



UNIVERSITY AT ALBANY

State University of New York

Final Interim Evaluation Report

By the Independent Evaluator for the New York State
Delivery System Reform Incentive Payment (DSRIP) Program

August 2, 2019

Authors:

Wendy Weller, Ph.D.¹

Keegan Bailey, M.S.¹

Soumyadeb Chatterjee, M.S.²

Sarah Drazek, M.S.³

Rose Greene, M.A.³

Margaret Gullick, Ph.D.³

Kajal Lahiri, Ph.D.²

Erika Martin, Ph.D.⁴

Young Joo Park, Ph.D.⁵

Sarah Rain, M.S.³

Dylan Roby, Ph.D.⁶

Amanda Rozsavolgyi, M.S.Ed.³

¹ School of Public Health, University at Albany, State University of New York

² Econometric Research Institute,
University at Albany, State University of New York

³ Center for Human Services Research,
University at Albany, State University of New York

⁴ Rockefeller College of Public Affairs
and Policy, University at Albany, State University of New York

⁵ School of Public Administration,
University of New Mexico

⁶ School of Public Health, University of Maryland



Table of Contents

New York DSRIP Terminology Guide.....	5
Abbreviations.....	5
Performing Provider Systems	7
New York DSRIP Program Timeline of Demonstration and Measurement Years	9
1. Executive Summary.....	11
1.1. Overview	11
1.2. Findings	13
1.2.1. Early Findings on DSRIP Program Performance Measures.....	13
1.2.2. Implementation and Process Early Successes and Challenges.....	20
1.3. Conclusions and Future Work.....	25
1.4. Limitations.....	26
2. Demonstration Description.....	28
2.1. New York's Medicaid Crisis and the Medicaid Redesign Team	28
2.2. DSRIP Goals, Objectives, and Activities	30
2.2.1. Overview of DSRIP Goals and Objectives.....	30
2.2.2. Conceptual Framework Guiding DSRIP Activities	31
2.2.3. Development of Performing Provider Systems	33
2.2.4. Selection of Projects by Performing Provider Systems	35
2.3. Attribution and Project Valuation.....	41
3. Independent Evaluation Study Design.....	44
3.1. Research Questions and Hypotheses	44
3.2. Study Design for Evaluation of the Implementation and Process	47
3.2.1. Framework for Evaluation of the Implementation and Process	47
3.2.2. Data Collection and Analysis for Key Informant Interviews	50
3.2.3. Data Collection and Analysis for Regional Partner Focus Groups	52
3.2.4. Data Collection and Analysis for Statewide Partner Survey	54
3.2.5. Data Collection and Analysis for Patient Survey.....	58
3.3. Study Design for Evaluation of DSRIP Program Measures.....	61
3.3.1. Framework for the Time Series and Comparative Analysis of Administrative Data ..	61
3.3.2. Data Sources	63
3.3.3. Data Analysis.....	65
3.3.4. Cost Analysis	70
3.4. Study Limitations	70

4. Findings and Conclusions	72
4.1. Characteristics of Performing Provider Systems	73
4.2. Challenges and Successes of Implementation and Process	79
4.2.1. Start-up	79
4.2.2. Operations	90
4.2.3. Support Systems and Accountability Structures	119
4.2.4. Perceived Outcomes and Observations.....	123
4.2.5. Stakeholder Input	143
4.3. Assessment of Changes in Health Care Quality	148
4.3.1. Statewide Trends in Quality of Care Measures	149
4.3.2. Comparative Analysis of Quality of Care Measures among Performing Provider Systems	153
4.4. Assessment of Changes in Population Health	155
4.4.1. Statewide Trends in Mental Health and Substance Abuse Population Health Outcomes	158
4.4.2. Statewide Trends in Chronic Disease Prevention Population Health Outcomes	160
4.4.3. Statewide Trends in HIV Population Health Outcomes.....	162
4.4.4. Statewide Trends in Population Health Disparities	163
4.5. Assessment of Changes in Behavioral Health Care Utilization	165
4.5.1. Statewide Trends in Behavioral Health Care Utilization.....	167
4.5.2. Comparative Analysis of Behavioral Health Care Utilization among Performing Provider Systems.....	174
4.6. Assessment of Changes in Hospital Utilization.....	191
4.6.1. Statewide Trends in Hospital Utilization.....	193
4.6.2. Comparative Analysis of Hospital Utilization among Performing Provider Systems	198
4.7. Assessment of Changes in Health Care System Transformation.....	216
4.7.1. Statewide Trends and Comparative Analysis of Health Care Service Delivery Integration	218
4.7.2. Statewide Trends and Comparative Analysis of Health Care Coordination	221
4.7.3. Statewide Trends and Comparative Analysis of Utilization among the Uninsured, Non-Utilizing, and Low-Utilizing Populations	226
4.8. Assessment of Changes in Health Care Costs	229
5. Policy and Practice Implications	230
5.1. Successes of the DSRIP Program to Date.....	231
5.1.1. Collaboration and Breaking Down “Silos”	231

5.1.2. Observed Positive Changes in the Delivery of Care.....	232
5.1.3. Increased Understanding of and Preparation for Value Based Payment.....	233
5.2. Challenges of the DSRIP Programs to Date.....	234
5.2.1. PPS Formation and Start-Up	234
5.2.2. Operations	235
5.3. Implications for Practice from Early Findings	237
6. Interaction with Other State Initiatives	238
6.1. Overview	238
6.2. Improving Care and Improving Health.....	238
6.3. Reducing Costs	240
Appendix 1. Projects Selected by Each Performing Provider System.....	241
Appendix 2. Algorithm to Attribute Members for Valuation and Performance	255
Appendix 3. Additional Details on Research Questions and Hypotheses	259
Appendix 4: Key Informant Interview Guides.....	263
Appendix 5: Focus Group Guide	268
Appendix 6: Statewide Partner Survey Instruments	271
Appendix 7. Additional Details on DSRIP Dataset Measures Used in the Interim Report	278
Appendix 8: Clinician & Group CAHPS 3.0 Survey Composite Score Items	287

New York DSRIP Terminology Guide

Abbreviations

AST	Account Support Team
AHRQ	Agency for Healthcare Research and Quality
ACO	Accountable Care Organization
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CG-CAHPS	Clinician & Group Consumer Assessment of Providers and Systems
CMS	Centers for Medicare and Medicaid Services
DSRIP	Delivery System Reform Incentive Payment
DY	Demonstration Year
ED	Emergency Department
EHR	Electronic Health Record
EMR	Electronic Medical Record
FQHC	Federally Qualified Health Center
HEDIS	Healthcare Effectiveness Data and Information Set
HIT	Health Information Technology
IA	Independent Assessor
IE	Independent Evaluation
LGBTQ	Lesbian, Gay, Bisexual, Transgender, and Queer
MAPP	Medicaid Analytics Performance Portal
MAX Series	Medicaid Accelerated eXchange Series
MDW	Medicaid Data Warehouse
MY	Measurement Year
MRT	Medicaid Redesign Team

NCQA	National Committee for Quality Assurance
NewCo	New Corporation
NYC	New York City
NYS DOH	New York State Department of Health
P4P	Pay/Payment for Performance
P4R	Pay/Payment for Reporting
PCG	Public Consulting Group
PCMH	Patient-Centered Medical Home
PPR	Potentially Preventable Readmission(s)
PPS	Performing Provider System(s)
PPV	Potentially Preventable Emergency Room Visit(s), Full Attributed Population
PPVBH	Potentially Preventable Emergency Room Visit(s), Behavioral Health Population
QE	Qualified Entity
ROS	Rest of State
RQ	Research Question
SHIN-NY	Statewide Health Information Network for New York
SPARCS	Statewide Planning and Research Cooperative System
STC	Special Terms and Conditions
SUNY RF	State University of New York Research Foundation
VBP	Value Based Payment

Performing Provider Systems

Acronym	Preferred Name	Counties Served
AHI	Adirondack Health Institute	Clinton, Essex, Franklin, Fulton, Hamilton, St. Lawrence, Saratoga, Warren, Washington
ABHC	Alliance for Better Health	Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady
BHNNY	Better Health for Northeast New York	Albany, Columbia, Greene, Saratoga, Warren
BHA	Bronx Health Access	Bronx
BPHC	Bronx Partners for Healthy Communities	Bronx
CCN	Care Compass Network	Broome, Chemung, Chenango, Cortland, Delaware, Schuyler, Steuben, Tioga, Tompkins
CNYCC	Central New York Care Collaborative	Cayuga, Lewis, Madison, Oneida, Onondaga, Oswego
CCB	Community Care of Brooklyn	Kings (Brooklyn), Queens
CPWNY	Community Partners of Western New York	Chautauqua, Erie, Niagara
FLPPS	Finger Lakes PPS	Allegany, Cayuga, Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Steuben, Wayne, Wyoming, Yates
LCHP	Leatherstocking Collaborative Health Partners	Delaware, Herkimer, Madison, Otsego, Schoharie
MCC	Millennium Collaborative Care	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming
MHVC	Montefiore Hudson Valley Collaborative	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester
MSPPS	Mount Sinai PPS	Kings (Brooklyn), New York (Manhattan), Queens
NQP	Nassau Queens PPS	Nassau, Queens
NYPQ	New York-Presbyterian Queens PPS	Queens
NYP	NewYork-Presbyterian PPS	New York (Manhattan)
NCI	North Country Initiative	Jefferson, Lewis, St. Lawrence
NYUL	NYU Langone Brooklyn	Kings (Brooklyn)
HHC	OneCity Health	Bronx, Kings (Brooklyn), New York (Manhattan), and Queens
RCHC	Refuah Community Health Collaborative	Orange, Rockland
SOMOS	SOMOS	Bronx, Kings (Brooklyn), New York (Manhattan), Queens
SIPPS	Staten Island PPS	Richmond (Staten Island)
SCC	Suffolk Care Collaborative	Suffolk

Acronym	Preferred Name	Counties Served
WMC	WMCHC	Delaware, Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester

New York DSRIP Program Timeline of Demonstration and Measurement Years

Demonstration Years		Measurement Years	
DY0	April 2014 – March 2015	MY0	June 2014
DY1	April 2015 – March 2016	MY1	July 2014 – June 2015
DY2	April 2016 – March 2017	MY2	July 2015 – June 2016
DY3	April 2017 – March 2018	MY3	July 2016 – June 2017
DY4	April 2018 – March 2019	MY4	July 2017 – June 2018
DY5	April 2019 – March 2020	MY5	July 2018 – June 2019

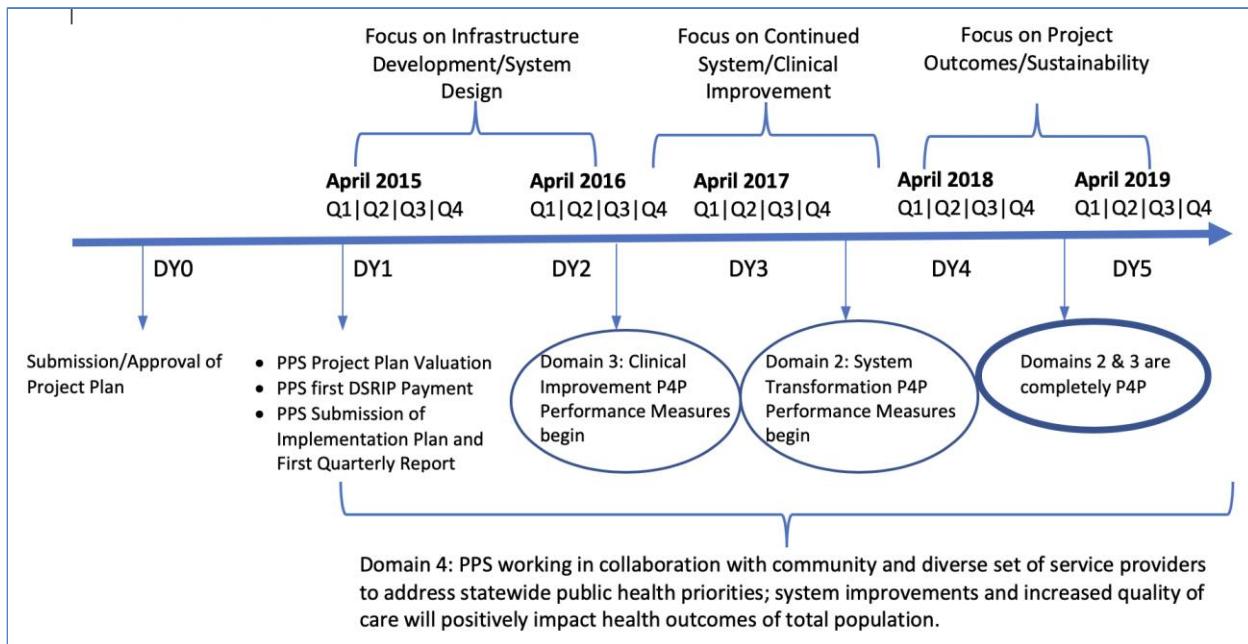
Source: Adapted from the New York State Department of Health DSRIP Timeline Poster.¹

Abbreviations: Demonstration Year (DY), Measurement Year (MY)

Notes: The implementation and process component of the Interim Report relied primarily on data collected by the Independent Evaluator and covered the period from the beginning of DY0 (April 2014) through the middle of DY4 (October 2018). The time series analysis and comparative analysis components of the Interim Report relied on secondary data, collected according to measurement year, to assess New York DSRIP program performance from MY0 (June 2014) to the end of MY3 (June 2017).

¹ New York State Department of Health (2016, January). Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/2016/docs/2016-01-29_dsrp_timeline_poster.pdf

New York DSRIP Program Implementation Timeline and Key Program Benchmarks



Source: Adapted from New York State Department of Health DSRIP overview materials.²

Abbreviations: Demonstration Year (DY), Pay for Performance (P4P), Performing Provider System(s) (PPS), Quarter (Q)

² New York State Department of Health (2016, October 21). DSRIP program: An overview (slide deck). Retrieved from http://medicaidmattersny.org/cms/wp-content/uploads/2016/10/Medicaid-Matters-DSRIP_102116-VF.pdf

1. Executive Summary

1.1. Overview

New York's Delivery System Reform Incentive Payment (DSRIP) program is the main mechanism by which the state is implementing its Section 1115 Medicaid Redesign Team (MRT) Demonstration Waiver Amendment. The DSRIP program intentions are to achieve the triple-aim of improving health care quality, improving health, and reducing costs by fundamentally restructuring New York's health care delivery system through investments in the Medicaid program and participating providers. Its primary stated goal is to reduce avoidable inpatient and emergency department hospital use by 25% over five years,³ with broader goals of sustainable system transformation and improvements in population health.

Of the estimated \$17.1 billion in federal savings from MRT reforms, New York was authorized to reinvest \$8 billion, with \$6.42 billion allocated to the DSRIP program. The DSRIP program comprises 25 regional Performing Provider Systems (PPS) – coalitions of safety net hospitals, clinics, and other eligible providers with clear business relationships – that work together to implement specific projects targeting Medicaid members and the uninsured. The DSRIP payouts to PPS are based upon their measured performance on structural, process, and outcome milestones related to system transformation, clinical management, and population health.⁴

As part of the team conducting the Independent Evaluation (IE), the State University of New York Research Foundation (SUNY RF) is implementing a robust, mixed methods, statewide evaluation of New York's DSRIP program to:

- Assess program effectiveness on a statewide level, with respect to the MRT triple-aim;
- Obtain information on the effectiveness of specific projects and strategies selected and the factors associated with program success; and
- Obtain feedback from stakeholders, including PPS administrators and providers and Medicaid members served under the DSRIP program, regarding the program's planning and implementation, and on the health care service experience under DSRIP reforms.

Evaluation results are reported regularly to the PPS, the New York State Department of Health (NYS DOH), and the Centers for Medicare and Medicaid Services (CMS). This report serves as the interim evaluation covering implementation and process through the middle of Demonstration Year (DY) 4 (October 2018),⁵ and outcomes through Measurement Year (MY) 3 (June 2017). A final report, to be released in 2021, will include findings from the last two years of the DSRIP program, and the overall outcomes of the program.

³ New York State Department of Health. (n.d.). DSRIP overview. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/overview.htm

⁴ Ibid.

⁵ Data were collected about stakeholder experiences covering Demonstration Year 0 through the first month of quarter 3 in Demonstration Year 4.

Consistent with the specifications outlined in the New York DSRIP program's Special Terms and Conditions (STC), Sections VII.21 through VII.33, the evaluation is guided by seven overarching research questions (see Exhibit 1.1).⁶

Exhibit 1.1. Overarching research questions for the Independent Evaluation

Research questions

- **RQ-A:** What were the successes and challenges with respect to PPS planning, implementation, operation, and plans for program sustainability from the perspective of DSRIP program planners, administrators, and providers; and why were they successful or challenging? (CMS RQ7)
- **RQ-B:** Did health care quality improve as a result of clinical improvements in the treatment of selected diseases and conditions? (CMS RQ2)
- **RQ-C:** Did population health improve as a result of implementation of New York's DSRIP initiative? (Sub-question: Were racial and ethnic disparities on specific population measures reduced following the DSRIP program?⁷) (CMS RQ3)
- **RQ-D:** Did utilization of behavioral health care services increase as a result of the DSRIP program? (CMS RQ4)
- **RQ-E:** Was avoidable hospital utilization reduced as a result of the DSRIP program? (CMS RQ5)
- **RQ-F:** To what extent did PPS achieve health care system transformation, including increasing the availability of behavioral health care? (CMS RQ1)
- **RQ-G:** Did the DSRIP program reduce health care costs? (Sub-question: Was the DSRIP program cost effective in terms of New York and federal governments receiving adequate value for their investments?) (CMS RQ6)

Source: Adapted from the Request for Proposal and the CMS-approved Independent Evaluation plan.

Abbreviations: Research Question (RQ), Hypothesis (H)

The Interim Evaluation consists of an implementation and process component to address RQ-A, and a time series and comparative analysis component that analyzes DSRIP performance measures to address RQ-B through RQ-F. The last research question (RQ-G), which examines the DSRIP program's influence on costs, will be addressed in the final summative report and not the Interim Evaluation because the program is still underway and would likely be limited in its findings due to the initial time period where PPS efforts were focused on start-up activities and initiating implementation.

⁶ The research questions presented in Exhibit 1.1 are edited slightly and reordered from the original Request for Proposal and CMS-approved Independent Evaluation plan to be consistent with the presentation of results in Section 4. The original research question number in the CMS-approved Independent Evaluation plan is indicated in parentheses at the end of each research question. See Appendix 3 for a comprehensive crosswalk to the updated research questions and hypotheses and the rationale behind these changes.

⁷ Specific measures for this sub-question are: premature deaths, newly diagnosed cases of HIV, preterm births, adolescent pregnancy rate per 1,000 females aged 15-17, percentage of unintended pregnancy among live births, and infants exclusively breastfed while in the hospital.

The Interim Evaluation presents a detailed description of the DSRIP program's implementation and its early successes and challenges, preliminary findings about the overall effect of DSRIP on the triple-aim, and a synthesis of lessons learned and implications for practice. It is important to note the PPS project implementation timeframe compared to the measurement years. The PPS applications and valuation awards were finalized in April 2015, the start of DY1, while MY2 began in July 2015 when much of the infrastructure for implementation was being initiated. Further, the last measurement period of MY5 ends 9 months before the end of DY5 when implementation is still occurring. Because the DSRIP program is still ongoing and the data available on performance measures was limited to a small number of years before and after initiation of the DSRIP program, it is too early to draw conclusions about the impact of the DSRIP program on quality, cost, service utilization, and overall system transformation. Therefore, the findings presented here are preliminary, subject to data limitations, and may change as the program continues to be implemented. However, early results promote transparency, provide feedback to diverse stakeholders, and offer insights for continued implementation.

1.2. Findings

1.2.1. Early Findings on DSRIP Program Performance Measures

The analysis of DSRIP performance measures examines trends over time for each performance measure, covering the period before and after the initiation of the DSRIP program, and estimating both statewide and PPS-specific trends.⁸ A smaller subset of measures relevant to the most common clinical focus areas of the projects were used to make the effort more focused, to ensure that the findings are clear and easy to understand, and to design an analysis that was feasible given the type of data, time, and resources available. Additional measures will be added to the summative evaluation.

1.2.1.1. Statewide Performance Trends

Analyses of statewide pre-post DSRIP initiation trends for 27 performance measures showed encouraging results. Overall, performance improved post-DSRIP initiation for 13 measures, remained steady for 13 measures, and worsened for only one measure (Exhibit 1.2). The majority of performance measures in behavioral health and population health were improved in the interim evaluation period. Additionally, results for asthma medication ratio improved, as did early indicators of system change such as members' connectedness to providers (usual source of care) and reduction in uninsured use of emergency department (self-pay ED visits). It is perhaps not surprising that half the performance measures remained steady given the short post-DSRIP initiation time period, during which many PPS were still focusing on infrastructure development and design. It often takes time to see improvements when implementing new interventions for a program of this magnitude that require effort to establish new processes

⁸ All analyses of the performance measures in this report used the start of MY2 (July 2015) as the first month of the post-DSRIP initiation period, with all prior months assigned to the pre-DSRIP initiation period. This provided 13 months of pre-DSRIP initiation measurement time and 24 months of post-DSRIP initiation measurement time.

and familiarize staff with them. Some of the measures remaining steady were noted to have high levels of performance which can also limit the ability to demonstrate improvement. For example, performance measures of patient experience with coordinated care were associated with high levels of performance (Care Transition and Up-to-Date Coordination). Both measures would be positive indications for early system change success.

Although it is important to examine statewide performance among DSRIP attributed Medicaid members, these early statewide findings need to be interpreted in the context of other factors, such as variability across PPS, as shown for MY3 in Exhibit 1.2. Individual PPS performance and results of the comparative analysis are discussed in more detail in Section 1.2.1.2.

Specific statewide findings on performance measures are presented below.

Quality: To examine clinical quality improvements (RQ-B), the Interim Report focused on a limited set of measures, related to asthma care among PPS that selected an asthma project (13 of 25 PPS). Statewide results showed that the post-DSRIP initiation trend significantly improved for one of the asthma measures and remained steady for the other asthma measure. Improvement was noted for the ratio of asthma controller medication, indicating more members with asthma are receiving controller medications in at least equal proportion to rescue medications. This is an initial step for improving long term medication compliance with controller medication. This is a first step towards a more in-depth evaluation of clinical quality improvements. A broader set of quality outcomes, including those relevant to other PPS will be examined for the final summative report.

Population Health: Eleven measures of population health were examined to address the impact of the DSRIP program on population health (RQ-C). Six of the eleven population measures showed improvement following DSRIP initiation.⁹ Improvement in areas of premature death, new HIV cases and people in poor mental health were noted. Performance on population health measures in the Interim Report should be considered a snapshot of New York's performance using trends from MY0 to MY3. It is anticipated that there would be a longer lag time between the implementation of the DSRIP program and population health. It is also difficult to attribute changes in population health to specific PPS in regions where there are multiple PPS that have overlapping geographic boundaries and/or PPS covering multiple counties. Additionally, many of the data sources used for population health measures involve the larger statewide population beyond the Medicaid population.

Behavioral Health Care Utilization: Integration of behavioral health and primary care, and improvement in behavioral health care overall is an important emphasis of the New York DSRIP program. The statewide post-DSRIP initiation trend significantly improved for three of the four measures used to assess behavioral health utilization (RQ-D). These improvements on the behavioral health utilization measures are consistent with findings from the implementation and process component of the evaluation that found that PPS partners and key informants perceived improvements in integration of primary care with behavioral health care. The only

⁹ All measures used to assess population health were annual measures. Statistical tests were not done on these measures due to limited data points.

behavioral health utilization measure that did not show any significant change following the initiation of the DSRIP program was initiation of drug or alcohol treatment.¹⁰ The index number of cases presenting for drug or alcohol dependence treatment increased, likely due to the state's opioid epidemic. Lack of improvement on the initiation of drug or alcohol treatment measure may reflect an increase in the denominator of people presenting for care, rather than a reduced or stable performance in meeting care needs.

Hospital Utilization: A major overall goal of the DSRIP program is to reduce avoidable inpatient and emergency department hospital use by 25% over five years. Preliminary statewide results showed that although the downward trend for potentially preventable hospital readmissions (PPR) did not significantly change in the short period post-DSRIP initiation, substantial progress is being made towards the 25% reduction goal due to an overall decrease in preventable readmissions between MY0 and MY3 (RQ-E). The preliminary statewide results for potentially preventable emergency room visits (PPV) were somewhat similar to those for PPR. The post-DSRIP initiation trend for PPV did not significantly change, but there was a small overall decrease in PPV between MY0 and MY3. Although preliminary statewide results suggest that potentially preventable emergency room visits among the behavioral health population (PPVBH) significantly worsened in the short post-DSRIP initiation period, the absolute percent change in the PPVBH rate compared to baseline was relatively small (0.82% increase from baseline to MY3). These preliminary findings do not reflect impact from PPS projects developed in the MAX series specifically addressing hospital and emergency department utilization by 'super-utilizers'. The initial projects were developed during the interim period and are continuing to be spread to other facilities. Impact from these efforts will be examined in the summative evaluation.

¹⁰ Initiation of drug or alcohol treatment is defined as having an inpatient admission, intensive outpatient encounter, or partial hospitalization within 14 days of presenting to care with a new episode of alcohol or drug dependence.

Exhibit 1.2. Summary of Statewide Analyses of DSRIP Program Performance Measures

Research Question	Outcome Measure	Measure Data Source	Percent Change Baseline-MY3	PPS MY3	Progress Towards	Trend Post-DSRIP Initiation
				Low/High	25% Reduction	
RQ-B: Did health care quality improve as a result of clinical improvements in the treatment of selected diseases and conditions?	Asthma Medication Ratio ^a	Claims	-0.50	57.2% 70.6%	NA	Improving
	Asthma Medication Management (75% days covered) ^a	Claims	4.05	24.6% 37.0%	NA	No change
RQ-C: Did DSRIP improve population health?	Binge Drinking ^b	eBRFSS	2.81	NA	NA	No change
	Poor Mental Health ^b	eBRFSS	-4.46	NA	NA	Improving
	Suicide Death Rate ^b	Vital Statistics	0.00	NA	NA	No change
	Colorectal Screening ^a	eBRFSS	-1.15	NA	NA	No Change
	Cigarette Smoking ^b	eBRFSS	-8.97	NA	NA	No Change
	Premature Deaths ^b	Vital Statistics	1.69	NA	NA	No Change
	Newly Diagnosed HIV Case Rate ^b	HIV Surveillance System	-16.23	NA	NA	Improving
	Ratio of Premature Deaths: Non-Hispanic Black to Non-Hispanic White ^b	Vital Statistics	-2.99	NA	NA	Improving
	Ratio of Premature Deaths: Hispanic to Non-Hispanic White ^b	Vital Statistics	-5.56	NA	NA	Improving
	Newly Diagnosed HIV Case Rate: Non-Hispanic Black to Non-Hispanic White ^b	HIV Surveillance System	-20.72	NA	NA	Improving
	Newly Diagnosed HIV Case Rate: Hispanic to Non-Hispanic White ^b	HIV Surveillance System	-14.23	NA	NA	Improving
RQ-D: Did DSRIP impact use of behavioral health services?	Initiation of Drug Treatment ^a	Claims	-3.27	31.50% 52.89%	NA	No change
	Engagement in Drug Treatment ^a	Claims	-6.21	13.31% 29.98%	NA	Improving
	Adherence to Antipsychotic Medication ^a	Claims	-0.16	53.62% 88.89%	NA	Improving
	Follow Up after Hospitalization within 30 Days ^a	Claims	12.46	50.74% 75.36%	NA	Improving

Research Question	Outcome Measure	Measure Data Source	Percent Change Baseline-MY3	PPS MY3 Low/High	Progress Towards 25% Reduction	Trend Post-DSRIP Initiation
RQ-E: Did DSRIP reduce inpatient stays and emergency department visits?	Potentially Preventable Readmissions ^b	Claims	-15.03	122.8 1269.5	60.12	No change
	Potentially Preventable Emergency Room Visits ^b	Claims	-1.32	6.2 56.9	5.28	No change
	Potentially Preventable Emergency Room Visits, Behavioral Health Population ^b	Claims	0.82	34.4 150.2	0.0	Worsening
RQ-F: Did DSRIP transform the system?	Bidirectional Exchange with Qualified Entity ^a	Qualified Entity Survey	22.43	39.85% 90.47%	NA	Improving
	Participating Agreement with Qualified Entity ^a	Qualified Entity Survey	-0.26	45.29% 99.47%	NA	No change
	Care Transition ^a	HCAHPS survey	-0.11	90.00% 96.14%	NA	No change
	Usual Source of Care ^a	CG-CAHPS survey	10.56	79.51% 92.74%	NA	Improving
	Up-to-Date Coordination ^a	CG-CAHPS survey	0.12	78.85% 87.64%	NA	No change
	No Preventive Services ^b	Claims	8.65	4.90% 14.60%	NA	No change
	Self-pay Emergency Room Visits ^b	Claims	-26.32	2.34% 24.12%	NA	Improving

Abbreviations: Clinician & Group Assessment of Healthcare Providers and Systems (CG-CAHPS), Delivery System Reform Incentive Payment (DSRIP), Expanded Behavioral Risk Factor Surveillance System (eBRFSS), Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), Human Immunodeficiency Virus (HIV), Research Question (RQ)

Notes: HIV case rates refer to newly diagnosed cases. Findings for RQ-B, RQ-D, and RQ-E are based on analyses of monthly data; findings for RQ-C and RQ-F are based on annual data. All data for RQ-C (population health) reflect the New York State general population and are not limited to Medicaid members; no PPS specific results are available for RQ-C. Post-DSRIP initiation trends for RQ-B, RQ-D, and RQ-E are based on the sign and significance of the *Trend*DSRIP* interaction coefficient in interrupted times series regression models; the interaction term represents the slope of the post-DSRIP initiation trend. Results were considered significant at the p<0.1 level. Post-DSRIP initiation trends for RQ-C and RQ-F are based on a descriptive summary data; no statistical tests for trend were performed on the annual data due to limited data points. For RQ-C and RQ-F, outcomes that remained largely steady during the study period were reported as "no change". Analyses of the asthma measures (RQ-B) were limited to the 13 PPS that selected the Domain 3 asthma clinical improvement projects. Analyses of the "no preventive services" and "self-pay emergency room visits" measures (RQ-F) were limited to the 14 PPS that were eligible for and selected the eleventh Project 2.d.i (patient activation). Data were only available for MY2 and MY3 for the two health information technology measures (bidirectional exchange and participating agreements) and MY1 through MY3 for the three care coordination measures used to assess RQ-F. ^aFor these measures, higher rates are better. ^bFor these measures, lower rates are better.

System Transformation: The New York DSRIP program ultimately aims to fundamentally transform the health care system in New York. To assess progress on system transformation

seven measures using annual data¹¹ were used to examine health care delivery integration, health care coordination, and utilization among the uninsured, non-utilizing, and low-utilizing populations (RQ-F).¹² Improvements were seen in the percent of providers who conduct bidirectional exchange with Qualified Entities, the percent of patients reporting a provider as their usual source of care, and the percent of emergency room visits from self-pay patients. Performance on the remaining system transformation measures remained steady. Although there were no major changes in care transition and up-to-date care coordination, the overwhelming majority of Medicaid members had consistently positive experiences in these areas during the study period.

Recognizing the importance of patient-centered care to system transformation, all primary care practices in PPS were expected to meet National Committee for Quality Assurance (NCQA) Level 3 patient-centered medical home (PCMH) standards by the end of DY3 (March 31, 2018). Because the interim evaluation addresses performance outcomes up to MY3, it would not adequately capture the DY3 PCMH milestone. Therefore, PCMH measures will be examined in more detail in the summative evaluation and are not included in the Interim Report. However, internal analyses by the NYS DOH using data up to June 30, 2018 suggest that the DSRIP program has had a positive impact on increasing the number of new PCMH providers and providers who moved up to Level 3, especially compared to providers who are not partnered with a PPS.

Cost: A detailed cost assessment of the demonstration was not possible in time for the Interim Report to address RQ-G and would likely be limited in its findings due to the initial time period where PPS efforts were focused on start-up activities and initiating implementation. For the Interim Report, the Independent Evaluator examined where there might be other information regarding Medicaid costs that would help inform the reader as to the state's performance on cost trends. The state reported on the Statewide Accountability Milestones (SWAM) for DY3 in its Demonstration Year 3 Quarter 4 report to CMS.¹³ The SWAM measure 3 is the Medicaid spending milestone and New York reports passing the DY3 milestone measure where costs for inpatient and emergency room spending were below the target trend rate. The DY4 SWAM information is not yet available. The final summative report will contain more detailed analyses of how costs have shifted over time, and differences across PPS over the entire course of the demonstration period.

1.2.1.2. PPS-Level Descriptive Analyses

¹¹ Data were only available for MY2 and MY3 for the two health information technology measures (bidirectional exchange and participating agreements) and MY1 through MY3 for the three care coordination measures used to assess RQ-F.

¹² Analyses of the non-use of preventive services among Medicaid members and emergency room use among the uninsured population were examined only for PPS that selected the 11th “patient activation” Project 2.d.i (14 of 25 PPS).

¹³ New York State Department of Health, Office of Health Insurance Programs (2018, May). New York DSRIP 115 Quarterly Report. January 1, 2018–March 31, 2018. Year 3, fourth quarter. Retrieved from:
https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/quarterly_rpts/year3/q4/2018_jan-mar_report.htm

As previously noted, focusing only on statewide trends for all Medicaid members attributed to the DSRIP program may mask changes at the individual PPS-level due to the high level of variation across PPS and the time it takes to see changes at the statewide level. Each PPS is inherently different, due to variation in size, lead entity type, patient mix, findings from their community needs assessment, and other factors.

For the Interim Report, initial descriptive analyses were used to examine PPS-level performance from MY0 through MY3, for most measures. While performance remained unchanged on several performance measures at the overall statewide level, some PPS showed progress while others showed room for improvement. For some measures, a small number of PPS were able to show progress when most other PPS did not. For example, among the 6 PPS that had improvements in performance on the initiation of drug or alcohol treatment measure, most only improved by 1% to 2% in MY3 compared to MY0. However, two PPS improved by at least 8%. As noted previously, lack of improvement on this measure for most PPS may be attributed to the number of persons being identified as having a substance use disorder and linked to care. Nevertheless, a small number of PPS were able to show some improvement.

Even among PPS that improved or worsened on a given performance measure between MY0 and MY3 there was wide variation, although variation tended to be greater for PPS that improved than those that worsened. For example, although rates of potentially preventable admissions improved between MY0 and MY3 for the majority of PPS (22 of 25), the improvement ranged from 7.02% to 67.86% (data not shown).

Variation across and within PPS will be explored further in the summative report. For example, the Independent Evaluator will explore whether PPS have had more successes with some projects than others and examine variation in project performance within PPS.

1.2.1.3. Comparative Analysis

The comparative analysis extended the statewide time series analysis to examine how four PPS-level characteristics (size, behavioral health patient mix, geographic location, and selection of the 11th project) were associated with overall differences in performance, and differential post-DSRIP initiation performance changes. Comparative analyses were only performed for the monthly performance measures to assess behavioral health utilization (RQ-D) and avoidable hospital utilization (RQ-E). The final summative report will include a more extensive analysis of PPS-level performance, including comparing performance on specific DSRIP program projects and examining additional PPS characteristics.

Exhibit 1.3 summarizes the findings related to the comparative analysis and post-DSRIP initiation trends. Findings were largely mixed for both the behavioral health care utilization and hospital utilization measures, making it difficult to draw conclusions at this time. With the exception of PPS in the rest of the state having a significantly worsening trend on all behavioral health utilization measures compared to PPS in New York City, variation was noted for PPS with the same characteristic and will be explored further in the summative report. These results should be considered preliminary; more refined categorizations of PPS characteristics may be

needed. For example, aggregating all PPS outside of New York City into a single category (Rest of State) masks regional variations, which will be explored in more detail in summative report.

Exhibit 1.3. Summary of Comparative Analysis of PPS-Level DSRIP Program Performance Measures

Research Question	PPS Characteristic	Trend Post-DSRIP Initiation
RQ-D: Behavioral Health Care Utilization	Large PPS vs. Small	Mixed results with variation noted for PPS with same characteristics. Unable to draw conclusions at this time. This will be explored further in the summative report.
	High BH vs. Low	Mixed results with variation noted for PPS with same characteristics. Unable to draw conclusions at this time. This will be explored further in the summative report.
	ROS vs. NYC	All four measures were noted to have worsening trend for ROS.
	11 th Project Selected vs. Not	Mixed results with variation noted for PPS with same characteristics. Unable to draw conclusions at this time. This will be explored further in the summative report.
RQ-E: Hospital Utilization	Large PPS vs. Small	Mixed results with variation noted for PPS with same characteristics. Unable to draw conclusions at this time. This will be explored further in the summative report.
	High BH vs. Low	Mixed results with variation noted for PPS with same characteristics. Unable to draw conclusions at this time. This will be explored further in the summative report.
	ROS vs. NYC	Mixed results with variation noted for PPS with same characteristics. Unable to draw conclusions at this time. This will be explored further in the summative report.
	11 th Project Selected vs. Not	Mixed results with variation noted for PPS with same characteristics. Unable to draw conclusions at this time. This will be explored further in the summative report.

Abbreviations: Performing Provider System (PPS), Behavioral Health (BH), Rest of State (ROS), New York City (NYC)
Notes: Interpretations are based a triple interaction term used to examine differences in post-DSRIP initiation trends between PPS with and without the characteristic in comparative analysis regressions. Comparative regression analyses were not conducted for the annual measures (RQ-C and RQ-F) or the monthly asthma measures used to assess RQ-B, which was limited to the 13 PPS that selected Domain 3 asthma clinical improvement projects.

1.2.2. Implementation and Process Early Successes and Challenges

1.2.2.1. Early Successes

The implementation and process component of the evaluation comprises a detailed description of the DSRIP program's evolution (RQ-A) and provides a context for interpreting the DSRIP performance measures. The implementation and process study triangulates data from four data sources to capture the experiences of diverse DSRIP stakeholders: PPS key informant interviews, regional partner focus groups, a statewide partner survey, and a patient survey.

The early years of the DSRIP program were important for capacity building and laying the foundation for improving clinical and population outcomes. Exhibit 1.4 briefly summarizes the successes and challenges related to the DSRIP program's implementation and processes from DY0 (April 2014) through part of DY4 (October 2018) and are described in this section.

The structure of the New York DSRIP program, with coalitions of partners forming PPS to work on a specific set of projects, necessitates collaboration and the breaking down of "silos" between a broad range of provider types, and investments in infrastructure development and capacity building (e.g., governance, technology, human resources). Although this is challenging and takes time for the full results of these efforts to be realized, data collected from PPS key informants and engaged-partners indicate that the DSRIP program has been a catalyst for changing the way many providers and organizations think about and provide care to Medicaid members and to the population as a whole. This was seen early on during the start-up phase when PPS were forming, selecting projects, and setting "speed and scale targets" in Demonstration Year 0, and has continued through implementation and the early years of operations.

New collaborations were established between providers and organizations that had never worked together before, considered themselves competitors, or who were previously mistrustful of each other. In the beginning, this was not always easy and obtaining buy-in and aligning different objectives took time. The general consensus was that involving a broad-based group of partners early on was vital to a well-functioning group and continued engagement.

Shared accountability, which many stakeholders viewed as a major step for the health care system, has further encouraged providers and organizations to develop connections that encourage them to work together to maintain responsibilities for their patients. In particular, a majority of PPS key informants interviewed saw their new work with community-based organizations as a vital change to the health care system. Community-based organizations that had not previously considered their organizations to be part of the health care system also began seeing their roles differently.

Exhibit 1.4. Summary of Implementation and Process Findings

RQ-A: What were the Successes and Challenges of PPS Planning, Implementation, and Operation from the Perspective of DSRIP Program Planners, Administrators, and Providers?		
Implementation and Process Aspect	Early Successes	Early Challenges
PPS Organizational Development and Early Operations	Increased collaboration and cross-sector partnerships	PPS and project start-up were time and resource intensive Multiple competing demands in early stages while still learning DSRIP program requirements and expectations
Partners' Perceived Effectiveness of DSRIP program	Most partners perceived DSRIP as effective. Partners had positive perceptions of DSRIP's impact on population health and services/clinical care	Some perceptions of increased bureaucratic requirements
Patient Experience	Patient satisfaction with providers was high and has remained high since DSRIP initiation Patient continuity of care has improved since DSRIP initiation	

Abbreviations: Delivery System Reform Incentive Payment (DSRIP), Performing Provider System (PPS)

Consistent with increased collaboration and shared accountability, PPS key informants and focus group participants most often cited improved care transitions, the integration of primary care with behavioral health care, and encouragement of innovation as specific positive outcomes of the DSRIP program so far. These are all goals of the DSRIP program, and prerequisites for a high-performing health care system.

The results of the partner survey provide further evidence that providers have observed positive changes in the way care is being delivered since the initiation of the DSRIP program. The majority of partner survey respondents in 2018 reported that services at their organization have changed for the better since the initiation of the DSRIP program.¹⁴ Findings did vary somewhat by organization type, with respondents working at hospitals most likely to report having observed positive changes and respondents working at community-based organizations among those least likely. Similar to key informants and focus group participants, the most

¹⁴ Direct comparison to the 2017 statewide partner survey is not possible for this survey item due to some wording changes to improve clarity.

commonly cited benefit from the DSRIP program observed by 2018 partner survey participants was coordinated care, with a substantial portion of respondents also reporting improved understanding of patient needs and reduced avoidable utilization as benefits of the program. These findings also varied somewhat by provider type.

Value based payment is a key component of the DSRIP program and overall Medicaid redesign in New York. Changing health systems in an environment where both fee-for-service and value based payment operate simultaneously is challenging and requires organizational focus and capital. In addition to educational resources provided by the NYS DOH, most PPS provided educational tools for their partners, especially primary care, behavioral health, and community-based partners, and some PPS provided direct infrastructure support (e.g., data analytics) to help partners shift to value based payment. These efforts have been well received and most partners report an improved understanding of value based payment and that the organizations have made changes to prepare for value based payment.

Given the complex nature of the DSRIP program and the major reinvestment of Medicaid funding, support and accountability structures were built into the program. Some challenges were experienced early on, when the program was just starting but communication and guidance improved over time. Data tools, such as the Salient Interactive Miner, which provides in-depth access to the state's Medicaid claims and encounter data, and the Medicaid Analytics Performance Portal, which houses DSRIP program performance tools, were seen as useful and critical to the work of PPS and partners. Many PPS developed their own internal data systems, including dashboards or other platforms which largely made use of partner portals to gather partner data. Some PPS data analytics teams were able to use partners' electronic health record data along with state-provided data to share aggregate results and guide performance improvement efforts. Many PPS and their partners found their efforts around developing data tools, especially those that provide real-time information, among the most important work that had been done to support closing gaps in patient care and meet performance targets as quickly as possible.

1.2.2.1. Early Challenges

The New York DSRIP program is an ambitious program to fundamentally transform New York's Medicaid system into a "financially viable, high-performing health system."¹⁵ Any large, complex program is likely to encounter challenges when trying to reform a health care system that is equally complex, especially in the context of a five-year demonstration program. Although these challenges need to be recognized, it is also important to note that many DSRIP program participants have been able to overcome early challenges and move forward in their efforts.

The New York DSRIP program has required considerable time and resources on the part of participants, including investment in relationship-building, governance, staff, technical expertise, education, and technology resources. Challenges were sometimes encountered

¹⁵ New York State Department of Health. (n.d.). DSRIP Project Toolkit. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf.

during PPS formation and application development, including alignment on key issues, allocation of resources, and leadership structure. This was particularly the case in regions where many competitors were organized into a small number of PPS. These challenges were often addressed and resolved, allowing the group to develop a better functioning relationship by the final application phase, but this took time and effort. Overall, PPS that already had some existing structures in place, such as those evolving from a unified health system or those that had previously begun DSRIP-like initiatives, were able to quickly pivot to the requirements of PPS formation and related work. Other PPS with no existing infrastructure in place faced additional early challenges with project implementation and partner engagement. It was difficult for them to simultaneously build infrastructure for a new organization, engage partners, and adhere to the breadth and pace of DSRIP program project requirements.

Some PPS encountered other challenges with start-up and the early stages of implementation, making it difficult to set speed and scale targets. These particular challenges occurred at the beginning of the DSRIP program when all entities, including the NYS DOH, were working on multiple start-up tasks simultaneously, resulting in what many PPS perceived to be continually changing requirements and a lack of clear and consistent information.

Operational challenges mainly occurred in the areas of PPS overlap, value based payment preparation, funds flow, and data and information technology. Partners working with multiple PPS were sometimes frustrated by differing interpretations of DSRIP program rules by each PPS, overwhelmed by working with multiple PPS administrations, and struggled to meet DSRIP project reporting requirements. However, while PPS key informants acknowledged challenges with overlapping PPS at the design and initial implementation phase, some felt they had overcome these challenges by collaborating with other PPS to develop similar reporting requirements and alignment of other procedures.

Although many of the efforts by PPS and the NYS DOH to prepare for the shift to value based payment have been well received and resulted in improved understanding and infrastructure investments on the part of PPS and their partners, perceived challenges remain for some organizations. In particular, focus group participants from community-based organizations at the time of this research felt that value based payment models were not structured to include them and expressed their concern about the sustainability of their work if they did not have the ability to demonstrate their value for value based payment, a concern shared by multiple types of focus group participants.

Some challenges with funds flow was encountered by some PPS and partners, especially early on in the program. The amount of time it took for PPS to establish contracts with individual providers and organizations, and ultimately distribute funds, varied. Many PPS were able to move funds to partners quickly and felt that this improved relationships, while others took a more deliberate approach. New Corporation PPS (“NewCos”) without established infrastructures tended to struggle more often with delays and lapses in the flow of funds. Likewise, several partner organizations, particularly non-hospital participants, expressed concerns about the time it took for them to receive funds. Several organizations, especially non-hospital participants, also reported that the level of funding was not commensurate with the effort they were putting in to the DSRIP projects.

Transformation to a coordinated, patient-centered system of care requires ready access to clinical, administrative, and financial data. Both PPS and partners were often frustrated by difficulties accessing data provided by the NYS DOH, and PPS were not always able to access the data their partners were collecting. Respondents reported substantial challenges with data lag, data access, and data sharing. The need for real-time data to measure real-time impacts was a common theme across PPS key informants and partners. Challenges were also encountered by PPS in their attempt to share data with their partners, due to patient privacy regulations or uncertainty about privacy regulations. Although data challenges were encountered, PPS and their partners were often able to address these challenges, and often considered these efforts successes.

1.3. Conclusions and Future Work

Preliminary findings from the Interim Evaluation suggest that New York is making progress towards its goal of fundamentally restructuring New York's health care delivery system in order to achieve the triple-aim. The early years of the program required considerable effort and resources for participants to build infrastructure and capacity in a short time-frame. Although this presented multiple challenges, and some challenges continue, results of the Interim Evaluation indicate that New York's DSRIP program has contributed to more collaborative care and has laid important groundwork necessary for improving clinical and population outcomes and reducing costs.

The Interim Evaluation also analyzed the impact of the DSRIP program on specific DSRIP performance measures using administrative data. Preliminary findings for performance measures were encouraging with almost all results improving or remaining steady. However, because the New York DSRIP program is still ongoing and the data available on performance measures was limited to a small number of years after initiation of the DSRIP program, it is still too early to draw conclusions about the impact of the DSRIP program on quality, cost, service utilization, and overall system transformation. The final summative evaluation will include additional years of data and additional analyses to provide a more complete understanding of the DSRIP program's impact on performance.

In addition to including data from all New York DSRIP program demonstration years, analyses for the summative evaluation will examine program costs, include additional performance measures, and provide a more extensive analysis of PPS-level performance, including comparing performance on specific DSRIP program projects.¹⁶ The summative evaluation will also include further feedback on the implementation and process of the New York DSRIP program from the perspectives of PPS administrators, providers, and Medicaid members, through a final round of partner surveys, key informant interviews, focus groups, and analysis of patient survey data.

¹⁶ The final summative report is due to CMS on March 28, 2021. A preliminary and draft final report will be submitted to the NYS DOH and CMS in mid-2020 and late-2020.

1.4. Limitations

Although the Interim Evaluation relies on a robust, mixed methods approach, there are limitations, as summarized below.

The following limitations apply to the implementation and process study:

- The implementation and process data are subject to the standard interview and focus group limitations, such as non-response bias and social desirability bias.
- Key informant interviews were conducted in a small group via telephone. There is potential that interviewees moderated their contributions to the discussion based on the other people present.
- While many of the PPS had members of the original team present for the interview, there were several entities where there had been full staff turnover, and no respondent was able to accurately provide historical data on start-up related questions.
- Engaged partners who were invited to participate in the partner survey and focus groups were identified by PPS, and a complete list may not have been provided.
- Focus groups have not yet been conducted in Central or Western New York.
- While qualitative conclusions are supported by stakeholder quotes, there is a possibility that some experiences in the DSRIP program will not be represented by the findings.
- The perspectives of patient care within the DSRIP program design may not yet be fully informed. The Independent Evaluator is assessing the possibility of conducting and gathering data from patient focus groups in the future.
- As data were retrospectively focused on DY0 through part of DY4, there is a possibility that some information was not recalled correctly.
- Due to the recommended case mix adjustments to the CAHPS survey data, the ability to examine trends over time is limited.

The following limitations apply to the analysis of the DSRIP performance measures:

- The analysis only includes data for New York. Although the comparative regression framework explicitly controls for statewide trends, internal validity would be higher with an external comparison group. Conceptually, it is difficult to identify an ideal “control” state as comparison, given large inter-state variations in Medicaid implementation and ongoing waivers. States that are typically used as comparisons for New York based on program size or similar region (e.g., California, New Jersey, and Texas) already have DSRIP waivers and a comparison of New York to other states was beyond the scope of this evaluation.
- A small number of pre-DSRIP initiation years limits the assessment of the DSRIP program’s effect on statewide trends.
- The current analysis assumes that pre- and post-DSRIP initiation trends are linear. Additional specifications will be explored for the final summative report after additional years of data and information about the implementation and process are available. Future work might include distinguishing early and late implementation periods.

- The monthly DSRIP performance measures are 12-month rolling average values, and hence the full effect of the DSRIP program will show up on the performance with a 12-month lag. However, the inclusion of the first MY1 in the definition of pre-DSRIP initiation period will mitigate this lagged effect to some extent.
- The annual performance measures cannot be analyzed in a regression framework due to an insufficient number of data points for a robust multivariate regression, limiting their analysis to a more descriptive presentation.
- During the study period, the billing codes changed from the International Classification of Diseases (ICD) version 9, to ICD-10. Following consultation with NYS DOH, measures affected by this change were not included in the Interim Report although they will be considered for the final summative report.
- Most DSRIP performance measures are process outcomes rather than clinical outcomes, due to the nature of the underlying data.
- *Potentially Preventable Readmissions* are defined as 30-day readmissions in the total attributed population, rather than 30-day admissions as a percentage of index admissions. Changes in this measure could reflect higher or lower index admissions, irrespective of readmissions.
- There was a change in the health plan encounter intake system (EIS) that occurred in October 2015 (between MY1 and MY2). This change led to differences in how emergency room encounters were reported and could, in particular, affect assessment of the level change immediately after DSRIP initiation (between MY1 and MY2) in the regression analyses.
- The monthly measures for *Potentially Preventable Emergency Room Visits* and *Potentially Preventable Emergency Room Visits among Behavioral Health Members* only have 31 time points due to missing data at the time of analysis. Consequently, regression results may be under-powered and findings may be biased if the months with missing data have different trends. Results should be interpreted with caution, and the final summative report will use a complete set of monthly data.
- The measures of initiation of and engagement in drug/alcohol abuse treatment are defined as a percentage among index cases. The denominator is changing over time as a result of the opioid crisis, and so no change or a worsening trend in this measure could reflect increased index cases.
- The DSRIP program is implemented concurrently with other important New York initiatives to achieve the triple-aim, making it difficult to isolate its marginal effect on system transformation. Due to its large size, it is presumed that much of the observed difference is due to the DSRIP program although external policies and activities may also play a role in facilitating changes in performance measures.
- One of the DSRIP program's overall goals is to enable broader system transformation, beyond Medicaid. Enabling other aspects of the health care system to move towards the triple-aim is an important outcome but is not fully captured in the performance measures available in the DSRIP Dataset.

2. Demonstration Description

2.1. New York's Medicaid Crisis and the Medicaid Redesign Team

In 2010, New York's Medicaid system was in crisis. At the time, there were 5 million Medicaid recipients, incurring \$53 billion, with a 14% increase in spending over the prior 5 years. On a per member basis, New York's Medicaid costs were twice the national average.¹⁷ In that time period, the Commonwealth Fund's 2009 edition of the *State Scorecard on Health System Performance* analyzed data from the prior few years and reported that New York ranked 50th in the nation for avoidable hospital use and costs, and 21st for overall health system quality. New York was slightly above the median rankings for access (18th), prevention and treatment (22nd), and healthy lives (17th),¹⁸ and scored in the top quartile for equity (11th). Its lower ranking for overall system performance was driven by its low score for avoidable hospital use and costs.¹⁹

To address the Medicaid crisis, Governor Andrew M. Cuomo issued Executive Order No. 5 to create the New York Medicaid Redesign Team (MRT).²⁰ Its 27 stakeholders, representing diverse health care delivery system sectors, created a multi-year action plan comprising both a vision and a set of specific recommendations.²¹ Guided by the Center for Medicare and Medicaid Services' (CMS) triple-aim, the MRT concluded that the underlying problem is "not due to a lack of access to vital services" but instead that "for far too many people, care is not effectively managed" and that health disparities persist. The MRT also aspired that health care delivery system reforms from its Medicaid system redesign would spill over into New York's overall health care delivery system, beyond Medicaid.

The activities outlined in the MRT's multi-year action plan are organized along the triple-aim:

- To **improve care**, New York is creating fully-integrated care management for all Medicaid members, ensuring universal access to high quality primary care, implementing Patient-Centered Medical Homes, developing a robust health care workforce for the 21st century, improving the interoperability of electronic health records, and improving behavioral health integration with primary care.

¹⁷ New York State Department of Health. (2011). A plan to transform the Empire State's Medicaid program. Better care, better health, lower costs multi-year action plan. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/mrtfinalreport.htm

¹⁸ The healthy lives measure comprises "indicators that measure the degree to which a state's residents enjoy long and healthy lives, as well as factors such as smoking and obesity that affect health and longevity" (Commonwealth Fund, 2009, p. 25).

¹⁹ Commonwealth Fund. (2009, October). Aiming higher: results from a state scorecard on health system performance, 2009. Retrieved from https://www.commonwealthfund.org/publications/fund-reports/2009/oct/aiming-higher-results-state-scorecard-health-system-performance?redirect_source=/publications/fund-reports/2009/oct/2009-state-scorecard

²⁰ Cuomo, A.M. (2011, January 5). No. 5: Establishing the Medicaid Redesign Team [executive order]. Retrieved from <https://www.governor.ny.gov/news/no-5-establishing-medicaid-redesign-team>

²¹ New York State Department of Health. (2011). A plan to transform the Empire State's Medicaid program. Better care, better health, lower costs multi-year action plan. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/mrtfinalreport.htm

- To **improve health**, New York is pursuing strategies to reduce disparities in health outcomes, expanding access to affordable and supportive housing, and redesigning the Medicaid benefit to ensure access to clinically effective and efficiently delivered services.
- To **reduce costs**, New York developed a new statutory “global cap” on the state’s share of Medicaid spending, is strengthening and transforming the health care safety net, engaging in medical malpractice reform and payment reform, and redefining state and local relationships around Medicaid financing.

Having established the MRT’s multi-year plan, New York sought a Medicaid Section 1115 waiver amendment to “both allow the state to reinvest in its health care infrastructure as well as to give the state the freedom to innovate”.²² In April 2014, CMS approved New York’s Section 1115 Medicaid waiver amendment request allowing New York to reinvest \$8 billion of its anticipated \$17.1 billion federal savings over 5 years towards the MRT action plan, with \$6.42 billion of waiver funds allotted for its DSRIP program. The remainder of the MRT reinvestment is allocated to the Interim Access Assurance Fund (\$500 million) and other Medicaid Redesign purposes including supporting the development of health homes, and investments in long-term care, workforce, and enhanced behavioral health services (\$1.08 billion).²³

New York’s DSRIP program is not implemented in isolation. It is one of several New York initiatives to facilitate broader changes in the state’s health care environment, and leverages other programs and infrastructure. Other relevant activities include:

- A larger portfolio of MRT projects, which encompass over 400 completed or ongoing MRT projects being implemented in eight phases;²⁴
- The implementation of the Affordable Care Act;
- Continued focus on moving from fee-for-service to Medicaid managed care, including Health and Recovery Plans (HARPs) for adults with significant behavioral health needs;
- A Medicaid global spending cap;
- The Patient-Centered Medical Home and Advanced Primary Care (APC) initiative;
- Ongoing efforts to improve health information connectivity through the Statewide Health Information Network for New York (SHIN-NY), the technology platform that connects Qualified Entities across the state to exchange electronic clinical information; and
- A broader movement towards value based payment (VBP) modeling by government and private insurers.

This interim report focuses on New York’s DSRIP program, but it is important to recognize that it is one mechanism in a broad set of programs and policies to achieve the triple-aim. Caution is

²² Ibid, p. 41.

²³ New York State Department of Health. (n.d.). DSRIP overview. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/overview.htm

²⁴ New York State Department of Health. (2018, August). MRT projects compilation table updates. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/progress_updates/projects_compilation_table.htm

warranted when interpreting changes in performance metrics, as it is difficult to isolate the DSRIP program's impact from this broader context. The DSRIP program's influence on system transformation may also facilitate the implementation of other programs; enabling other programs to be successful is an important outcome but may not be captured in DSRIP performance metrics.

2.2. DSRIP Goals, Objectives, and Activities

2.2.1. Overview of DSRIP Goals and Objectives

New York's DSRIP program is embedded within its MRT Waiver Amendment's overarching triple-aim vision.²⁵ As the largest component of the MRT Waiver Amendment, the DSRIP program aims to achieve a 25% reduction in avoidable inpatient and emergency department hospital use over five years, and to use incentives to drive system transformation, and improvements in clinical management and population health. Four core measures are used to evaluate the DSRIP program's success in meeting its avoidable hospital utilization goal: potentially preventable emergency room visits, potentially preventable hospital readmissions, adult prevention quality indicators, and pediatric prevention quality indicators. In addition to these measurable objectives, New York's DSRIP aims to leverage managed care payment reform to ensure that delivery system transformation continues beyond the waiver period, provides near-term financial support for vital safety net providers at immediate risk of closure, and increases collaboration by requiring communities of eligible providers to partner on DSRIP projects.

To achieve its goals, New York's DSRIP program created 25 PPS, coalitions of safety net hospitals, clinics, and other eligible providers with clear business relationships. The PPS implement DSRIP projects towards the primary goal of reduced avoidable hospital use, and meeting broader objectives of system transformation and improved clinical management and population health. In selecting projects, PPS were required to respond to their communities' needs. The PPS are responsible for attributed Medicaid members and populations of uninsured people, which are assigned to them through an algorithm that considers characteristics such as geographic region and members' affiliations with providers.²⁶ Partners within each PPS earn incentive payments based on their documented performance towards measurable goals. Section 2.3 includes additional details on the attribution of Medicaid members to PPS and project payments.

²⁵ Information on the DSRIP program comes from the following New York State Department of Health sources, unless noted otherwise: (1) DSRIP frequently asked questions (FAQs), retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/dsrip_faq/section2_faqs.htm; (2) Special Terms and Conditions Attachment I – NY DSRIP program funding and mechanics protocol , retrieved from https://www.health.ny.gov/health_care/managed_care/appextension/docs/2017-07-20_rev_att1.pdf; (3) Special Terms and Conditions Attachment J – NY DSRIP strategies menu and metrics, retrieved from https://www.health.ny.gov/health_care/managed_care/appextension/docs/2018-01-18_attj_rev.pdf; (4) DSRIP Project Toolkit, retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf.

²⁶ As described in section 2.3, only PPS that selected project 2.d.i, or the “11th project,” have uninsured or low/non-utilizing populations attributed to them for valuation and performance.

In addition to incentive payments for PPS to reach their project-related performance goals, the PPS are responsible for collectively meeting statewide accountability milestones (SWAM), listed below. The SWAM target values change across DSRIP Demonstration Years (DY), reflecting a desire for increasing performance over time. Failure to meet the SWAM milestones triggers funding penalties of 5% of funds from CMS in Demonstration Year (DY) 3, 10% of funds in DY4, and 20% of funds in DY5.²⁷

- **Statewide performance metrics:** At least 50% of measures must be determined to be improving or maintaining, versus worsening. Sixteen statewide measures were selected for this SWAM milestone.
- **Success of projects statewide:** At least 50% of eligible PPS-level measures must meet their Annual Improvement Target thereby triggering awards to PPS.
- **Total Medicaid spending:** Statewide total Medicaid spending (in DY4 and DY5) and total inpatient and emergency room spending (in DY3, DY4, and DY5) among attributed members must meet annual targets measured on a per member per month basis.²⁸
- **Managed care plan:** A minimum percentage of total Medicaid managed care organization expenditures must be in specific levels of VPB contracts.

2.2.2. Conceptual Framework Guiding DSRIP Activities

New York's DSRIP program takes a holistic approach to system transformation (see Exhibit 2.1). As described by the NYS DOH, the underlying conceptual framework places the social determinants of health at the foundation.²⁹ The second level is to introduce "system-ness" into health care, emphasizing a focus on broader systems and cross-sector collaboration rather than working in silos. Higher levels include investing in primary care, including investment in health information technology and patient-centered medical homes; working with key subpopulations with high cost of care, such as people living with HIV/AIDS or with intellectual and/or developmental disabilities; and tracking quality measures at all levels of care.³⁰

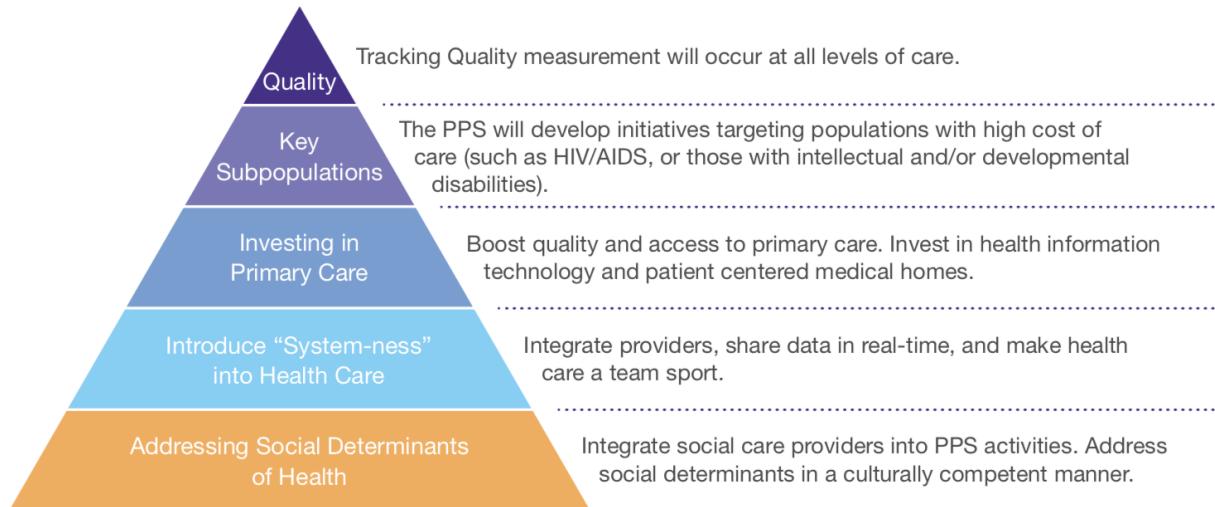
²⁷ New York State Department of Health. (2018, April 30). Statewide accountability milestones monthly status update (slide deck).

²⁸ The DY3 milestone on statewide spending was reported to CMS as passed (total inpatient and emergency room spending was under the target spending rate). The DSRIP program's influence on cost will be addressed in the final summative report and not the interim report because the program is still underway.

²⁹ Helgerson, J. (2016, October 17). *NYS DSRIP Whiteboard – An Eye toward the Future* [Video file]. Retrieved from <https://www.youtube.com/watch?v=gAUqU7RSers>

³⁰ Kiernan, D. and Cooper, J. (2017, April 10). DSRIP overview presentation to the DSRIP Independent Evaluator team, p. 20.

Exhibit 2.1. Holistic approach to system transformation



Source: Adapted with permission from New York State Department of Health.

Ultimately, the DSRIP program should reduce total costs to New York's Medicaid program by changing the mix of health care services delivered and facilitating the transition from fee-for-service to VBP contracting. Exhibit 2.2 illustrates a high-level conceptual logic model of how the DSRIP program's delivery system reforms are intended to reduce total costs by shifting health care services upstream, and achieve a value based health care system. The DSRIP program's large emphasis on VBP reform relates to its objective of long-term sustainability.³¹

Value in health care is a function of the health outcomes that matter to patients and the true cost.³² Conceptually, improved value can be measured in several domains. In Exhibit 2.2, the upward pointing orange arrows illustrate important outcomes that are expected to improve: patient and caregiver experiences, care coordination, patient safety, care for at-risk populations, and preventative health. Overall costs will be lowered as a result of *increased* use of less costly preventive services and coordinated primary care, and subsequent *reduced* use of emergency departments, inpatient hospital visits, pharmacy benefits, and institutional long-term care (downward pointing blue arrows). In the conceptual model, reductions in emergency department and inpatient visits are highlighted to reflect New York's core program objective to "reduce avoidable hospital use by 25% through transforming the New York State health care system into a financially viable, high performing system."³³

Investment in governance, staff, technical expertise, technology resources, and associated activities can transition Medicaid providers to VBP. Changing health systems in an environment where both fee-for-service and VBP operate simultaneously is challenging, and requires organizational focus and capital. For example, shifting from a business model of ensuring daily

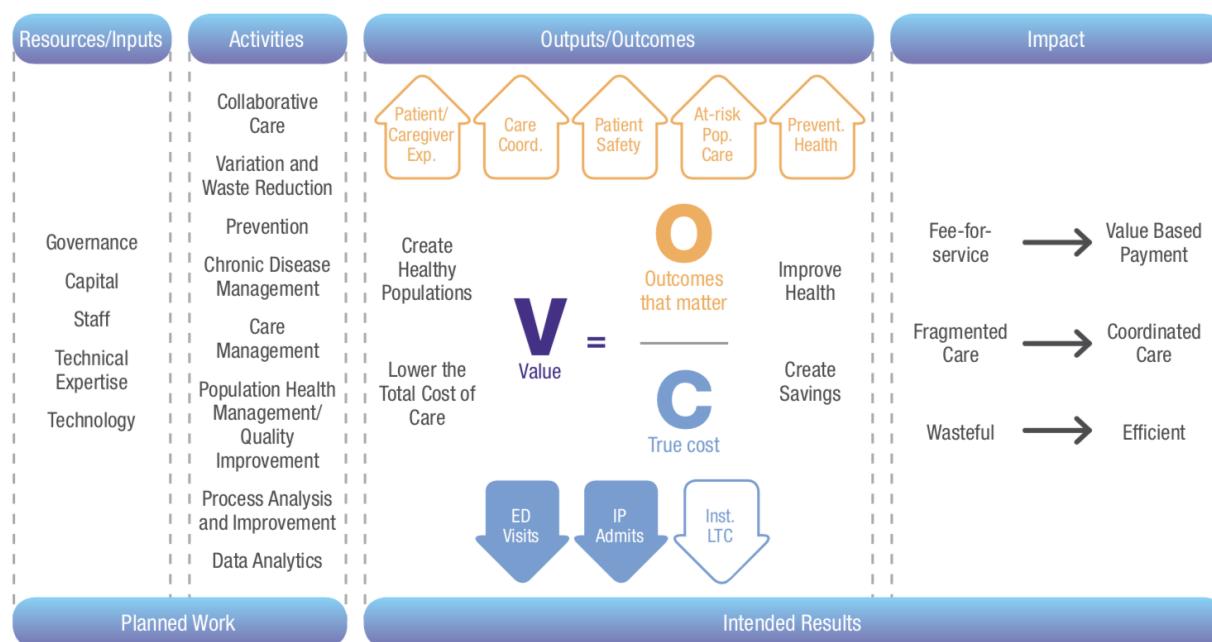
³¹ A complete DSRIP-related website describing VBP and offering tools for DSRIP providers is accessible at https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/vbp_reform.htm

³² Porter, M.E. & Lee, T.H. (2013). The strategy that will fix health care. *Harvard Business Review*. Retrieved from <https://hbr.org/2013/10/the-strategy-that-will-fix-health-care>.

³³ New York State Department of Health. (n.d.). DSRIP Project Toolkit, p. 2. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf.

patient visit volume to delivering health prevention strategies to prevent readmissions and expensive tertiary care (relevant to both DSRIP program Domains 3 and 4) require significant resources, including provider and staff time, to educate and build relationships between patients and providers. New York's DSRIP program enables a shift towards increased primary care services and decreased emergency and inpatient services, and the development of VBP-focused infrastructure through: grant funding, technical assistance, data sharing, training and support to PPS. Activities such as collaborative care, chronic disease management, and data analytics are designed to drive success on both health outcomes, and the total cost of care.

Exhibit 2.2. Overview of DSRIP activities, outputs, outcomes, and impact



Source: Authors' synthesis of DSRIP program materials

Abbreviations: Emergency Department (ED), Experiences (Exp), Inpatient (IP), Institutional (Inst), Long-term Care (LTC)

2.2.3. Development of Performing Provider Systems

Following the DSRIP program's focus on "system-ness," entities pursuing DSRIP projects were required to develop integrated networks of public hospitals and safety-net providers who were collectively accountable for performance.³⁴ The "Performing Provider Systems" refers to the performance network of lead entities and their associated partners. An entity could be associated with a PPS as a partner or as an outside contractor. The distinction is that partners were in formal performance-based collaborative relationships to implement PPS project plans.

³⁴ Entities without a safety-net provider designation can participate as members, but they are only eligible for up to 5% of the PPS's total performance payments.

Under leadership by the PPS, the collective performance of PPS partners drives achievement of DSRIP milestones to enable payments to the PPS and to its partners.

Each PPS is led by an entity that is either a safety net provider or else a group of safety net providers collaborating to form a new governing structure (“NewCo”). To qualify as a lead entity, safety net providers also had to demonstrate qualifications to manage the PPS, such as prior collaborative experience, leadership and administrative capabilities, and financial stability. The PPS lead entities were required to form partnerships with community providers representing diverse partner types, including hospitals, health homes, skilled nursing facilities, federally qualified health centers, behavioral health providers, and community-based organizations. The inclusion of an array of partners, including providers of supportive services such as housing, was intended to address the entire continuum of care including the social determinants of health. In some regional areas, a single provider can be a member of multiple PPS.

The STC specify that 95% of the PPS achieved performance payments must go to safety net providers. PPS partners are eligible for performance payments (described in section 2.3) if they meet safety net criteria.³⁵ Hospitals were defined as “safety net” upon meeting at least one of the following criteria: (1) being a public hospital, critical access hospital, or sole community hospital; (2) having at least 35% of outpatient consumers *and* at least 30% of inpatient consumers with Medicaid, Medicaid/Medicare dual insurance, or no insurance; or (3) serving at least 30% of all members who have Medicaid, Medicaid/ Medicare dual insurance, or no insurance in their communities. Non-hospital providers received a CMS-approved safety net status, and thus eligible for DSRIP performance payments, if they participated as part of a state-designated health home; or at least 35% of consumers had Medicaid, Medicaid/Medicare dual insurance, or no insurance. Non-safety net providers including community-based organizations such as housing providers who have no Medicaid billing reports, private doctors, and independent practice associations who did not have sufficient Medicaid payor mix were allowed to join the PPS. However, these non-safety net providers could only receive up to 5% of the PPS’ performance payments.

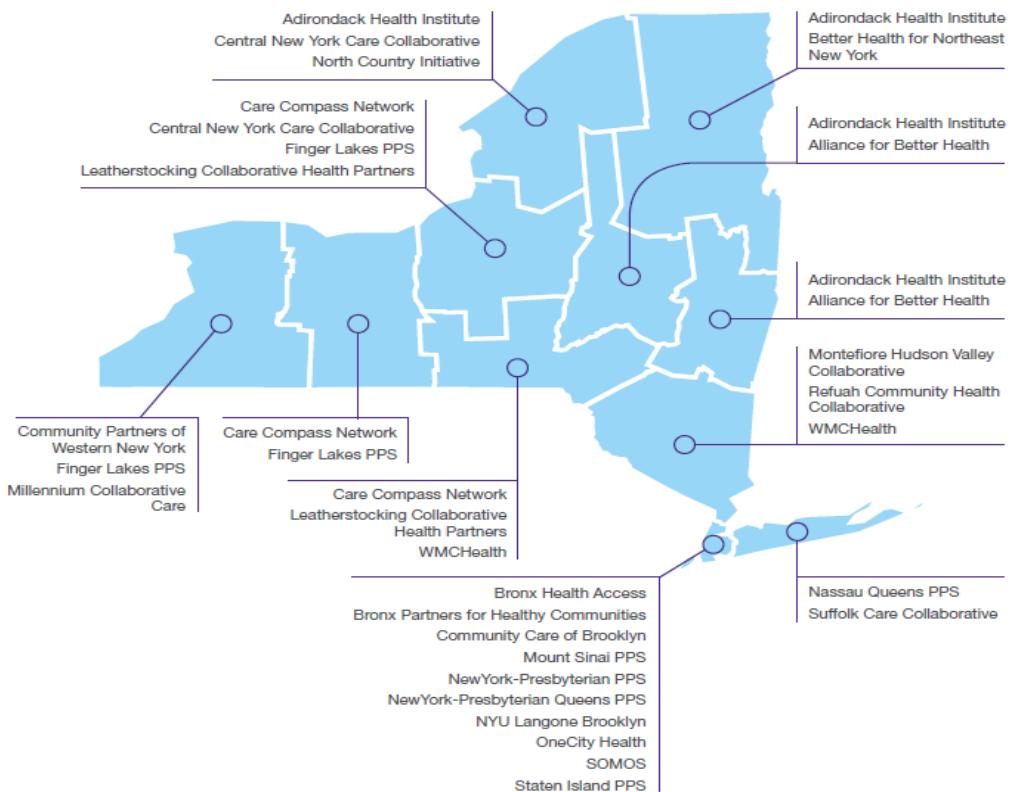
In the early years of the DSRIP program, the PPS were able to adjust their performance networks over time.³⁶ New partners were able to join PPS during annual network re-openings until MY5 began in July 2018. The PPS were allowed to drop partners only during the mid-point assessment in December 2016.

³⁵ On a case-by-case basis, “vital access provider” exceptions were made by CMS to allow non-safety net providers to be considered “qualifying safety net providers” for the purpose of the DSRIP program. The vital access providers had to meet one of three CMS criteria: (1) location in a community without a safety net provider willing or able to develop and lead a PPS; (2) hospitals with one or more unique qualifications to be PPS lead entities (available services, financial viability, community relationships, and/or past success in reducing avoidable hospitalizations); and (3) state-designated health homes.

³⁶ The DSRIP program distinguishes performance and valuation networks. The annual network re-openings and one-time drop during the midpoint assessment period refer to the performance network of partners actively collaborating on DSRIP projects to meet performance goals. The valuation network represents the PPS partner membership on December 1, 2014, and used to attribute members for valuation. Unlike the evolving performance networks, the valuation networks do not change over time.

In total, there are 25 PPS located across the state (see Exhibit 2.3), covering each of the 62 counties across New York. In New York City and Long Island, some PPS cover only one county and ten PPS serve the five boroughs with some overlap. In contrast, the PPS in upstate New York regions serve multiple counties that cover a larger and more diverse geographic area but with a lower population density and in some cases may be the only PPS in that county. (see the New York DSRIP Terminology Guide at the front of the report for a full list of PPS and their counties served.)

Exhibit 2.3. Geographic distribution of New York's Performing Provider Systems across the 11 DSRIP planning regions



Source: Authors' synthesis of PPS website.³⁷

Notes: See the New York DSRIP Terminology Guide at the front of the report for a list of the PPS acronyms. The 11 regions were developed for DSRIP planning purposes only.

2.2.4. Selection of Projects by Performing Provider Systems

The DSRIP program's projects are classified by domain, with Domain 1 focused on overall PPS organization and Domains 2, 3, and 4 focused on various areas of transformation.³⁸

³⁷ New York State Department of Health. (n.d.) DSRIP Performing Provider Systems (PPS): PPS by County. Available at https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/pps_map/index.htm

³⁸ A comprehensive list of DSRIP projects and descriptions is included in the DSRIP Project Toolkit, available at https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf

- **Domain 1** outputs are structurally-focused, related to setting up the PPS networks, projects, capacity, and structural changes that are foundational to program operations. Instead of projects, Domain 1 focuses on organizational implementation milestones.
- **Domain 2** outcomes are related to system transformation. Project categories are: creating integrated delivery systems, implementing care coordination and transitional care programs, connecting settings, and “patient activation” to expand access to community-based care for special populations.
- **Domain 3** outcomes focus on clinical improvement. Projects are categorized by health condition: behavioral health, cardiovascular health, diabetes care, asthma, HIV/AIDS, perinatal care, palliative care, and renal care.³⁹ DSRIP has a special focus on behavioral health, as all PPS were required to select a behavioral health project.
- **Domain 4** outcomes focus on population health. These DSRIP projects mirror the goals, objectives, and strategies of the state’s Prevention Agenda.⁴⁰ New York’s 2013-2018 Prevention Agenda contains detailed goals and measurable objectives, recommended strategies (analogous to DSRIP projects), technical assistance, and a data dashboard that stakeholders can use to inform their community needs assessments and view progress towards their Prevention Agenda goals.

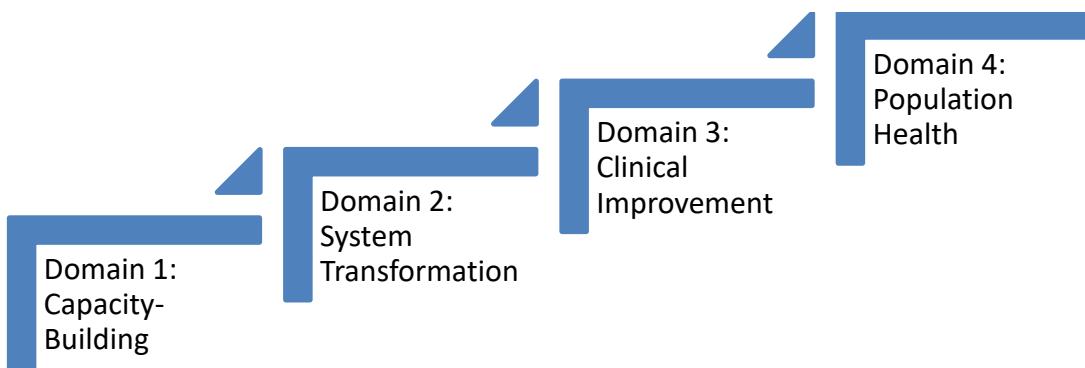
The four domains were deliberately additive (see Exhibit 2.4); for example, PPS capacity (Domain 1), organizational structures to facilitate system transformation (Domain 2), and clinical improvement interventions (Domain 3) are all pre-conditions for promoting population health (Domain 4). Domain 1 measurable objectives are *program outputs*, whereas measurable objectives from Domains 2, 3, and 4 represent short, medium, and long-term *program outcomes*.

³⁹ The PPS chose projects in 7 of the 8 clinical categories in Domain 3. None of the PPS selected the project on renal care (project 3.h.i, specialized medical home for chronic renal failure).

⁴⁰ The Prevention Agenda 2013-2018 contains five priority areas and associated state and local action plans, as well as a focus on improving health equity. Its focus areas are: (1) preventing chronic diseases; (2) promoting a healthy and safe environment; (3) promoting healthy women, infants, and children; (4) promoting mental health and substance abuse; and (5) preventing HIV, sexually transmitted diseases, vaccine-preventable diseases, and health care-associated infections. These line up with the DSRIP projects with the exception of promoting a healthy and safe environment; the recommended interventions for these projects (e.g., increasing the percentage of residents with fluoridated drinking water and improving the design and maintenance of home environments) cannot be modified directly through DSRIP’s clinically-focused interventions. Retrieved from

https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/

Exhibit 2.4. Schematic of the additive effect of projects in four DSRIP domains



Source: Authors' synthesis of NYS DOH program materials.

New York's DSRIP program offered the PPS a defined list of 44 projects. The 44 potential projects outlined in the Project Toolkit (see Exhibit 2.5) were designed to meet the core DSRIP program goals of reducing avoidable hospital use and transforming the New York health care system into a financially viable, high performing system. A limited project list was required by CMS, and state administrators predicted that a focused project menu could improve overall success, project evaluation efforts, and state oversight.⁴¹

Exhibit 2.5. List of New York DSRIP program projects

Project No.	Description
Domain 2: System Transformation Projects	
A.	Create Integrated Delivery Systems
2.a.i	Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/Population Health Management
2.a.ii	Increase certification of primary care practitioners with PCMH certification and/or Advanced Primary Care Models (as developed under the NYS Health Innovation Plan (SHIP))
2.a.iii	Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes through access to high quality primary care and support services
2.a.iv	Create a medical village using existing hospital infrastructure
2.a.v	Create a medical village/alternative housing using existing nursing home infrastructure
B.	Implementation of Care Coordination and Transitional Care Programs
2.b.i	Ambulatory Intensive Care Units (ICUs)

⁴¹ Bachrach, D., Bernstein, W., Augenstein, J., Lipson, M., & Ellis, R. (2016, April 21). Implementing New York's DSRIP program: implications for Medicaid payment and delivery system reform, p. 13. Retrieved from <https://www.commonwealthfund.org/publications/fund-reports/2016/apr/implementing-new-yorks-dsrip-program-implications-medicaid>

Project No.	Description
2.b.ii	Development of co-located primary care services in the emergency department (ED)
2.b.iii	ED care triage for at-risk populations
2.b.iv	Care transitions intervention model to reduce 30 day readmissions for chronic health conditions
2.b.v	Care transitions intervention for skilled nursing facility (SNF) residents
2.b.vi	Transitional supportive housing services
2.b.vii	Implementing the INTERACT project (inpatient transfer avoidance program for SNF)
2.b.viii	Hospital-Home Care Collaboration Solutions
2.b.ix	Implementation of observational programs in hospitals
C.	Connecting Settings
2.c.i	Development of community-based health navigation services
2.c.ii	Expand usage of telemedicine in underserved areas to provide access to otherwise scarce services
D.	Utilizing Patient Activation to Expand Access to Community Based Care for Special Populations
2.d.i	Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing Medicaid populations into Community Based Care
Domain 3: Clinical Improvement Projects	
A.	Behavioral Health
3.a.i	Integration of primary care and behavioral health services
3.a.ii	Behavioral health community crisis stabilization services
3.a.iii	Implementation of evidence-based medication adherence programs (MAP) in community based sites for behavioral health medication compliance
3.a.iv	Development of Withdrawal Management (e.g., ambulatory detoxification, ancillary withdrawal services) capabilities and appropriate enhanced abstinence services within community-based addiction treatment programs
3.a.v	Behavioral Interventions Paradigm (BIP) in Nursing Homes
B.	Cardiovascular Health—Implementation of Million Hearts Campaign
3.b.i	Evidence-based strategies for disease management in high risk/affected populations (adult only)
3.b.ii	Implementation of evidence-based strategies in the community to address chronic disease – primary and secondary prevention projects (adult only)
C.	Diabetes Care
3.c.i	Evidence-based strategies for disease management in high risk/affected populations (adults only)
3.c.ii	Implementation of evidence-based strategies to address chronic disease – primary and secondary prevention projects (adults only)
D.	Asthma
3.d.i	Development of evidence-based medication adherence programs (MAP) in community settings– asthma medication
3.d.ii	Expansion of asthma home-based self-management program

Project No.	Description
3.d.iii	Implementation of evidence-based medicine guidelines for asthma management
E.	HIV/AIDS
3.e.i	Comprehensive Strategy to decrease HIV/AIDS transmission to reduce avoidable hospitalizations – development of a Center of Excellence for Management of HIV/AIDS
F.	Perinatal Care
3.f.i	Increase support programs for maternal & child health (including high risk pregnancies) (Example: Nurse Family Partnership)
G.	Palliative Care
3.g.i	Integration of palliative care into the PCMH Model
3.g.ii	Integration of palliative care into nursing homes
H.	Renal Care
3.h.i	Specialized Medical Home for Chronic Renal Failure
Domain 4: Population Wide Projects: New York's Prevention Agenda	
A.	Promote Mental Health and Prevent Substance Abuse (MHSA)
4.a.i	Promote mental, emotional and behavioral (MEB) well-being in communities
4.a.ii	Prevent Substance Abuse and other Mental Emotional Behavioral Disorders
4.a.iii	Strengthen Mental Health and Substance Abuse Infrastructure across Systems
B.	Prevent Chronic Diseases
4.b.i	Promote tobacco use cessation, especially among low SES populations and those with poor mental health.
4.b.ii	Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings (Note: This project targets chronic diseases that are not included in domain 3, such as cancer)
C.	Prevent HIV and STDs
4.c.i	Decrease HIV morbidity
4.c.ii	Increase early access to, and retention in, HIV care
4.c.iii	Decrease STD morbidity
4.c.iv	Decrease HIV and STD disparities
D.	Promote Healthy Women, Infants and Children
4.d.i	Reduce premature births

Source: Reproduced from the New York DSRIP Project Toolkit.⁴²

The PPS were required to perform stakeholder-engaged community needs assessments to understand their local demographics and health care needs, and available health care and community resources. Based on their findings, the PPS chose between five and 10 projects for valuation and scoring purposes following decision criteria specified in the DSRIP Project Toolkit (see Exhibit 2.6). With the exception of the behavioral health Domain 3 measures, if the PPS's pre-DSRIP initiation performance on the majority of Domain 3 measures relevant to a project

⁴² New York State Department of Health. New York State Delivery System Reform Incentive Payment Program Project Toolkit. Retrieved from

https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf

was close to the high performance goal, the project would not be approved. These decision criteria ensured that PPS implemented projects in each domain, with an emphasis on behavioral health and tailoring projects to local community needs.

Each PPS submitted a DSRIP Project Plan comprising:

- A selection of Domain 2, 3, and 4 projects,
- A rationale for selecting the projects,
- Specific goals,
- A description of how the projects would change the system,
- A list of partners attesting to join their PPS network,
- A description of project activities, and
- A justification for the funding.

Exhibit 2.6. Decision criteria guiding the selection of DSRIP projects

Domain	Selection Requirements for Project Valuation and Scoring
Domain 2	<ul style="list-style-type: none">• Between two and four projects• Selection based on community needs assessment• At least one project from strategy sub-list A, and at least one project from strategy sub-lists B or C• If qualified, project 2.d.i. allowed as an additional project from this list (also referred to as the “11th project”)
Domain 3	<ul style="list-style-type: none">• Between two and four projects• Selection based on community needs assessment• At least one project from strategy sub-list A
Domain 4	<ul style="list-style-type: none">• Between one and two projects• Based on community needs assessment• Consistent with, but not duplicate, Domain 3 projects• Applicable to the full service area population

Source: Authors' synthesis of the New York DSRIP Project Toolkit.⁴³

Some PPS, primarily the major public hospitals, received NYS DOH approval to pursue an 11th project in their area (project 2.d.i.). The goal of the 11th project was to incorporate uninsured members into the DSRIP program and to reach out to non-utilizing and low-utilizing Medicaid members who might otherwise end up in the hospital for a preventable visit. To be eligible for the 11th project, a PPS had to already be pursuing 10 projects, demonstrate its network had sufficient capacity to undertake the additional project, and have a network that was suitable for serving the uninsured and non-utilizing and low-utilizing Medicaid populations in its geographic area. If a public hospital PPS in a county was eligible for and received approval for the 11th project, no other PPS in the county could pursue it (“right of first refusal”). If a county did not

⁴³ New York State Department of Health. New York State Delivery System Reform Incentive Payment Program Project Toolkit. Retrieved from

https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf

have a public hospital PPS or else the public hospital PPS elected to not pursue the 11th project, then one or more other PPS could be approved to pursue it in that county.

The DSRIP project plan applications were reviewed in 2014 by the Independent Assessor to ensure their compliance with the DSRIP program's STC. The Independent Assessor also scored each DSRIP project plan and provided its recommendations for their approval or rejection. The Project Approval and Oversight Panel, a panel of non-conflicted experts and public stakeholders reviewed the Independent Assessor's recommendations and made decisions to accept, reject or modify them. These were then passed on to the New York State Commissioner of Health for final determination.

2.3. Attribution and Project Valuation

Project payments are based on project performance, with funding disbursed to the PPS who then pay their PPS partners based on their individual contract terms.⁴⁴ A unique feature of New York's DSRIP program is that in addition to the PPS collective performance of its diverse partners, New York's federal funding is also tied to achieving the statewide accountability milestones (SWAM) beginning in DSRIP Demonstration Year 3.⁴⁵ Domain 1 infrastructure-building payments are linked to reporting (Pay for Reporting [P4R]) and payments for projects in domains 2, 3, and 4 are linked to performance (Pay for Performance [P4P]). Over the five-year DSRIP program period, many P4R payments transition to P4P, with some exceptions such as Domain 4 which are P4R throughout all DSRIP years (see Exhibit 2.7).

Exhibit 2.7. Shift in funding from pay for reporting to pay for performance

Domain	Payment Type	Annual Funding Percentages				
		DY1	DY2	DY3	DY4	DY5
Domain 1: Project Process Milestones	P4R	80%	60%	40%	20%	0%
Domain 2: System Transformation and Financial Stability Milestones	P4P	0%	0%	50%	72%	93%
	P4R	20%	40%	10%	8%	7%
Domain 3: Clinical Improvement Measures	P4P	0%	30%	50%	70%	90%
	P4R	20%	10%	10%	10%	10%
Domain 4: Population Health Outcomes	P4R	20%	40%	60%	80%	100%
Total		100%	100%	100%	100%	100%

Source: Adapted from the Special Terms and Conditions (STC), Attachment I⁴⁶

Abbreviations: Demonstration Year (DY), Pay for Performance (P4P), Pay for Reporting (P4R)

⁴⁴ While PPS could include non-safety net providers in their performance networks, at least 95% of the total DSRIP payments earned by PPS had to be distributed to its safety net providers.

⁴⁵ Felland, F., Lipson, D., & Heeringa, J. (2018, April). Examining New York's Delivery System Reform Incentive Payment System: achievement at the demonstration's midpoint and lessons for other states. Retrieved from <https://www.medicaid.gov/medicaid/section-1115-demo/downloads/evaluation-reports/ny-dsrip-case-study.pdf>

⁴⁶ Special Terms and Conditions Attachment I – NY DSRIP program funding and mechanics protocol, retrieved from https://www.health.ny.gov/health_care/managed_care/appextension/docs/2017-07-20_rev_att1.pdf.

Notes: The sum of the Domain 1 P4R percentage and the percentages of the P4R and P4P in each of the remaining Domains totals 100%. For example, total funding for Domain 2 in DY3 is based 40% on reporting Domain 1 milestones (P4R), 50% on Domain 2 performance (P4P), and 10% on reporting Domain 2 milestones (P4R).

The Independent Assessor determined project valuations for each PPS DSRIP project plan following a methodology specified in the STC. Maximum application values, the highest financial payment that each PPS could receive during their DSRIP program participation, were based on factors such as the projects selected, the DSRIP Project Plans' application scores, "scale and speed" commitments (i.e., the number of sites, providers, and entities; percent of safety net providers; number of actively engaged members and the timelines for project implementation and patient engagement), and the size of the attributed Medicaid population for each project.⁴⁷ In setting their scale and speed commitments, PPS had to consider trade-offs between setting aggressive targets that might calculate high potential payments versus the risk of underperforming and potentially missing payments altogether.⁴⁸

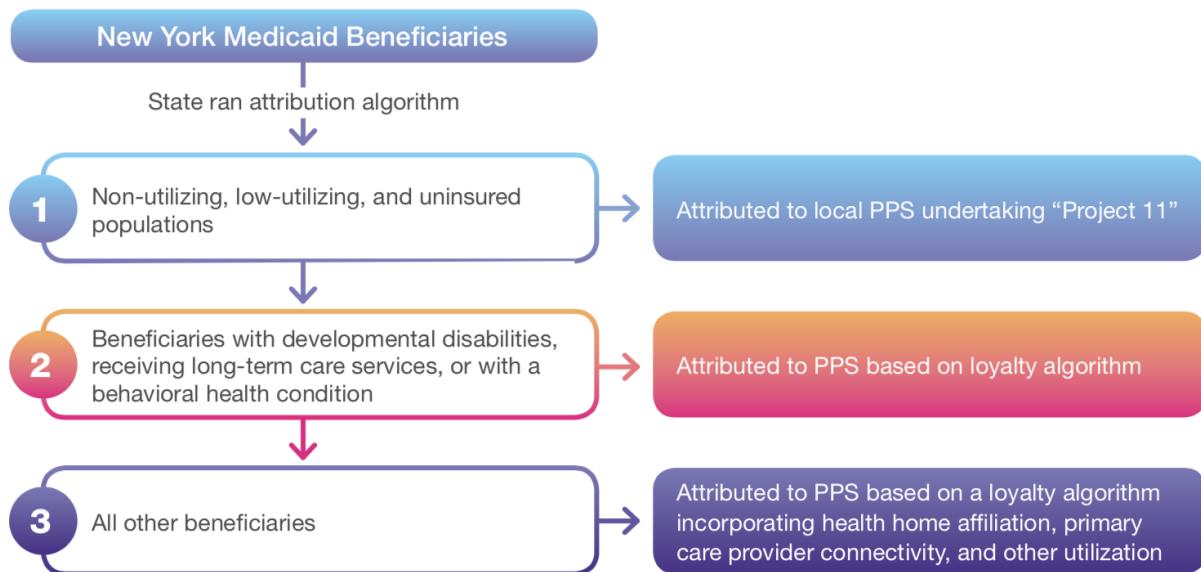
An attribution methodology assigned each Medicaid member and a portion of uninsured individuals in each region to one and only one PPS, with a separate attribution for valuation and performance. The attribution for valuation was based on membership on December 1, 2014; it represents the maximum funding that a PPS could receive over its DSRIP duration. This fixed amount does not change even if the PPS drop or add partners over time. The attribution for performance adjusts annually and reflects the number of attributed Medicaid members based on the current partners in the PPS performance networks.

The basic features of the attribution logic are shown in Exhibit 2.8, with additional details in Appendix 2. Medicaid members with partial Medicaid coverage or supplemental coverage from other insurances were not included in attribution. The non-utilizing, low-utilizing, and uninsured populations were attributed to the local PPS undertaking the 11th project. For the remainder of Medicaid members with full Medicaid coverage, geography, patient visit information, and patients' primary care provider assignments were used to first classify members into one of four health populations or "swim lanes" (developmental disabilities, long-term care, behavioral health, or other). A "loyalty" algorithm within each "swim lane" was then used to assign the member to the PPS that contained the providers where most of the members' services were received. In addition to the loyalty algorithm, some members were attributed to a PPS based on their total claims, their assigned primary care provider, or via their ZIP code.

⁴⁷ The full project valuation methodology is outlined in the STC Attachment I, retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/docs/program_funding_and_mechanics.pdf.

⁴⁸ Helgerson, J. (2014, November 14). NYS DSRIP whiteboard – project plan scale and speed of implementation. [Video file]. Retrieved from <https://www.youtube.com/watch?v=f2UP3rQh1SQ&feature=youtu.be>

Exhibit 2.8. Overview of Performing Provider System attribution methodology



Source: Adapted with permission from Bachrach et al. 2016.⁴⁹ See Appendix 2 for additional details.

Notes: If a PPS is the only one in a county, its attribution includes all beneficiaries receiving a plurality of services in that county. Non-utilizing members are defined as Medicaid members who have not used services in a given year. Low-utilizing Medicaid members are defined as using three or fewer services per year and having no relationship with their primary care provider or care manager.

⁴⁹ Bachrach, D., Bernstein, W., Augenstein, J., Lipson, M., & Ellis, R. (2016, April 21). Implementing New York’s DSRIp program: implications for Medicaid payment and delivery system reform. Retrieved from <https://www.commonwealthfund.org/publications/fund-reports/2016/apr/implementing-new-yorks-dsrip-program-implications-medicaid>

3. Independent Evaluation Study Design

3.1. Research Questions and Hypotheses

The Independent Evaluation is guided by seven overarching research questions (RQ) and corresponding hypotheses (see Exhibit 3.1).⁵⁰ Consistent with the mixture of Pay for Reporting (P4R) and Pay for Performance (P4P) payments (see Section 2.3), there are both process and outcome measures. All hypotheses and definitions of “improvements” are in comparison to the statewide pre-DSRIP initiation trend. For example, if utilization of behavioral health services (hypothesis 3) were increasing statewide in the pre-DSRIP initiation period, there should be a more rapid rate of increase in the post-DSRIP initiation period.⁵¹ If total health care costs were increasing in the pre-DSRIP initiation period, then the rate of cost growth would be slower in the post-DSRIP initiation period (hypothesis 13). If the outcome of total costs improved, the post-DSRIP initiation trend could: (a) continue to increase but at a slower rate than in the pre-DSRIP initiation period, (b) remain at a steady level thereby having a slower growth rate compared to the pre-DSRIP initiation period, or (c) decline.

Exhibit 3.1. Overarching research questions and hypotheses for the Independent Evaluation

Research questions

- **RQ-A:** What were the successes and challenges with respect to PPS planning, implementation, operation, and plans for program sustainability from the perspective of DSRIP program planners, administrators, and providers; and why were they successful or challenging?
- **RQ-B:** Did health care quality improve as a result of clinical improvements in the treatment of selected diseases and conditions?
- **RQ-C:** Did population health improve as a result of implementation of New York’s DSRIP initiative? (Sub-question: Were racial and ethnic disparities on specific population measures reduced following the DSRIP program?⁵²)
- **RQ-D:** Did utilization of behavioral health care services increase as a result of the DSRIP program?
- **RQ-E:** Was avoidable hospital utilization reduced as a result of the DSRIP program?
- **RQ-F:** To what extent did PPS achieve health care system transformation, including increasing the availability of behavioral health care?

⁵⁰ Some of the research questions and hypotheses were edited slightly from the original Request for Proposals and CMS-approved Independent Evaluation plan. See Appendix 3 for a comprehensive crosswalk to the updated research questions and hypotheses and the rationale behind the changes.

⁵¹ Nearly all time point observations in the study are during the period when the DSRIP program is underway. The “pre/post” language is standard for time series analysis. The “pre” period refers to the early stages when the PPS are forming, and the “post” initiation period refers to the middle stages of the DSRIP program when the PPS are implementing their projects.

⁵² Specific measures for this sub-question are: premature deaths, newly diagnosed cases of HIV, preterm births, adolescent pregnancy rate per 1,000 females aged 15-17, percentage of unintended pregnancy among live births, and infants exclusively breastfed while in the hospital.

- **RQ-G:** Did the DSRIP program reduce health care costs? (Sub-question: Was the DSRIP program cost effective in terms of New York and federal governments receiving adequate value for their investments?)

Hypotheses

- **H1:** Health care quality will increase in the following areas: (a) behavioral health, (b) cardiovascular health, (c) diabetes care, (d) asthma, (e) HIV/AIDS, (f) perinatal care, (g) palliative care, and (h) renal care.⁵³
- **H2a:** Population health measures will improve in the following areas: (a) mental health and substance abuse, (b) prevention of chronic diseases, (c) prevention of HIV and STDs, and (d) health of women, infants, and children.
- **H2b:** Racial and ethnic disparities in premature deaths, newly diagnosed cases of HIV, preterm births, adolescent pregnancy rates, percentage of unintended pregnancy among live births, and infants exclusively breastfed in the hospital will decrease.
- **H3:** Behavioral health care service utilization will increase.
- **H4:** Primary care utilization will increase.
- **H5:** Avoidable hospital utilization will decrease.
- **H6:** Health care service delivery integration will increase.
- **H7:** Health care coordination will increase.
- **H8a:** Primary care, behavioral health, and dental service utilization among the uninsured, non-utilizing, and low-utilizing populations will increase.
- **H8b:** Emergency department utilization among the uninsured, non-utilizing, and low-utilizing populations will decrease.
- **H9:** Costs for primary care services will increase.
- **H10:** Costs for behavioral health care services will increase.
- **H11:** Costs for emergency department services will decrease.
- **H12:** Costs for hospital inpatient services will decrease.
- **H13:** Total cost of care will decrease.

Source: Adapted from the Request for Proposals. RQ-A, RQ-E, RQ-F, and RQ-G are formerly CMS RQ-7, CMS RQ-1, and CMS RQ-6, respectively. See Appendix 3 for a comprehensive crosswalk of the original RQs and hypotheses and their reordering and adaptation for the interim report.⁵⁴

Abbreviations: Hypothesis (H), Research Question (RQ)

Notes: All hypotheses reflect changes compared to the baseline trend, e.g., if costs were increasing pre-DSRIP initiation then the total cost of care will either have a slower growth rate, remain constant, or decline.

A description of each RQ and associated hypotheses follows. There is some overlap among RQs, hypotheses, and DSRIP domains: some hypotheses relate to multiple RQs, each domain is associated with one or more RQs, and some RQs relate to multiple domains.

RQ-A: What were the successes and challenges with respect to PPS planning, implementation, operation, and plans for program sustainability from the perspective

⁵³ Hypothesis 1 includes renal care per the Request for Proposal and CMS-approved Independent Evaluation plan. However, it should be noted that no PPS selected the Domain 3 project on renal care (project 3.h.i, specialized medical home for chronic renal failure).

⁵⁴ Request for Proposals RFP # 16336, Independent Evaluation of the New York State Delivery System Reform Incentive Payment Program, issued December 29, 2015, pp. 6-7.

of DSRIP program planners, administrators, and providers; and why were they successful or challenging?

This RQ is relevant to Domain 1 (PPS capacity-building), and the overarching DSRIP program goal to make system transformation sustainable. For the purposes of the Independent Evaluation, these qualitative findings provide critical contextual information for interpreting the quantitative performance outcomes relevant to the remaining RQ-B through RQ-G. For example, PPS reporting higher implementation challenges may have lower performance, or implementation delays common to all PPS would lead to observed time lags in the time series analyses of performance measures.

Hypotheses are not applicable to the qualitative research conducted to answer this RQ (focus groups and interviews), or the descriptive analyses of the close-ended surveys completed by patients and PPS partners. No hypotheses are provided for RQ-A, as they are not appropriate for these analyses.

RQ-B: Did health care quality improve as a result of clinical improvements in the treatment of selected diseases and conditions?

This RQ is associated with Domain 3 clinical improvement projects. It is linked to hypothesis H1.

RQ-C: Did population health improve as a result of implementation of New York's DSRIP initiative? (Sub-question: Were racial and ethnic disparities on specific population measures reduced following the DSRIP program?⁵⁵)

This RQ is related to Domain 4 population-wide projects, which align with New York's Prevention Agenda (with the exception of the "promote a healthy and safe environment" focus area, which is not a component of the DSRIP program). It is linked to hypotheses H2a and H2b.

RQ-D: Did utilization of behavioral health care services increase as a result of the DSRIP program?

Similar to RQ-B, this question is related to the Domain 3 clinical improvement projects but with a particular focus on behavioral health (Projects 3.a.i, 3.a.ii, 3.a.iii, 3.a.iv, and 3.a.v). Whereas RQ-B focuses on health care quality, RQ-D focuses on utilization. It is linked to hypothesis H3.

RQ-E: Was avoidable hospital utilization reduced as a result of the DSRIP program?

This RQ addresses the DSRIP program's primary goal of achieving a 25% reduction in avoidable inpatient and emergency department hospital utilization over five years. Its measures are not tied to specific projects, but conceptually if the Domain 2 and 3 projects are successful then

⁵⁵ Specific measures for this sub-question are: premature deaths, newly diagnosed cases of HIV, preterm births, adolescent pregnancy rate per 1,000 females aged 15-17, percentage of unintended pregnancy among live births, and infants exclusively breastfed while in the hospital. Disparities are measured as ratios.

patients with improved access to and utilization of high-quality primary care services will have fewer hospitalizations. It is linked to hypotheses H4 and H5.

RQ-F: To what extent did PPS achieve health care system transformation, including increasing the availability of behavioral health care?

This RQ is relevant to Domain 2 system transformation projects, including the patient activation project (Project 2.d.i.) and some Domain 3 clinical improvement projects. System transformation would also enable changes in population health (Domain 4). It is linked to hypotheses H3, H6, H7, H8a, and H8b.

RQ-G: Did the DSRIP program reduce health care costs? (Sub-question: Was the DSRIP program cost effective in terms of New York and federal governments receiving adequate value for their investments?)

This RQ is relevant to the Medicaid Redesign Team (MRT)'s alignment with the triple-aim of improved care, improved health, and reduced costs. As access to and utilization of high-quality primary care increases, emergency department and inpatient hospital admissions will decline. It is linked to hypotheses H9, H10, H11, H12, and H13.

3.2. Study Design for Evaluation of the Implementation and Process

3.2.1. Framework for Evaluation of the Implementation and Process

The evaluation of the implementation and process comprises a detailed description of the DSRIP program's evolution. This serves several purposes. First, this component of the independent evaluation highlights early successes and challenges with the DSRIP program's implementation and operations to share with the PPS, NYS DOH, CMS, and other stakeholders. Second, it provides valuable context for interpreting the DSRIP performance metrics, such as inter-PPS differences and the anticipated timing of observed changes in outcomes.

While the analysis of DSRIP performance metrics (see Section 3.3) uses administrative data prepared by NYS DOH for the purposes of the DSRIP program, the implementation and process study triangulates information from four data sources: PPS key informant interviews, regional partner focus groups, a statewide partner survey, and a patient survey. These capture the experiences of diverse DSRIP stakeholders. The Independent Evaluator collected the first three data sources, while the fourth was collected by the NYS DOH and made available to the Independent Evaluator.

Exhibit 3.2 summarizes the key data sources, and Exhibit 3.3 describes the areas of inquiry covered by each. The subsequent sections describe each in detail.

Exhibit 3.2. Overview of data sources used to study the implementation and process

	PPS Key Informant Interviews	Regional PPS Partners Focus Groups	Statewide Partner Survey	Patient Survey (Clinician & Group CAHPS Survey version 3.0)
Topic Addressed	PPS organizational development (cycle 1), project implementation (cycle 2), and perceived performance (cycles 1 and 2)	PPS perceptions of the DSRIP program	Functioning of individual projects	Patient experiences with health care providers and services
Method	Semi-structured telephone interviews	In-person facilitated focus groups	Web-based survey	Mail and phone surveys
Data collection periods	DY3: 07/2017-08/2017 DY4: 06/2018-08/2018	DY3: 11/2017 DY4: 08/2018	DY3: 09/2017-11/2017 DY4: 09/2018-10/2018	DY1: 09/2015-10/2015 DY2: 09/2016-11/2016 DY3: 09/2017-12/2017
Target population	DY3: PPS administrators who were most knowledgeable about DSRIP start-up, implementation, and ongoing operations DY4: PPS administrators and staff directly responsible for launching DSRIP projects and overseeing project implementation	Partners engaged in PPS projects	Partners engaged in PPS projects	Medicaid members ages 18-64 who were attributed to a PPS and had at least one visit with a primary care provider in the PPS network
Sample size	DY3: 25 PPS, with 1 to 10 informants per PPS DY4: Total 25 PPS, with 2 to 18 informants per PPS	DY3: 33 DY4: 58	DY3: 897 (RR: 32.1%) DY4: 1,071 (RR: 49.3%)	DY1: 10,884 (RR: 30.8%) DY2: 7,915 (RR: 28.1%). DY3: 10,238 (RR: 29.8%)
Geographic scope	Statewide	DY3: Adirondack and Capital District regions DY4: New York City and Long Island regions	Statewide	Statewide

Abbreviations: Demonstration Year (DY), Measurement Year (MY), Response Rate (RR).

Notes: This table aligns with the tables on pages 12-14 of the CMS-approved Independent Evaluation plan. The patient survey comprises the Clinician & Group Consumer Assessment of Healthcare Providers and Systems Survey (version 3.0) (CG-CAHPS). The Independent Evaluator analyzed CG-CAHPS data made available by NYS DOH. The CG-CAHPS survey data is collected based on DSRIP MY, but is reported to PPS based on DY. To maintain consistency across Implementation and Process data sources CG-CAHPS survey results are reported by DY.

Exhibit 3.3. Areas of inquiry covered by each data source in the implementation and process study

Topics Covered	PPS Key Informant Interviews	Regional Partner Focus Groups	Statewide Partner Survey	Patient Survey
Program planning, operations, and effectiveness	X	X	X	
Program outcomes and challenges	X	X	X	
Plans for program sustainability	X		X	
Effectiveness of governance structure and provider linkages	X	X		
Facilitators and barriers to PPS achieving progress on P4R/P4P metrics	X	X	X	
Contractual and financial arrangements	X	X	X	
Challenges in the delivery of patient care	X	X	X	
Effect of other ongoing health care initiatives on DSRIP implementation and operation	X	X		
Progress and perceived effectiveness of projects focused on system transformation	X	X	X	
Progress and perceived effectiveness of projects focused on behavioral health	X	X	X	To be Determined in DY5
Progress and perceived effectiveness of projects focused on clinical improvement and population health			X	
Patient satisfaction and experience	X	X	X	X

Abbreviations: Pay for Performance (P4P), Pay for Reporting (P4R), Demonstration Year 5 (DY5)

Notes: The data sources and the topics in this table align with pages 12-13 of the CMS-approved Independent Evaluation plan.

3.2.2. Data Collection and Analysis for Key Informant Interviews

3.2.2.1. Sampling and Recruitment

There were two cycles of key informant interviews with PPS administrators and staff. Purposive sampling was used in the first cycle to identify executive leadership at each of the 25 PPS who were knowledgeable about DSRIP program start-up, implementation, administration components, and challenges, and in the second cycle to identify administrators and staff who were directly responsible for launching DSRIP projects and overseeing project implementation.⁵⁶ Unlike random sampling which is commonly used for population surveys, purposive sampling deliberately selects participants who have particular characteristics or represent diverse viewpoints in order to explore a phenomenon in detail and capture a range of perspectives.^{57,58,59} Consequently, the findings are a description of the implementation process, projects, successes, and challenges; and should not be interpreted as representative beliefs.

During the first research cycle, the Independent Evaluator identified administrators at each of the 25 PPS who were most knowledgeable about the DSRIP program's start-up, implementation, ongoing processes, administrative components, and challenges in the first two DY. If a single person did not possess the necessary knowledge and background in each of these areas, additional people were included in the interview. Generally, the sample included one or more of the following individuals within each PPS:

- Chief Executive Officer,
- Chief Operating Officer, or the individual currently responsible for all operations,
- Someone with authority who was involved in PPS start-up,
- Fiscal officer or individual involved in financial transactions, and
- Other individuals identified by either the NYS DOH or the PPS who were vital to the ongoing operations of the PPS.

During the second cycle, the Independent Evaluator recruited individuals who were directly responsible for launching DSRIP projects and overseeing project implementation. These were typically project managers during the implementation phase. By DY4, most PPS had restructured, and many project managers were phased out. Consequently, the key informants for the second cycle had a variety of job titles.

To recruit study participants, the Public Consulting Group (PCG) DSRIP Account Support Team (AST) provided a contact at each PPS who would assist in identifying key informants. Telephone

⁵⁶ For the final report, a third cycle will interview leadership again.

⁵⁷ Bryman, A. (2012). Social Research Methods (4th ed.). Oxford, UK: Oxford University Press.

⁵⁸ Creswell, J.W. (2013). Qualitative inquiry and research design: Choosing among five approaches (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

⁵⁹ Patton, M.Q. (2002). Qualitative research and evaluation methods (3rd ed). Thousand Oaks, CA: Sage Publications, Inc.

calls were scheduled directly by the researchers with these contacts to explain this component of the independent evaluation and request the e-mail addresses of these staff. These contacts also assisted in scheduling the interviews.

All 25 PPS participated in the key informant interviews in each cycle. In the first cycle, there were between one to 10 key informants within in each PPS and between two to 18 key informants in the second cycle. In the first cycle an additional interview was conducted with an exiting leader at one PPS who was deemed to have pivotal information about the formation and development of the PPS. With a couple of exceptions, the key informants in the two cycles were different people.

3.2.2.2. Data Collection Procedures

Semi-structured interview guides (see Appendix 4) were developed for each key informant interview cycle. The interview guides for both cycles contained questions about the following topics: (1) early operations, (2) challenges and successes, and (3) perceived outcomes and recommendations. The interview guide for cycle 1 also contained questions about initial formation of the PPS and administrative issues and structural configurations. Each question included a series of prompts to generate more specific examples or experiences. The interview guide was designed to align with the scope of the DSRIP program evaluation research question (RQ-A; see Section 3.1) and received input and final approval from NYS DOH.

Prior to each interview, the interview guide was tailored to each key informant's individual role and PPS. For example, some PPS had legacy staff who were with the project since initial formation and other PPS experienced full turnover. As such, questions were developed to be flexible within the knowledge scope of interview participants. Prior to each interview, the interviewers prepared by reviewing relevant publicly available documents such as PPS Quarterly Reports and the Mid-Point Assessment Reports to understand the context of each PPS. For the second research cycle, the key informants received a pre-interview survey. These brief surveys collected information about each participant's role in project implementation to help prepare evaluation staff for the interview.

Interviews were conducted via telephone, with at least two interviewers participating in each interview to improve reliability. Interviews were recorded and subsequently transcribed by one of the researchers. The interviewers supplemented the audio files with hand-written notes. Interviews lasted on average one hour.

3.2.2.3. Data Analysis

Familiarization with the data, including the transcripts and the interview guide, yielded a list of important topics that arose from the data. These topics were sorted into a hierarchy of themes

and subthemes, creating an initial thematic framework.⁶⁰ This process generated nine major themes that were relevant to both research cycles: formation, challenges, successes, committees, data, technical assistance, value based payment, health care, and governance. Transcripts were indexed to themes and sub-themes to identify initial commonalities, repeating themes, and items not discussed by all PPS.

Analytic matrices were developed for each theme, and organized in spreadsheets.⁶¹ Each theme's matrix comprised a case identification column (indicating the PPS's name) as well as columns for each subtheme. Data were extracted from interview transcripts and entered into their respective subtheme columns as data summaries and/or direct quotes. After all transcripts were indexed and data extracts were inputted into the matrices, the researchers read through each case, pulling detected elements within each subtheme's response, and entered them into a separate column. Detected elements identified the range of perceptions, experiences, and behaviors that were collected and the aspects that differentiated them.

Multiple researchers were engaged in all aspects of the analysis to discuss findings iteratively and improve inter-rater reliability.

3.2.3. Data Collection and Analysis for Regional Partner Focus Groups

3.2.3.1. Sampling and Recruitment

A series of regional focus groups with project-associated partners was conducted to elicit information about how the DSRIP program and its system transformation outcomes have affected various partners. In contrast to one-on-one interviews, the inter-participant interaction within focus groups allows for a wider range of responses, as respondents collectively discuss topics and react to others' comments. These guided discussions can activate forgotten details of participants' experiences and release inhibitions.

Focus groups function best when groups are somewhat homogenous, which fosters greater cooperation, greater willingness to communicate, and less conflict among group members.⁶² Thus, the initial plan to host one focus group per PPS was replaced with a hybrid geographic and provider-category based plan. Nine PPS regional service areas were defined based on the integration of New York's Economic Development map with service areas provided by PPS.

⁶⁰ Spencer, L., Ritchie J., O'Connor W., Morrell, G., & Ormston, R. (2003). Analysis in practice. In Ritchie, J., Lewis, J., McNaughton Nicholls, C., & Ormston, R. (Eds.), Qualitative research practice: A guide for social science students and researchers (pp. 295-345). Thousand Oaks, CA: Sage Publications, Inc.

⁶¹ Miles, M.B., Huberman, A.M., & Saldana, J. (2013). Qualitative data analysis: A methods sourcebook (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

⁶² Stewart, D.W., & Shamdasani, P.N. (2015). Focus Groups: Theory and Practice (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

In the first and second cycles of data collection, PPS from the following regions were recruited to participate in the focus groups: Capital District, Adirondack regions, New York City, and Long Island. In the first cycle, 33 individuals representing five PPS participated; and in the second cycle, 58 individuals representing 15 PPS participated. The third data collection cycle will include other regions, and eventually each region across New York State will be represented in the final evaluation report.

Within each region, there were separate focus groups for categories of partners.⁶³ These categories were developed based on the types of project partnerships, the categories of partners derived from the Medicaid Analytics Performance Portal (MAPP) network tool, and stakeholder commonalities. The four categories are:

- Group 1: Primary care physicians, clinic managers, health home organizations, and specialists
- Group 2: Mental health and substance use professionals
- Group 3: Hospitals, nursing home, hospice, and home care professionals
- Group 4: Community-based organization professionals

For each focus group, partners were identified based on lists of engaged partners created for the statewide partner survey (described in detail in section 3.2.4). Focus group invitations were sent electronically to engaged providers identified in each focus group-region. The invitation emails contained a link to an online sign-up form that allowed participants to select a preferred focus group date and location from a list of available slots within their provider type.

3.2.3.2. Data Collection Procedures

Four customized focus guides were developed by the IE team and reviewed and approved by NYS DOH, one for each provider group (see Appendix 5). The focus group guides were designed to align with the scope of the DSRIP program evaluation research question, with prompts to generate more specific examples or experiences for some questions. Specifically, the focus group guides contained questions about the following topics:

- Engagement with DSRIP program activities and projects
- Reflections on what worked well and less well
- Value based payment
- Recommended changes

⁶³ Because the Adirondack region focus groups were conducted in a less populated area, they drew fewer participants and were separated into two focus groups. The first focus group included participants from Group 1 (primary care physicians, clinic managers, health home organizations, and specialists) and Group 3 (hospitals, nursing homes, hospice, and home care professionals). The second focus group included participants from Group 2 (mental health and substance use professionals). Community-based organizations from Adirondack Health Institute were present at the focus group held in the Capital District region.

Focus groups were conducted in-person, with two qualitative researchers participating in each focus group. A trained facilitator conducted each focus group to ensure consistency, while a separate note taker recorded details and impressions. With permission of the participants, focus groups were audio-recorded using digital voice recorders. A meal was provided for each focus group as an incentive, and to convey appreciation for the participants' time. Each focus group lasted approximately 1.5 hours.

3.2.3.3. Data Analysis

All focus groups recordings were transcribed, coded, and analyzed for patterns and themes using the same process for the key informant interviews (see Section 3.2.2.3). The primary themes were: successes, challenges, infrastructure, partnerships, value based payment, funds flow, health care, and sustainability.

3.2.4. Data Collection and Analysis for Statewide Partner Survey

3.2.4.1. Sampling, Recruitment, and Data Collection Procedures

Annual electronic partner surveys collected information about perceptions of the DSRIP program and the function of individual projects. The key informant interviews and focus groups had flexible interview guides designed to allow participants to elaborate on topics for a deeper understanding, and used purposive sampling. In contrast, the surveys were designed to collect information about representative viewpoints through a uniform survey (i.e., all participants received an identical survey) and invitations for all PPS engaged partners to participate.

To identify respondents in the first survey cycle, the Independent Evaluator built a unique contact list of partners for each of the 25 PPS by merging the Medicaid Analytics Performance Portal (MAPP) network tool with the Provider Export/Import Tool (PIT)/ Provider Export/Import Tool-Revised (PIT-R). The list reflected PPS networks in DY2. Each PPS primary contact was sent the list of partners generated for their PPS and asked to: (1) identify which partners were engaged with projects, and (2) provide contact and engagement status information for any additional partners engaged with projects. Twenty-four of the 25 PPS responded and returned an updated list of engaged partners. For the remaining PPS, survey invitations were sent to all partners in the DSRIP DY2 network list.

A similar approach was used to identify respondents in the second survey cycle. A new list of partners, based on PPS networks in DY3, was obtained from the NYS DOH's vendor that manages the Medicaid Data Warehouse. The new lists were compared to the lists used in the first survey cycle to identify any new providers. Each PPS was asked to review the updated list that included engaged partners identified the previous year as well as new providers, identify additional engaged partners that were not yet on the list, and indicate if any partners were no longer engaged. All 25 PPS responded for research cycle 2 and returned an updated list of engaged partners.

A survey invitation was sent to each email address corresponding to an engaged provider, with a personalized link to the survey in Qualtrics. In total, survey links were sent to 2,794 email addresses in the first cycle, and 2,171 valid email addresses in the second cycle. Fewer invitations were sent in the second cycle because PPS were better able to specifically identify engaged partners and all PPS returned an updated list of engaged partners. As some partners were part of several PPS, in the first data collection cycle they received multiple requests for the survey. These multi-PPS partners were asked to respond to one survey only. Simultaneously, contacts at each PPS were encouraged to alert their provider network to the survey and encourage completion. This partner survey reminder was shared via PPS newsletters, Project Advisory Committee meetings and other PPS events. As an incentive to complete the Independent Evaluation survey, participants in the first cycle were informed that three respondents would win a \$100 Amazon gift card.

Providers could be individual practitioners or organizations. In some cases, only one email address was available for multiple providers (e.g., a medical practice may have provided one contact email for multiple staff doctors, or a community-based organization with multiple involved staff members may have used one business email). Because of this, participants were allowed to forward the invitation to other members of their organization. As such, there is no direct correspondence between email address and individual respondents.

For the first cycle, the survey launched in September 2017 on the Qualtrics online survey platform and closed in November 2017. Potential participants who had not completed the survey were sent eight reminders over the response period; some PPS also elected to send reminders of their own. A total of 1,235 completed surveys from unique individuals were returned. A total of 315 respondents opened the survey but did not answer any questions, and 23 more were determined to be unusable for various reasons (e.g., two participants did not provide a coherent response in any text box, including their name). These methods resulted in 897 usable responses, for a final response rate of 32.1%. Individual respondents could answer project evaluation questions for up to three projects, resulting in a total of 1,689 project-based evaluations.

For the second cycle, the survey launched in September 2018 and closed in October 2018, with eight reminder emails. A total of 1,071 completed surveys from unique individuals were returned, for a final response rate of 49.3%. For this cycle, individual respondents could answer project evaluation questions for all the projects they were actively involved with, rather than just three projects as in the first cycle. This resulted in a total of 3,621 project-based evaluations.

3.2.4.2. Survey Design

The partner survey (see Appendix 6) was developed to gather information on progress within individual projects, barriers and facilitators to project implementation, perceived effectiveness of the projects, and the DSRIP program overall. The NYS DOH provided feedback on and final approval for the Independent Evaluator's designed survey. Most questions were Likert scales,

with supplemental open-ended questions where participants could elaborate on their responses.

Survey topics included:

- Service provision and project operations
- Factors that helped or hindered their implementation
- Level of satisfaction with project operations
- Reflections on what worked well and less well
- Overall perception of the DSRIP program
- Overall perception of DSRIP projects
- Preparations for value based payment

Each respondent was allowed to select projects to evaluate individually. Thereafter, they received a battery of questions corresponding to each project they selected. This yielded more project-based responses than number of participants.

Most survey items were kept consistent across cycles to allow for interpretation of changes over time. Some questions were modified in the second cycle, based on feedback from the first cycle and emerging topics. Changes included adjusted time frames, dropping questions about early implementation, and adding items about the specific resources needed to transition to value based payment (see Appendix 6).

3.2.4.3. Data Analysis

Survey responses were first de-duplicated. In each cycle, about 100 respondents opened the survey multiple times. In the case of multiple responses from one person (same name and organization provided), the more complete response was kept (e.g., if a participant opened the survey but did not complete anything past entering his or her name, and then reopened the survey later and completed it, the second entry was used), but if they completed similar amounts each time, the first response was kept. If a participant in the first cycle had multiple survey entries and responded about different projects in each, the first three evaluations were kept. For example, if a participant responded about two DSRIP program projects in one survey entry, then retook the survey and answered regarding another different project, the responses from the second survey were added to those of the first, and the second survey record was deleted.

Response data quality was then examined by PPS and project. In the first cycle, of the 1,753 potentially usable individual project evaluations received, 265 (15.1%) were for a project that had not been implemented in the selected PPS. For example, across the sample, 70 (4.0%) responses were received for Project 2.a.ii in PPS that were not implementing 2.a.ii. When possible, these responses were recoded.

Respondents were first assumed to have selected the correct PPS but the wrong project: if the organization or PPS was involved in a similar project in the same subdomain or grouping, the

response was recoded. If the selected PPS was not involved in a similar project but the participant had also responded about another PPS which was involved in that project, the PPS name was corrected. Using these procedures, 201 responses were corrected. A total of 64 responses were unable to be recoded and so these were not included in any further analyses, leaving 1,689 project-based responses, inclusive of all 25 PPS.

The final set of 1,689 project-based evaluations (see Exhibit 3.4) in cycle 1 covered all DSRIP projects and included all 25 PPS across New York. There was a wide range in the number of responses a PPS received. On average, PPS received about 68 responses each (standard deviation of 37). Two PPS (Bronx Health Access and NY Presbyterian) received fewer than 20 evaluations; three PPS (Central NY Care Collaboration, Finger Lakes, and OneCity Health) received over 120 evaluations. There were no project responses for Projects 3.b.ii, 3.d.i, 3.h.i, 4.c.iii, and 4.c.iv, as they were not implemented by any PPS. A total of 3,621 project-based evaluations were received in cycle 2; on average PPS received about 145 responses each (standard deviation of 79) (see Exhibit 3.4). A total of 34 of these responses were for a project that the selected PPS was not implementing. These responses were recoded as described above.

Exhibit 3.4. displays the number of responses per PPS, and project responses per PPS for each survey cycle.

Exhibit 3.4. Number of usable responses received for the statewide partner survey

PPS	Cycle 1		Cycle 2	
	N Responses	N Project Evaluations within PPS	N Responses	N Project Evaluations within PPS
Adirondack Health Institute	55	105	63	167
Advocate Community Providers/SOMOS	40	47	72	231
Alliance for Better Health	29	48	33	88
Better Health for Northeast New York	40	63	41	115
Bronx Health Access	14	16	34	57
Bronx Partners for Healthy Communities	23	36	50	143
Care Compass Network	48	87	83	188
Central New York Care Collaborative	77	149	64	241
Community Care of Brooklyn	43	63	75	155
Community Partners of Western New York	66	92	109	260
Finger Lakes PPS	65	138	104	314
Leatherstocking Collaborative Health Partners	33	49	47	89
Millennium Collaborative Care	80	113	107	248
Montefiore Hudson Valley Collaborative	45	68	56	188
Mount Sinai PPS	52	64	59	104
Nassau Queens PPS	33	43	40	72

PPS	Cycle 1		Cycle 2	
	N Responses	N Project Evaluations within PPS	N Responses	N Project Evaluations within PPS
New York-Presbyterian PPS	10	14	37	49
New York-Presbyterian Queens PPS	23	36	29	54
North Country Initiative	35	78	46	179
NYU Langone Brooklyn	24	32	36	57
OneCity Health	101	135	128	238
Refuah Community Health Collaborative	17	22	23	39
Staten Island PPS	38	61	41	111
Suffolk Care Collaborative	49	70	32	66
WMCHHealth	45	60	63	168
Total Number of Unique Usable Responses and Project Evaluations	897	1,689	1,071	3,621

Abbreviations: Number (N)

Notes: The totals at the bottom of columns 1 and 3 are the total number of unique usable responses in each research cycle and not the sum of these columns. Individual respondents could respond about multiple PPS if they were engaged with more than one PPS. In research cycle 1 respondents could answer project evaluation questions for up to three projects; in research cycle 2 respondents could answer project evaluation questions for all projects with which they were actively involved. The number of responses for each PPS in columns 1 and 3 are the number of responses relevant to that PPS.

Survey responses were summarized descriptively as means and the percentage of respondents selecting each item in the five-point scales. The “do not know” responses were not combined with the neutral response (e.g., “did not improve or worsen”) because conceptually, they are distinct.

Responses were not compared across PPS due to two important considerations. First, the PPS have variable response rates. If there were systematic reasons why some PPS had higher percentages of participants overall and by partner type (e.g., different levels of engagement with the Independent Evaluation team’s initial outreach to refine the participant lists, additional inducements to participate or higher motivation to participate), nonresponse bias and non-representativeness of partners who completed surveys, reminders sent by PPS to partners, might affect results. Given the nature of the sampling design, it is infeasible to quantify the nonresponse bias in a manner that could be adjusted for in a comparative analysis. Second, there were instances of only one or several project-specific responses for a specific PPS which results in insufficient statistical power to compare project differences across PPS.

3.2.5. Data Collection and Analysis for Patient Survey

3.2.5.1. Sampling, Recruitment, and Data Collection Procedures

The Clinician & Group Consumer Assessment of Healthcare Providers and Systems (CG-CAHPS) (version 3.0) survey was used to assess patient perspectives among the Medicaid population in New York. The CG-CAHPS survey is conducted annually for each of the 25 PPS through a CAHPS certified vendor (i.e., DataStat). The vendor generates a random sample from the eligible Medicaid members for each PPS in August, then deploys the survey between September and December, and provides results in the spring of the following year. The results are provided to the PPS with PPS specific reports. Some CG-CAHPS items are also used in calculating DSRIP performance metrics, as described in Section 3.3.

The surveys were administered to a sample of Medicaid members, aged 18 to 64, who were attributed to a PPS and had at least one visit with a primary care provider from January to June prior to the survey administration. Each year's survey targeted 1,500 adults from each of the 25 PPS. Surveys were sent to 37,500 members with a combined mail and phone methodology (three mailings, with a phone call follow-up to non-responders). Some intended survey respondents were deemed ineligible for participation and were excluded from the total sample population size when determining the response rate. Intended participants were considered ineligible if they were deceased, had a language barrier that prevented them from completing the survey, were mentally or physically unable to complete the survey, or responded that they did not receive care from the provider indicated in the first survey question in the last six months.

The CG-CAHPS data presented in this report were collected by DSRIP Measurement Year. The MY1 survey was conducted between September 14, 2015 and December 7, 2015. A total of 10,884 usable responses were received out of a total of 35,356 eligible participants, resulting in a response rate of 30.8%. The MY2 survey was conducted between September 16, 2016 and November 30, 2016. A total of 7,915 usable responses were received, resulting in a response rate of 28.1%. The MY3 survey was conducted between September 18, 2017 and December 3, 2017. A total of 10,238 usable responses were received, resulting in a response rate of 29.8%. While the CG-CAHPS data were collected by DSRIP Measurement Year, they were reported to PPS by Demonstration Year. To maintain consistency across the reporting of results for each of the implementation and process data sources, the CG-CAHPS survey results for the implementation and process component of the evaluation were reported by Demonstration Year.

An additional CG-CAHPS survey is administered directly by each PPS for the uninsured if the PPS participates in Project 2.d.i.⁶⁴ Results from these surveys were not analyzed for the Interim Evaluation, but may be analyzed for the final report and will, therefore, be described briefly. The PPS participating in Project 2.d.i. conduct the survey of the uninsured annually following guidelines developed by the NYS DOH in alignment with standards created by the Agency for Healthcare Research and Quality, and must submit a minimum of 30 completed surveys in

⁶⁴ Project 2.d.i., also known as the “11th project”, is implementation of patient activation activities to engage, education, and integrate the uninsured, low, and non-utilizing Medicaid populations into community-based care.

order to qualify for the achievement values based on this measure.⁶⁵ The eligible survey population includes self-identified and provider-identified uninsured adults 18 years or older who have at least one primary or preventive care visit within the PPS during the measurement period. Performance reports are based on four composite measures (access to care; provider communication; helpful, courteous, and respectful office staff; and patient's rating of provider), comprised of 10 individual survey items. Surveys are considered complete if respondents answered affirmatively to the question asking about receipt of care from the indicated provider in the last six months and responses are recorded for at least one of the ten questions that comprise the four required composite measures.

3.2.5.2. Survey Design

The survey included the CG-CAHPS (version 3.0) core survey, a nationally vetted tool to assess the performance of clinicians and medical groups. Items addressed several domains of patient experiences, such as receipt of timely care, communication with doctors, and overall satisfaction with their provider. In addition, the survey included 18 supplemental questions of interest to NYS DOH concerning health literacy, health promotion, and care coordination.

3.2.5.3. Data Analysis

The CG-CAHPS data for the Medicaid population were made available to the Independent Evaluator in aggregate form, with results reported by PPS. For example, responses to the CG-CAHPS survey question "How often did this provider explain things in a way that was easy to understand?" were provided to the Independent Evaluator as the percentage of survey participants selecting a response of "usually" or "always". To control for inter-PPS differences in member populations, the CG-CAHPS vendor's aggregate results were case-mix adjusted for age, health status, and education.

For the Interim Report, data from the first three measurement years were summarized focusing on the composite scores for the following variables:

- Getting timely appointments, care, and information
- How well providers communicate with patients
- Care coordination
- Helpful, courteous, and respectful office staff

In addition, the following variables were reported:

- Proportion rating providers as "8 or higher" on a 0-10 scale
- Patients' ongoing relationships with their providers (having a usual source of care, and seeing the same provider for at least one year)

⁶⁵ New York State Department of Health (n.d.) CG-CAHPS for the Uninsured Guidelines.

Statistical tests of significance for comparisons between groups were not conducted because individual-level data were not available for analysis. Following consultation with the CG-CAHPS vendor and the NYS DOH Office of Quality and Patient Safety, data were not trended across years because of potential changes in the population case mix which cannot be adjusted for in statistical analysis.

3.3. Study Design for Evaluation of DSRIP Program Measures

3.3.1. Framework for the Time Series and Comparative Analysis of Administrative Data

For the interim report, CMS RQ1 through RQ6 (relabelled in the interim report as RQ-B through RQ-G) were assessed using administrative data developed by NYS DOH for the purposes of the DSRIP program, covering the measurement period June 2014 through June 2017. These data contained information about PPS member attribution, provider networks, project selection, service area, and the performance measures used for PPS valuation and DSRIP payments in Demonstration Year 3. The performance measures comprised both monthly and annual data elements, depending on the underlying source (see Section 3.3.2).

Descriptive analyses examined trends for performance measures statewide and by PPS. For the monthly measures, interrupted time series regressions examined changes in post-DSRIP initiation trends statewide, compared to the baseline pre-DSRIP initiation trend. These regressions tested the hypotheses regarding whether performance measures increased or decreased after the DSRIP program's implementation, compared to expected trends in the absence of DSRIP. Each PPS is inherently different, due to variation in their provider network characteristics, member attribution size, lead entity type, patient mix, findings from their community needs assessments that influenced project selection, and other factors. The PPS-level comparative regression framework examined how PPS characteristics are associated with changes in performance overall, and whether PPS with different characteristics had divergent post-DSRIP changes.⁶⁶

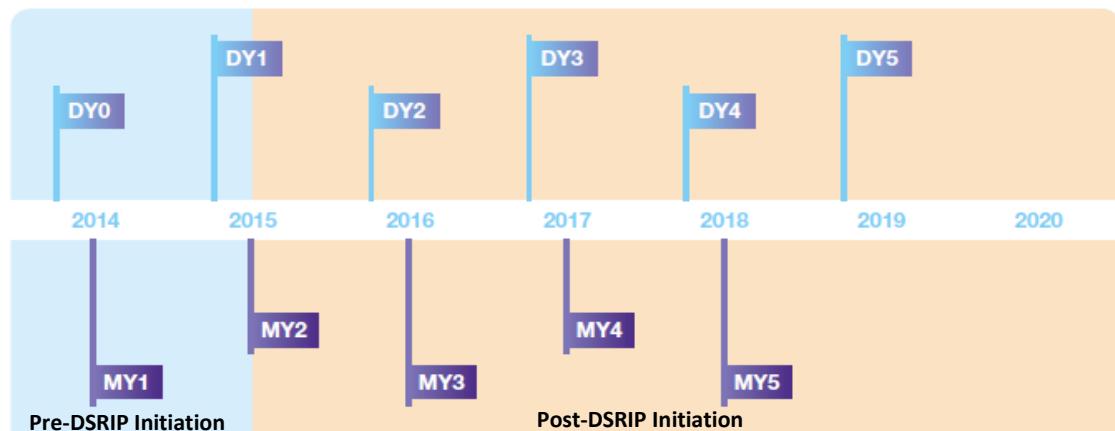
Analyzing performance differences pre- and post-DSRIP initiation required selecting a specific month for the change point to denote the two periods.⁶⁷ As shown in Exhibit 3.5, New York's DSRIP program followed two timelines relevant for the evaluation: demonstration years (DY)

⁶⁶ The Interim Report focused on four PPS characteristics that were identified as potentially important to performance. The final summative report will examine additional PPS characteristics and differences across PPS that selected different projects.

⁶⁷ The “pre/post” terminology is standard language for an interrupted time series research design, where the statistical analysis determines how an outcome changes after a major event (here, the implementation of the DSRIP program). At the time of this report, the DSRIP program is currently underway and almost all observations are during the period when the DSRIP program is operational. The “pre” period refers to the first year with early activities from the PPS to become operational. The “post” period refers to the time period when the PPS have matured and are actively implementing their projects. The final summative report will examine alternative specifications for the time trend, such as potentially identifying different phases of implementation.

and measurement years (MY). (see the New York DSRIP Terminology Guide at the front of the report for a detailed listing of DY and MY.) The six DY (DY0 through DY5) cover the period from April 2014 to March 2020, with DY0 considered an early development and planning year for the PPS. There are five MY (MY1 through MY5), starting July 2014 and ending June 2019. Although the DSRIP program started in April 2014 (DY0), the program's initial phase encompassed PPS formulation and infrastructure development (Domain 1). The first payments tied to Domain 2 activities (system transformation) used MY1 information, spanning July 2014 through June 2015. It is common in time series analysis to include a lag time for the "post" period to reflect the time to implement a program.⁶⁸ The power of the interrupted time series regression increases when there are a similar number of time points before and after the intervention.⁶⁹ Following standard practice, this analysis considered the start of MY2 (July 2015) to be the first month of the post-DSRIP initiation period, with all prior months assigned to the pre-DSRIP initiation period. This provided 13 months of pre-DSRIP initiation measurement time and 24 months of post-DSRIP initiation measurement time.⁷⁰ Using the start of MY2 as the post-DSRIP initiation period, rather than selecting a month in the middle of a MY, also allowed for consistent time periods when evaluating monthly and annual measures. This decision was vetted with NYS DOH and is also consistent with findings from the implementation and process study, which identified delays in implementation times.

Exhibit 3.5. Timeline of DSRIP demonstration and measurement years



Source: Adapted from the New York State Department of Health DSRIP Timeline Poster.⁷¹
 Abbreviations: Demonstration Year (DY), Measurement Year (MY)

⁶⁸ Bernal, J.L., Cummins, S., & Gasparrini, A. (2017). Interrupted time series regression for the evaluation of public health interventions: a tutorial. *International Journal of Epidemiology*, 46 (1) 348–355.

⁶⁹ Zhang, F., Wagner, A.K., & Ross-Degnan, D. (2011). Simulation-based power calculation for designing interrupted time series analyses of health policy intervention. *Journal of Clinical Epidemiology*, 64 (11): 1252-1261.

⁷⁰ There are 13 pre-DSRIP months because the DSRIP Dataset contains one month of data from June 2014, prior to the MY1 start date of July 2014.

⁷¹ New York State Department of Health (2016, January). Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/2016/docs/2016-01-29_dsrp_timeline_poster.pdf

Notes: Nearly all time point observations in the study are during the period when the DSRIP program is underway. The “pre/post” language is standard for time series analysis. The “pre” period refers to the early stages when the PPS are forming, and the “post” initiation period refers to the middle stages of the DSRIP program when the PPS are implementing their projects.

3.3.2. Data Sources

The Interim Report used selected performance measures from the DSRIP Dataset, which at the time of analysis contained performance data for 140 measures from Domains 2, 3, and 4. Domain 1 measures were project process milestones and not included in the DSRIP Dataset.

The Domains 2 and 3 data elements came from multiple sources:

- Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey, documenting health care consumers’ experiences with their services with “clinicians and groups” (GG-CAHPS) and hospital inpatient care (HCAHPS)
- Integrated palliative care outcome scale (IPOS) survey of the palliative care needs of patients and their families
- Medicaid Data Warehouse (MDW), with claims records for Medicaid members
- Medical record reviews
- Minimum Data Set (MDS), documenting comprehensive assessments of functional capabilities of residents in Medicare- or Medicaid-certified nursing homes
- New York State Perinatal Quality Collaborative Scheduled Delivery Form System (NYSPQC SDFS)
- New York State Provider Network Data System (PNDS)
- National Committee for Quality Assurance Recognition program organization-level measures of patient-centered medical home (PCMH) and Advanced Primary Care standards
- Patient Activation Measure® (PAM) patient survey of their underlying knowledge, skills, and confidence related to their personal health management
- Statewide Planning and Research Cooperative System (SPARCS), with patient-level information on hospital inpatient and outpatient discharges across all payers
- Survey of Qualified Entities

The Domain 4 performance measures were from New York’s 2013-2018 Prevention Agenda, which reports county- and state-level measures on a public dashboard.⁷² Its measures were available on an annual basis with data from the following sources. (Not all measures are relevant to New York’s DSRIP program, as Domain 4 projects do not cover the “promote a healthy and safe environment” Prevention Agenda focus area.)

- National Survey on Drug Use and Health
- New York City Fitnessgram data

⁷² New York State Department of Health. (n.d.). Prevention Agenda 2013-2018: New York State’s health improvement plan. Retrieved from https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/

- NYS Behavioral Risk Factor Surveillance System and Expanded Behavioral Risk Factor Surveillance System
- NYS Department of Environmental Conservation
- NYS DOH Bureau of Dental Health
- NYS DOH Healthy Neighborhoods program tracking
- NYS DOH HIV Surveillance System
- NYS DOH Office of Quality and Patient Safety
- NYS DOH STD Surveillance System
- NYS DOH Student Weight Status Category Reporting System
- NYS DOH Youth Tobacco Survey
- NYS Hospital-Acquired Infection Program
- NYS Immunization Information System
- NYS Safe Drinking Water Information System
- NYS Vital Records
- SPARCS
- U.S. Census Bureau (Small Area Insurance Estimates and American Community Survey)
- U.S. Department of Agriculture Food Environment Atlas
- U.S. Environmental Protection Agency Air Quality System Data Mart
- Youth Risk Behavior Survey

The performance measures for Domains 2, 3 and 4 were reported either monthly or annually, depending on the source. The monthly measures were predominately claims-based data from MDW, or else from medical records review. The annual measures comprised non-claims measures from Domains 2 or 3 (e.g., from CAHPS patient surveys) or else Domain 4 measures that were reported on the Prevention Agenda dashboard on an annual basis.

The monthly performance measures reported in the DSRIP Dataset were calculating for rolling 12-month periods; i.e., the October 2015 observation reflects average values from November 2014 through October 2015. Although this smoothed month-to-month variation in performance measures, it may have also generated lags in observed changes.

Following consultation with NYS DOH, a limited list of 27 measures were identified for detailed analysis in the Interim Report. The following considerations guided the selection of these measures:

- Clear connection to the six quantitative research questions and associated hypotheses
- Related to projects that were selected by multiple PPS
- Available for all PPS involved in the projects
- Ability to be trended over multiple years (for example, some measures were only available starting in MY3, and others had changes to their operational definitions midway through the study period)
- Data updates were not planned for the immediate future, ensuring consistency in the measures between the Interim Report and final summative report

Appendix 7 contains details on the 27 measures, including the measure steward and specification, associated projects, description of the numerator and denominator, data source, and years available for trending.

A smaller subset of measures relevant to the most common clinical focus areas of the projects were used to make the effort more focused, to ensure that the findings are clear and easy to understand, and to design an analysis that was feasible given the type of data, time, and resources available. Additional measures will be added to the summative evaluation.

In addition to the performance measures, the DSRIP Dataset contained information on the following PPS characteristics:

- Annual achievement targets for each PPS
- Demographics of attributed members (age, gender, race/ethnicity, county of residence, and years eligible in Medicaid)
- Listing of providers in each PPS and their categorization of service type
- Number of attributed members per month
- Patient mix (the percent of members in each swim lane, following the attribution logic described in Appendix 2)
- Project selection (specific projects selected and total number of projects selected)

3.3.3. Data Analysis

3.3.3.1. Analyses for Monthly Performance Measures

The analysis of the monthly measures comprised:

- Descriptive analyses to illustrate statewide trends
- Interrupted time series regressions to quantify changes in statewide performance in the two MY following DSRIP implementation
- Comparative regressions to examine: (1) how PPS-level characteristics were associated with inter-PPS differences in performance throughout the study period, and (2) how PPS-level characteristics were associated with changes in performance after DSRIP initiation

3.3.3.1.1. Descriptive Analyses of Monthly Performance Measures

For the monthly measures, the descriptive analyses encompassed visual presentations of statewide trends. Fitted lines illustrate the overall statewide trends across the pre- and post-DSRIP initiation period.⁷³ Additional clustered bar charts displayed PPS-level values for each

⁷³ Note: Nearly all time point observations in the study are during the period when the DSRIP program is underway. The “pre/post” language is standard for time series analysis. The “pre” period refers to the early stages when the PPS are forming, and the “post” implementation period refers to the middle stages of the DSRIP program when the PPS are implementing their projects.

outcome in the last month of MY0, MY1, MY2, and MY3. Those visualizations allow for a more detailed understanding of how the values of each outcome differed across PPS, and variation in trends over time within PPS. As each monthly observation is a rolling average from the past 12 months, the monthly value from the last month of a MY represents the average performance from the entire MY.

Statewide trends for the monthly measures used to assess utilization of behavioral health services (RQ-D) and avoidable hospital utilization (RQ-E) included data from all PPS because all PPS had to select a behavioral health project and avoidable hospital utilization is an overall DSRIP program goal. During project selection, PPS that were already performing well on measures relevant to a given Domain 3 (clinical improvement) project were not allowed to select that project. For example, PPS doing well pre-DSRIP on the asthma measures used to assess the Domain 3 asthma projects would not be approved for selections of those asthma projects. Therefore, statewide trends of the two monthly asthma measures used to assess health care quality (RQ-B), were limited to PPS that selected the associated asthma clinical improvement projects (13 of 25 PPS).⁷⁴

3.3.3.1.2. Interrupted Time Series Regression Framework for Statewide Trends

For the monthly performance measures, an interrupted time series regression framework quantified changes in the statewide trends before and after the DSRIP program's initiation. Following the schematic of the distinct pre- and post-DSRIP initiation periods (Exhibit 3.5), changes following the DSRIP program's initiation were assessed using a segmented regression whereby there is a linear trend for the pre-DSRIP initiation period, a dummy variable to capture a level change after implementation, and a time interaction term to capture a slope change after implementation. These "impact models" are a common framework to evaluate public health interventions, particularly when there is no clear control group.⁷⁵ For the statewide interrupted time series, the level of analysis was at the state-level using the total attributed Medicaid population.

The statewide interrupted time series regression framework follows:

$$y_t = \alpha + \beta_1 Month_t + \beta_2 DSRIP_t + \beta_3 (Month_t * DSRIP_t) + \varepsilon_t$$

In the equation, y_t is the value of a performance measure such as *Potentially Preventable Readmissions*, where t subscripts the month. The $DSRIP_t$ variable is an indicator that is equal to 1 in MY2 and MY3, and equal to 0 otherwise; that captures whether a given monthly observation is in the pre- or post-DSRIP initiation period. The coefficient β_1 measures the linear

⁷⁴ The Domain 3 asthma clinical improvement projects are: 3.d.i, development of evidence-based medication adherence programs (MAP) in community settings – asthma medication; 3.d.ii, expansion of asthma home-based self-management program; and 3.d.iii, implementation of evidence-based medicine guidelines for asthma management.

⁷⁵ Bernal, J.L., Cummins, S., & Gasparrin, A. (2017). Interrupted time series regression for the evaluation of public health interventions: a tutorial. *International Journal of Epidemiology*, 46(1), 348-355.

trend in the pre-DSRIP initiation period. The coefficient β_2 measures whether there is a level change, or immediate decline in the outcome values, in the post-DSRIP initiation period. The coefficient β_3 evaluates whether there is a change in the slope in the post-DSRIP initiation period. The constant term, denoted by α , is the initial value of y at the start of the study period when time $t = 1$. The random error ε_t represents the effect of all unobserved factors that could not be measured, and has expected value zero.

The regression assumed a linear functional form for time. Other functional forms including non-parametric specifications (no functional form assumed) and non-linear specifications (including logarithmic time transformation, inverse time (i.e., $1/t$), and a quadratic time (i.e., t^2)) were also considered in earlier versions of the model. The linear form was used in the final models because it was the best fit to model pre- and post-DSRIP initiation statewide performance and the most simple to present for the interim report. The linear trend may no longer be appropriate once additional data become available, as the implementation of programs may yield different changes in the outcome such as slope changes following a longer lag time, temporary level changes whereby levels of the outcome initially increase and subsequently revert back to their pre-program values, or temporary slope changes leading to subsequent level changes.⁷⁶ Other specifications will be explored in detail for the final summative report as more years of data become available for analysis and there are additional insights from the implementation and process study about how the DSRIP program has influenced the activities of PPS partners during different stages of implementation.

3.3.3.1.3. PPS-level Comparative Regression Framework

For the monthly performance measures to assess behavioral health utilization (RQ-D) and avoidable hospital utilization (RQ-E), the comparative analysis extended the statewide interrupted time series to examine how PPS-level characteristics were associated with: (1) overall differences in performance, and (2) differential post-DSRIP initiation performance changes. This component of the analyses used multi-level models for nested data structures, also referred to as mixed effects or random effects models. In the case of the DSRIP program, observations over time (level 2) are nested within the 25 PPS (level 1). Observations over time within each PPS share common characteristics, and heterogeneity in observations over time within a PPS drive the level 2 variations. Failure to account for the commonality of observations over time within PPS would lead to incorrect hypothesis testing.⁷⁷

Comparative analyses were not performed for the monthly asthma measures used to assess health care quality (RQ-B). The summative evaluation will include a more extensive analysis of PPS level performance, including comparing performance on specific DSRIP program projects.

⁷⁶ Bernal, J.L., Cummins, S., & Gasparrin, A. (2017). Interrupted time series regression for the evaluation of public health interventions: a tutorial. *International Journal of Epidemiology*, 46(1), 348-355.

⁷⁷ Chatterji, P., Dohyung, K., & Lahiri, K. (2014). Birth weight and academic achievement in childhood. *Health Economics*, 23 (9): 1013-1035.

The PPS-level characteristics evaluated in the interim report, all derived from the DSRIP Dataset, follow. The CMS final summative report will examine additional PPS characteristics.

- *PPS size*—This time-varying characteristic was measured as the number of PPS members in each month. Larger PPS might have improved outcomes due to greater capacity, or vice versa a smaller PPS may have improved outcomes due to efficient integration within a smaller network. For simplicity and ease of interpretation, this was transformed into a dichotomous indicator variable for large versus small size, based on whether the PPS size was higher than or equal to the median value across PPS. The median value for PPS size is time-varying, as the number of members per PPS changes over time. The dichotomous "large versus small" indicator was determined monthly for each MY and may vary somewhat across the study period. See Exhibit 4.3 for the total number of attributed members for each PPS based on the last month of MY3; this rolling year covers July 2016 to June 2017.
- *Behavioral health patient mix*—This time-varying characteristic was measured as the percent of PPS members attributed to the behavioral swim lane in each month. Although there were four swim lanes (developmental disabilities, long-term care, behavioral health, and “all other”), the regression only included a variable for the percent in the behavioral health swim lane because this is a large focus of the DSRIP program. For simplicity and ease of interpretation, this was transformed into a dichotomous indicator variable for “high BH” versus “low BH,” based on whether the percentage of members in the behavioral health swim lane was higher than or equal to the median value across PPS.
- *Geography*—The analysis included a dichotomous indicator for New York City versus rest of state (ROS), with New York City as the reference group. New York has large intrastate regional differences, the New York City region has multiple overlapping PPS in the same area, and NYS DOH analyses commonly distinguish between New York City and ROS.
- *Selection of the “eleventh project”*—This was a dichotomous indicator for whether the PPS was eligible for and selected the patient activation project (Project 2.d.i.). The PPS that selected the eleventh project were inherently different because of the project’s eligibility requirements (selecting ten other projects, and in regions with multiple PPS the networks with a safety net hospital as the lead entity had the first right of refusal). Early implementation and process data identified challenges to implementing this project.

The main functional form of the model was specified as follows:

$$Y_{it} = \beta_0 + \beta_1 Month_t + \beta_2 DSRIP_t + \beta_3 Month_t * DSRIP_t + \beta_4 LargeSize_{it} + \beta_5 LargeBH_{it} + \beta_6 ROS_i + \beta_7 Eleventh_i + \epsilon_{it}$$

The model also includes a random effect error term to account for the clustering of monthly observations within each PPS. The interpretation of β_1 , β_2 , and β_3 is identical to their interpretation in the statewide interrupted time series, measuring the pre-DSRIP initiation

linear trend, the post-DSRIP initiation level change, and the post-DSRIP initiation slope change, respectively. *LargeSize* is a time-varying dichotomous indicator variable, which is equal to 1 for PPS i whose number of attributed members (size) is greater than or equal to the median value for all PPS at time t , and equal to 0 for PPS whose size is less than the median value of all PPS's membership sizes at time t . *LargeBH* is a time-varying dichotomous indicator variable for whether each PPS i has a percentage of members in the behavioral health swim lane that is greater than or equal to the median value of all PPS's behavioral swim lane membership at time t . The *ROS* variable is a dichotomous indicator variable for whether a PPS i is located in rest of state (ROS) or NYC, and *Eleventh* is a dichotomous indicator variable for whether a PPS i was eligible for and selected the eleventh project compared to those that did not. The *ROS* and *Eleventh* variables are not time-varying because each PPS's value remains the same throughout the study period. The coefficient β_4 measures the difference in the values of PPS that have large versus small sizes, after adjusting for pre/post DSRIP initiation and the other PPS characteristics in the model. The coefficients β_5 , β_6 , and β_7 have similar interpretations.

Extensions of this model included: three-way interaction terms between each characteristic and the DSRIP variables and stratified models. For example, an addition of coefficients for *Month*Large Size*, *DSRIP*Large Size*, and *Trend*DSRIP*Large Size* tests whether large PPS have different pre-DSRIP initiation linear trends, post-DSRIP initiation level changes, or post-DSRIP initiation slope changes compared to small PPS. For ease of interpretation, where these two- and three-way triple-interaction terms were significant, additional models stratified the PPS into two groups (such as large versus small PPS). Separate models for each group allow for a more intuitive understanding of how the pre- and post-DSRIP initiation performances differ along these characteristics.

As a specification check, models with a heteroskedasticity- and autocorrelation-consistent (HAC) estimator yielded similar findings.

3.3.3.1.4. Special Notes on the Potentially Preventable Emergency Room Visit Measures

As described above, the regression analyses based on monthly data have 37 months, yielding 37 observations for the interrupted time series analysis and 925 observations for the comparative regression analysis (37 months for each of the 25 PPS). Two of the measures made available to the Independent Evaluator at the time of the analysis, *Potentially Preventable Emergency Room Visits (PPV)* and *Potentially Preventable Emergency Room Visits among Behavioral Health Members (PPVBH)*, only have 31 time points: 1 observation in the last month of MY0, 12 monthly observations in MY1 and MY2, and 6 observations in MY3.

Therefore, analyses of these two measures, particularly the interrupted time series regression, may be underpowered. In addition, findings may be biased if the months of with the missing data have different trends. However, these variables were included as core metrics of the DSRIP program. Results should therefore be interpreted with caution, and the final summative report will use the complete set of monthly data.

3.3.3.2. Analyses for Annual Performance Measures

For the annual measures, a regression analysis was inappropriate due to an insufficient numbers of data points. They were summarized descriptively as values in each year, changes over time, and differences across PPS. Analyses of two system transformation measures (utilization of preventive care and emergency department (ED) services among the uninsured, non-utilizing, and low-utilizing populations) were limited to PPS that opted to do the 11th project (2.d.i., implementation of patient activation activities to engage, educate and integrate the uninsured and low-utilizing and non-utilizing Medicaid populations into community based care).

3.3.4. Cost Analysis

The last research question examines how the DSRIP program influenced health care costs. A detailed cost assessment of the demonstration was not possible in time for the Interim Report and would likely be limited in its findings due to the initial time period where PPS efforts were focused on start-up activities and initiating implementation. For the Interim Report, the Independent Evaluator examined where there might be other information regarding Medicaid costs that would help inform the reader as to the state's performance on cost trends. The state reported on the Statewide Accountability Milestones (SWAM) for DY3 in its DSRIP, Year 3 Quarter 4 report to CMS.⁷⁸ The SWAM measure 3 is the Medicaid spending milestone and New York reports passing the DY3 milestone measure where costs for inpatient and emergency room spending were below the target trend rate. DY4 SWAM information has not yet been completed and made available. The final summative report will contain more detailed analyses of how costs have shifted over time, and differences across PPS over the entire course of the demonstration period.

3.4. Study Limitations

There are several limitations to the implementation and process study:

- The implementation process data are subject to the standard interview and focus group limitations, such as non-response bias and social desirability bias.
- Key informant interviews were conducted in a small group via telephone. There is potential that interviewees moderated their contributions to the discussion based on the other people present.

⁷⁸ New York State Department of Health, Office of Health Insurance Programs (2018, May). New York DSRIP 115 Quarterly Report. January 1, 2018–March 31, 2018. Year 3, fourth quarter. Retrieved from:
https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/quarterly_rpts/year3/q4/2018_jan-mar_report.htm

- While many of the PPS had members of the original team present for the interview, there were a number of entities where there had been full turnover, and no respondent was able to accurately provide historical data on start-up related questions.
- Engaged partners who were invited to participate in the partner survey and focus groups were identified by PPS, and a complete list may not have been provided.
- Focus groups have not yet been conducted in Central or Western New York.
- While qualitative conclusions are supported by stakeholder quotes, there is a possibility that some experiences in the DSRIP program will not be represented by the findings.
- The perspectives of patient care within the DSRIP program design may not yet be fully informed. The Independent Evaluation team is evaluating the possibility to host future data collection activities with patients through focus groups.
- As data were retrospectively focused on DSRIP DY0 through part of DY4, there is a possibility that some information was not recalled correctly.
- Due to the data collection methodology for the CAHPS survey by the DOH vendor, the patient surveys cannot be trended over multiple years.

The following limitations apply to the analysis of the DSRIP performance measures:

- The analysis only includes data for New York. Although the comparative regression framework explicitly controls for statewide trends, internal validity would be higher with an external comparison group. Conceptually, it is difficult to identify an ideal “control” state as comparison, given large inter-state variations in Medicaid implementation and ongoing waivers. States that are typically used as comparisons for New York based on program size or similar region (e.g., California, New Jersey, and Texas) already have DSRIP waivers.
- A small number of pre-DSRIP years limits the assessment of the DSRIP program’s effect on statewide trends.
- The current analysis assumes that pre- and post-DSRIP initiation trends are linear. Additional specifications will be explored for the final summative report after additional years of data and information about the implementation and process are available. Future work might include distinguishing early and late implementation periods.
- The monthly DSRIP performance measures are 12-month rolling average values, and hence the full effect of the DSRIP program will show up on the performance with 12-month lag. However, the inclusion of the first MY1 in the definition of pre-DSRIP initiation period will mitigate this lagged effect to some extent.
- The annual performance measures cannot be analyzed in a regression framework due to an insufficient number of data points for a robust multivariate regression, limiting their analysis to a more descriptive presentation.
- During the study period, the billing codes changed from the International Classification of Diseases (ICD) version 9, to ICD-10. Following consultation with NYS DOH, measures affected by this change were not included in the Interim Report although they will be considered for the final summative report.

- Most DSRIP performance measures are process outcomes rather than clinical outcomes, due to the nature of the underlying data.
- *Potentially Preventable Readmissions* are defined as 30-day readmissions in the total attributed population, rather than 30-day admissions as a percentage of index admissions. Changes in this measure could reflect higher or lower index admissions, irrespective of readmissions.
- There was a change in the health plan encounter intake system (EIS) that occurred in October 2015 (between MY1 and MY2). This change led to differences in how emergency room encounters were reported and could, in particular, affect assessment of the level change immediately after DSRIP initiation (between MY1 and MY2) in the regression analyses.
- The monthly measures for *Potentially Preventable Emergency Room Visits* and *Potentially Preventable Emergency Room Visits among Behavioral Health Members* only have 31 time points due to missing data at the time of analysis. Consequently, regression results may be underpowered and findings may be biased if the months with missing data have different trends. Results should be interpreted with caution, and the final summative report will use a complete set of monthly data.
- The measures of initiation of and engagement in drug/alcohol abuse treatment are defined as a percentage among index cases. The denominator is changing over time as a result of the opioid crisis, and so no change or a worsening trend in this measure could reflect increased index cases.
- The DSRIP program is implemented concurrently with other important New York initiatives to achieve the triple-aim, making it difficult to isolate its marginal effect on system transformation. Due to its large size, it is presumed that much of the observed difference is due to the DSRIP program although external policies and activities may also play a role in facilitating changes in performance measures.
- One of the DSRIP program's overall goals is to enable broader system transformation, beyond Medicaid. Enabling other aspects of the health care system to move towards the triple-aim is an important outcome but is not fully captured in the performance measures available in the DSRIP Dataset.

4. Findings and Conclusions

This section provides the findings and conclusions from the seven overarching research questions. It starts with a general overview of characteristics of the Performing Provider Systems (PPS) for general context (Section 4.1). Section 4.2 summarizes the main findings from the analysis of the implementation and process (RQ-A), followed by preliminary findings for the remaining six quantitative questions (RQ-B through RQ-G, described in sections 4.3 through 4.8).

4.1. Characteristics of Performing Provider Systems

Summary At-A-Glance

The 25 Performing Provider Systems (PPS) varied substantially with respect to their size, geographic reach, composition of members, project selection, type of system, and current progress towards implementation. This is not unexpected, as there are substantial intrastate differences in local communities' population characteristics, health care infrastructure, population health outcomes, and community health care needs. This was reflected in the attributes of the PPS serving these areas, and the projects they selected based on their community needs assessments.

These details on the PPS's characteristics are important for contextualizing the successes and challenges they have faced in their implementation and process (RQ-A, see Section 4.2) and variations in their DSRIP performance metrics (RQ-B through RQ-F, see Sections 4.3-4.7). The final summative evaluation will include a more comprehensive analysis of how these PPS characteristics are associated with performance.

Exhibits 4.1, 4.2, and 4.3 summarize descriptive characteristics of the 25 PPS.

Regional distribution and PPS size: Ten PPS (40%) were in NYC, with the remaining 15 (60%) distributed in the rest of state (ROS), comprised of Long Island and upstate. Their catchment areas varied from 1 to 13 counties (median: 3 counties). They also varied in membership size, from 31,600 to 637,300 attributed members (median: 144,300).⁷⁹ Within geographic regions, there was high variation in size: the smallest and largest PPS (NewYork-Presbyterian Queens PPS and OneCity Health, respectively) were both located in NYC.

Member characteristics: Statewide across all PPS, 9.2%, 1.2%, and 2.2% of members were in the behavioral health, developmental disabilities, and long-term care swim lanes, respectively. The remaining 87.4% of members were assigned to the "all other" swim lane, the group designated for individuals who were not assigned to the other three swim lanes. (See Section 2.3 for a detailed description of the attribution logic.) The largest differences in patient mix across PPS were in behavioral health (ranging from 3.1% in NewYork-Presbyterian Queens PPS to 15.3% in Montefiore Hudson Valley Collaborative) and long-term care (ranging from 0.7% in SOMOS to 13.5% in NewYork-Presbyterian Queens PPS). The average age of all attributed members was 31.2 years; among the PPS the average age ranged from 21.1 years (Refuah Community Health Collaborative) to 38.8 years (Mount Sinai PPS). Overall, 21.4% of members were black (PPS-level range: 1.7% (Adirondack Health Institute) to 37.1% (OneCity Health)) and 15.0% of members were Hispanic/Latino (PPS-level range: 0.7% (Adirondack Health Institute) to 34.1% (Bronx Health Access)). Most (79.9%) members were in Medicaid managed care plans

⁷⁹ The number of attributed members changed over time. This count is from the last month of MY3, covering July 2016 through June 2017.

(PPS-level range: 69.7% (Adirondack Health Institute) to 90.1% (NYU Langone Brooklyn)), 9.9% were in health homes (PPS-level range: 1.3% (Refuah Community Health Collaborative) to 24.7% (Mount Sinai PPS)), and 12.6% were dually covered by both Medicaid and Medicare (PPS-level range: 4.1% (Refuah Community Health Collaborative) to 21.1% (NewYork-Presbyterian Queens)).

Project selection: The number of projects selected by each PPS ranged from 7 to 11. Twenty-two PPS (88%) selected a full menu of 10 projects, of which 14 were eligible for and selected the optional eleventh patient activation project.

Type of System: Twenty-two (88%) of the lead entities are hospital-sponsored and the remainder are led by other provider collaboratives. Among the hospital-based lead entities, 9 are characterized as single hospital-led where the PPS efforts are primarily led by a single hospital with its network that may include other hospitals; 5 PPS are led by hospital systems where multiple hospitals are all under the same parent entity and involved in PPS activities; 8 PPS are led by a collaborative of multiple unaffiliated hospitals. There are 3 PPS who are led by non-hospital provider organizations: community physicians, a health collaborative of multiple unaffiliated providers, and an FQHC. Of the 25 lead entities, 11 (44%) elected to form separate legal corporate entities ("Newcos") for the collaboration efforts of the PPS.

Current progress towards implementation: The PPS received a range of recommendations in their midpoint assessment reports prepared by the Independent Assessor.⁸⁰ The number of recommendations related to organizational issues ranged from 0 to 7 (median: 2 recommendations), with 14 receiving a recommendation for partner engagement. Project-related recommendations ranged from 0 to 15 (median: 2 recommendations). Four PPS (Community Care of Brooklyn, Montefiore Hudson Valley Collaborative, New York Presbyterian-Queens, and Staten Island PPS) did not receive any recommendations.

⁸⁰ These midpoint assessments were produced by the Independent Assessor, and available at https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/pps_map/midpoint/final_companion.htm (accessed October 27, 2018, table "Independent Assessor (IA) Findings and Recommendations Table"). The midpoint assessment comprises DY0, DY1, and DY2; details on the Independent Assessor's methodology are in the midpoint assessment reports. Following consultation with NYS DOH, the Independent Evaluation team focused on aggregate measures of the number of recommendations related to organizational and partner engagement issues, and separately the number of project-related recommendations.

Exhibit 4.1. Summary characteristics of Performing Provider Systems

Preferred name	Projects selected	Region	Midpoint recommendations: organizational and partner engagement (PE)	Midpoint recommendations: project-related	NewCo versus pre-existing lead entity	Lead entity type	Counties served
Adirondack Health Institute	11	Rest of state	5	7	Pre-existing	Multiple Unaffiliated Providers	9
Alliance for Better Health	11	Rest of state	7 (PE)	8	NewCo	Multiple Unaffiliated Hospitals	6
Better Health for Northeast New York	11	Rest of state	4	4	Pre-existing	Single hospital	5
Bronx Health Access	10	New York City	1 (PE)	1	NewCo	Single hospital	1
Bronx Partners for Healthy Communities	10	New York City	1 (PE)	2	Pre-existing	Single hospital	1
Care Compass Network	11	Rest of state	7 (PE)	15	NewCo	Multiple Unaffiliated Hospitals	9
Central New York Care Collaborative	11	Rest of state	6	5	NewCo	Multiple Unaffiliated Hospitals	6
Community Care of Brooklyn	10	New York City	0	0	Pre-existing	Multiple Unaffiliated Hospitals	2
Community Partners of Western New York	10	Rest of state	2 (PE)	6	Pre-existing	Single hospital	3
Finger Lakes PPS	11	Rest of state	3 (PE)	3	NewCo	Multiple Unaffiliated Hospitals	13
Leatherstocking Collaborative Health Partners	11	Rest of state	4 (PE)	5	Pre-existing	Single hospital	5
Millennium Collaborative Care	11	Rest of state	3 (PE)	0	Pre-existing	Single hospital	8
Montefiore Hudson Valley Collaborative	10	Rest of state	0	0	Pre-existing	Hospital system	7
Mount Sinai PPS	10	New York City	2 (PE)	1	NewCo	Hospital system	3

Preferred name	Projects selected	Region	Midpoint recommendations: organizational and partner engagement (PE)	Midpoint recommendations: project-related	NewCo versus pre-existing lead entity	Lead entity type	Counties served
Nassau Queens PPS	11	Rest of state	2 (PE)	7	NewCo	Multiple Unaffiliated Hospitals	2
NewYork-Presbyterian PPS	10	New York City	1	4	Pre-existing	Hospital system	1
NewYork-Presbyterian Queens PPS	9	New York City	0	0	Pre-existing	Single hospital	1
North Country Initiative	11	Rest of state	1	0	NewCo	Single hospital	3
NYU Langone Brooklyn	9	New York City	3 (PE)	1	Pre-existing	Single hospital	1
OneCity Health	11	New York City	2 (PE)	3	Pre-existing	Hospital system	4
Refuah Community Health Collaborative	7	Rest of state	1	0	Pre-existing	FQHC	2
SOMOS	10	New York City	1	2	NewCo	Community Physicians	4
Staten Island PPS	11	New York City	0	0	NewCo	Multiple Unaffiliated Hospitals	1
Suffolk Care Collaborative	11	Rest of state	1 (PE)	0	NewCo	Multiple Unaffiliated Hospitals	1
WMCHHealth	11	Rest of state	1 (PE)	3	Pre-existing	Hospital system	8

Source: Authors' synthesis of DSRIP program materials.

Abbreviations: Federally Qualified Health Center (FQHC), New Corporation (NewCo)

Notes: The PPS lead entity type may have some categorization overlap. A PPS may have more than one hospital that supports the PPS performance.

Exhibit 4.2. Demographic characteristics of attributed Medicaid members

Preferred Name	Average Age	Female (%)	Black (%)	Hispanic (%)	Managed Care (%)	Health home (%)	Dual (%)
Adirondack Health Institute	32.6	52.8	1.7	0.7	69.7	7.6	17.3
Alliance for Better Health	30.2	55.0	17.6	5.0	75.0	7.5	13.7
Better Health for Northeast New York	29.8	53.3	13.8	3.0	73.6	7.0	13.9
Bronx Health Access	31.1	55.2	32.7	34.1	83.6	14.5	11.2
Bronx Partners for Healthy Communities	31.2	55.7	32.1	29.2	79.5	7.8	13.2
Care Compass Network	29.1	52.8	8.4	2.9	71.9	9.4	13.9
Central New York Care Collaborative	30.5	54.1	14.9	3.6	75.7	14.2	12.8
Community Care of Brooklyn	30.0	52.9	22.2	11.2	84.9	4.6	11.2
Community Partners of Western New York	31.0	55.1	11.9	5.4	80.9	11.3	11.6
Finger Lakes PPS	29.5	53.8	20.9	6.3	75.7	12.4	13.0
Leatherstocking Collaborative Health Partners	30.6	53.8	2.1	1.1	75.6	7.8	13.3
Millennium Collaborative Care	29.2	53.3	25.6	6.5	77.0	18.9	12.9
Montefiore Hudson Valley Collaborative	32.4	55.9	19.1	10.8	75.4	18.7	15.7
Mount Sinai PPS	38.8	55.2	31.8	22.3	78.2	24.7	18.6
Nassau Queens PPS	33.2	54.7	19.1	14.2	80.2	6.1	12.9
NewYork-Presbyterian PPS	31.1	59.0	18.5	32.5	86.2	6.9	12.6
NewYork-Presbyterian Queens PPS	35.6	54.6	12.9	18.8	78.6	3.5	21.1
North Country Initiative	28.6	53.2	2.9	0.8	71.1	5.0	12.7
NYU Langone Brooklyn	23.7	51.8	10.0	16.4	90.1	2.7	6.2
OneCity Health	31.6	55.2	37.1	22.0	80.6	14.7	12.2
Refuah Community Health Collaborative	21.1	50.4	3.0	1.1	84.7	1.3	4.1
SOMOS	31.5	53.0	13.5	21.0	85.8	2.0	9.4
Staten Island PPS	31.8	53.1	19.9	16.0	75.2	5.2	14.0
Suffolk Care Collaborative	28.6	53.5	10.7	14.0	78.0	3.1	11.4
WMCH Health	27.5	54.0	12.8	7.3	77.8	2.8	11.1

Source: Authors' analysis of the DSRIP Dataset. The numbers are from the last month of MY3; this rolling year covers July 2016 to June 2017.

Exhibit 4.3. Attribution swim lanes for Medicaid members

Preferred Name	Total Attributed Member Count	Behavioral Health	Developmental Disabilities	Long-term Care	All Other
Adirondack Health Institute	84,463	12.0	4.0	3.7	80.3
Alliance for Better Health	119,564	13.0	2.1	3.0	81.8
Better Health for Northeast New York	90,796	9.7	3.2	2.0	85.1
Bronx Health Access	144,263	11.3	0.1	1.8	86.9
Bronx Partners for Healthy Communities	344,540	9.9	0.1	2.7	87.3
Care Compass Network	91,923	11.4	2.5	3.9	82.2
Central New York Care Collaborative	242,374	12.9	1.7	2.7	82.7
Community Care of Brooklyn	615,905	5.4	0.7	1.5	92.4
Community Partners of Western New York	83,031	10.7	0.8	2.6	86.0
Finger Lakes PPS	319,080	13.5	1.0	2.8	82.6
Leatherstocking Collaborative Health Partners	43,383	7.8	2.4	1.6	88.2
Millennium Collaborative Care	278,363	12.2	2.8	2.6	82.4
Montefiore Hudson Valley Collaborative	259,657	15.3	0.5	2.9	81.4
Mount Sinai PPS	411,037	14.0	1.1	1.7	83.3
Nassau Queens PPS	429,275	5.6	1.7	3.0	89.6
NewYork-Presbyterian PPS	82,483	6.9	0.0	0.9	92.2
NewYork-Presbyterian Queens PPS	31,645	3.1	0.3	13.5	83.1
North Country Initiative	39,900	11.9	3.8	3.3	81.0
NYU Langone Brooklyn	108,575	3.3	0.8	1.0	95.0
OneCity Health	637,293	10.6	1.2	1.1	87.1
Refuah Community Health Collaborative	51,408	3.1	1.2	0.9	94.9
SOMOS	617,598	3.4	0.1	0.7	95.8
Staten Island PPS	74,742	7.5	3.3	5.7	83.6
Suffolk Care Collaborative	201,721	6.6	1.0	4.5	87.9
WMCHHealth	181,865	9.3	3.2	2.6	84.9

Source: Authors' analysis of the DSRIP Dataset. The numbers are from the last month of MY3; this rolling year covers July 2016 to June 2017.

Notes: There were no PPS members attributed to the developmental disabilities swim lane for NewYork-Presbyterian PPS. The "all other" category represents the members that were not assigned to the Behavioral Health, Developmental Disabilities, or Long-term Care swim lanes, and includes services such as engagement with a health home, any connectivity with a Primary Care Provider, or other ambulatory care provider.

4.2. Challenges and Successes of Implementation and Process

This section addresses RQ-A:

What were the successes and challenges with respect to PPS planning, implementation, operation, and plans for program sustainability from the perspective of DSRIP program planners, administrators, and providers; and why were they successful or challenging? (CMS RQ7)

4.2.1. Start-up

This section presents the findings related to building the Performing Provider Systems (PPS) and launching the DSRIP program from the perspectives of the PPS key informants and partners engaged in projects.

4.2.1.1. PPS Formation

To receive DSRIP program funding, interested entities needed to form coalitions of partners to create a PPS and submit an application to the NYS DOH. Depending on the pre-existing health care systems in their regions, some PPS found this to be more of a challenge than others.

While many communities convened planning groups with newly formed coalitions, some PPS leveraged existing relationships with partners to create collaborative applications. Many PPS key informants indicated that the application process involved public meetings as well as workgroups, where partners met several times per week to develop the application. While in most cases, a broad-based coalition of planners was found to be beneficial, sometimes a large and diverse group led to difficulty in consensus building.

We pulled together a workgroup or steering committee to write the application. It included three FQHCs⁸¹, four [community-based organizations], and [Hospital] as well as other community providers. The whole process of building the application that way was very painful because we had to have a lot of conversations earlier on that other PPS didn't have to yet. – 2017 PPS key informant

In regions where many competitors were organized into a small number of PPS, key informants often reported difficulties during the initial application development.

Challenges included alignment on key issues, allocation of resources, and leadership structure.

It could really be described as “cooperatition,” or an amalgamation of cooperation and competition, since these entities who came together were previously competitors and remained that way to some extent. – 2017 PPS key informant

⁸¹ Federally Qualified Health Centers

Sometimes these challenges were addressed and resolved, and the group evolved to develop better functioning relationships by the final application phase.

The major things that turned the tide was integrating these two PPS. We re-selected all of our projects together. We had 120 people in the meeting in small groups. Each table worked with and reported out the projects selected...The willingness to stop, take a breath, and let go of what we did independently to collectively pick our projects raised the confidence of the PPS and their ability to hold their own in a larger PPS. – 2017 PPS key informant

Several PPS, especially those which evolved from a unified health system, reported that their existing structures enabled them to quickly pivot to the requirements of PPS formation and related work.

Our overall governance and the speed with which we were able to get this launched from ground zero was pretty incredible. – 2017 PPS key informant

With the medical home and the ACO⁸², we already had a lot of infrastructure there. – 2017 primary care/hospital regional focus group participant

Some PPS described building a PPS around their regional hospital. Through an advisory council, they developed a consensus model and networked with major stakeholders, including local government, behavioral health, social service organizations, and community hospitals. In one example, this council merged successfully into a governance committee.

A small number of PPS reported that they had already started to make changes to their current organizations prior to or around the time of PPS formation because of ongoing strategic initiatives. They attributed these early actions as setting them up for success.

We started a transformation effort here about two years before DSRIP came in terms of reducing unnecessary Emergency Department visits and moving toward value based payments. We had a number of risk-based contracts and level-1 contracts prior to DSRIP. – 2017 PPS key informant

The lead agency, [health center], was DSRIP-ing before DSRIP. It seemed so logical for us to continue what we were doing in a more formal structure. That was the genesis. Rather than join another PPS, we did it on our own because we were experienced in this area already. – 2017 PPS key informant

Before DSRIP, we had gotten a grant that allowed us to integrate behavioral health in rural clinics. So, we had already gone down that road of trying to have a clinician sitting in

⁸² Accountable Care Organization

a rural physical clinic, and trying to manage two billing systems, and two HR systems... – 2017 mental health and substance use regional focus group participant

The PPS that did not already have a pre-existing infrastructure reported additional early challenges with project implementation and partner engagement. Key informants from these New Corporation (NewCo) PPS explained that it was difficult to simultaneously build infrastructure for a new organization, engage partners, and adhere to the breadth and pace of DSRIP program project requirements.

We were concurrently organizing around the region, while also organizing around the rollout of the projects. Those two things have two completely different needs and I think that there's a mismatch of pace compared to what it takes to effectively organize a region, and ideally, then you roll out projects. The nature of DSRIP was that we needed to do both of them at once and that presented a lot of operational challenges. – 2018 PPS key informant

Unlike many PPS with hospital-based infrastructure, we didn't have anything when we began. In order to implement and measure and do all of the things we needed to do, IT platform was critical. We didn't even have computers at first. Sort of like a startup, we are building everything from the ground up. – 2017 PPS key informant

The NewCo creates an administrative structure that is kind of an impediment to getting things done in our organization. – 2017 primary care regional focus group participant

4.2.1.2. Project Selection

The PPS were required to select projects that demanded investment in technology and human resources to better serve target populations consistent with DSRIP program goals. Each PPS was required to submit a detailed plan for each of their selected projects. In that same application, the PPS committed to speed (how fast they could meet their goals) and scale (how many patients would be served, or how many partners would be included). This phase was challenging for many PPS.

Nearly all PPS described utilizing the results of their community needs assessment to select projects. The community needs assessment was a required component of the PPS application, and was slated to be a “comprehensive assessment of health care resources, including behavioral health, and community-based service resources currently available in the service area and the demographics and health needs of the population to be served.”⁸³

⁸³ New York State Department of Health. (2014). [Guidance for conducting community needs assessment required for DSRIP planning grants and final project plan applications](#). Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/community_needs_assessment.htm.

Overall, the community needs assessment exercise was perceived as beneficial to inform project selection.

The community needs assessment led to the selection of the right projects for us. All selection was based on data and going through the exercise made us realize certain areas where we already had high performance, wouldn't have a gap to goal, or wouldn't be able to move the dial on that. Some of the analyses put behavioral health at the forefront of our minds, where it wasn't before. – 2017 PPS key informant

We also did a very comprehensive community needs assessment to figure out what gaps there were to fill. We understood a few large needs, like behavioral health and primary care, through this community needs assessment. Then we were working on [gaining] stakeholder agreement. We had a PPS-wide conference in the beginning, and at that time we discussed the community needs assessment with stakeholders. There were some assumptions both proven and novel that came out of the community needs assessment. – 2017 PPS key informant

Although most PPS key informants described positive outcomes of the community needs assessment and project selection process, some reported that in hindsight, they should have selected different projects. The reasons for this were varied and included changes in partnership structure, project design flaws, emerging clinical needs in their community, pressure from a dominant body, or lack of information.

We did not select the right projects. There's one that jumps out immediately, but the [name] project has proven to be a significant hurdle for us because [partners have sold the business or reduced capacity]. It's been a major struggle in trying to make progress with this because the few places that do have capacity do not align with our hot spot areas or our needs. – 2017 PPS key informant

One PPS had a particularly problematic experience with one project and had to reach out to NYS DOH for assistance after the interpretation of the project changed.

One of the struggles with all project selection is that we had a limited time to absorb what the project was and what it meant, and it was hard to see what the details were on the project. We found a lot of issues with this particular project...The State or Independent Assessor revised the wording on the project. It was a total game changer to us, to the point that we had many discussions with the State and the Independent Assessor, and got some relief on an alternative implementation plan. – 2017 PPS key informant

Many key informants reported that they were generally pleased with their projects, but felt that the “11th project” was problematic for their PPS.⁸⁴

⁸⁴ The optional 11th project focused efforts on uninsured patients and Medicaid low- or non-utilizers who may benefit from additional primary care services. All of the uninsured patients in the region as well as a NYS

We probably didn't have all of the right information to understand the uninsured at that point in time. The exchanges were barely up and running; it was hard to understand what the uninsured population looked like. It made the PAM⁸⁵ survey a nightmare in terms of qualifying someone to meet the survey requirements. They reflected the environment prior to the exchanges. The structuring of the 11th project didn't get the best footing because it didn't have the right understanding of the size, scope, and location of that population and how hard it would be to find the uninsured. Not that we'd eliminate it, but we'd have to size and scale it differently if we knew what the population would be like. – 2017 PPS key informant

After the fact, seeing how the State recalculated the other set of equity programs, I wonder if the PPS would have been better off not selecting the 11th project for the equity project. I'm not sure how well we were qualified for that. – 2017 PPS key informant

Some PPS key informants expressed that in hindsight, they would have selected projects differently given Pay for Performance considerations. They reported a lack of alignment between the projects and the Pay for Performance measures on which they are being assessed.

We should have selected projects that would meet the Pay for Performance measures. We lost sight of that in the list of the 44 projects. There is so little correlation between the projects and the Pay for Performance measures. The projects are there to just check-the-boxes and get dollars... If we had to do it over, I'd select new projects. I think a lot of PPS didn't realize that at the time. Meeting the milestones structured in terms of building the organization was the big focus in the beginning, and we lost sight of the end goal because of that. Speed and scale and actively engaged partners were the main focus, and it detracted from the bigger picture. – 2017 PPS key informant

4.2.1.3. Project Milestones

The DSRIP program Project Requirements Milestones and Metrics centered around Domain 1, PPS-led projects. Each quarter, PPS were required to submit reports to the Independent Assessor through the Medicaid Analytics Performance Portal (MAPP), including project-level reporting requirements (e.g. establishing monthly meetings with managed care organizations) and provider-level reporting requirements (e.g., primary care practices achieving Level 3 PCMH

determined portion of non-utilizing and low-utilizing Medicaid members were attributed to project 2.d.i. Ownership of this project and attribution for payment was determined by mechanics described in Attachment I-NYS DSRIP Program Funding and Mechanics Protocol

(https://www.health.ny.gov/health_care/medicaid/redesign/program_funding_and_mechanics.htm)

⁸⁵ Patient Activation Measures or PAM is from project 2.d.i. The project is focused on increasing patient activation related to health care paired with increased resources that can help the uninsured as well as non-utilizing and low utilizing Medicaid populations gain access to and utilize the benefits associated with DSRIP PPS projects, particularly primary and preventative services.

certification). For each requirement, PPS committed to a target completion date which could not exceed the prescribed speed and scale commitments made in their application.

Key informants from PPS reported significant challenges with committing to speed and scale targets in Demonstration Year 0. They had trouble understanding the milestones and also criticized continually changing requirements. These changes reverberated down to partners as they described devoting time and staffing to meet requirements, only to have them change again. Key informants said that guidance on the projects was often changing, there was not a clear source of consistent information for PPS, and PPS had to make decisions without all the information they needed to inform their commitments.

If we're thinking about the history, I think the main, underlying problem that led to all of these challenges was how the initial process went, where the state was asking us to decide on a lot of things before they gave us the information that we would need to make those decisions. Certainly, any kind of commitment...it seemed like those were very premature. I know that the state was going as fast as they could, and then they were pushing us to go as fast as we could, but it was a really hectic process that led to a lot of weirdness that we're still stuck with these years later. – 2018 PPS key informant

The challenge was just how quick everything was happening. The State was figuring out what their requirements were; we didn't get validation until after things were due. We worked around it all; we have made 100% of our milestones and goals that we set out to, but it really has come down to the State's timeliness (or lack thereof) on guidance. – 2017 PPS key informant

In the beginning, I think New York State was kind of making it up as they go, too. It was difficult because we would receive multiple emails even per day on directions for many things, from reporting, from metrics, from new plans. But over time, over the first year, I think that finally sorted out and both sides got more organized. But, that was a bumpy first year. – 2018 PPS key informant

Respondents felt there was inconsistency and a lack of clarity surrounding specific milestone definitions, and did not believe the definitions aligned with project implementation and how PPS would later be measured.

For me, there were issues in implementation around ambiguity and inconsistency in the language. For example, the milestone and the metric or the metric and the data requirements were essentially talking about the same thing, but if there were inconsistencies in the language between those two, it could be very difficult to figure out what was actually being required and asked for. There might be a list of things in parenthesis, it was unclear if those were examples or if those were the only options that were eligible. – 2018 PPS key informant

The scale and speed, we set those numbers before the definitions were even complete...we didn't even know what the actively engaged criteria was until after the

fact. The provider counts, we didn't know what that meant until after the fact. Honestly, that made things very difficult when the requirements were changing. – 2018 PPS key informant

Because of this confusion, many PPS key informants reported that they set targets unrealistically high, or that they did not understand the commitments they were making. They cited challenges with not having the data they needed to assist them in making informed decisions when setting their targets, and some felt they were pushed into making commitments and only learned the ramifications of those decisions later. Without clear definitions related to milestones, some PPS projected their targets based on what they anticipated the metrics would be, and key informants said they would have made different projections if the requirements were clear from the beginning.

The targets were set so high that we didn't even have enough admissions to meet the numbers set up. There was a push from DOH to set high marks for networks, which became speed and scale commitments. It was after the numbers were handed in that it became clear what we were committing. Essentially, the way speed and scale commitments were set up was that we were instructed to give an informational forecast we weren't prepared to give yet. They said, "You're either in this pool or not..." Then, once you're in the pool, they said, "Let me explain what it means to you to be in this pool." "Let me tell you ramifications of the numbers you just gave us." On the provider commitment side, one of the project requirements is that we will have seven emergency rooms involved, and we only have six hospitals. Those are examples of the nonsensical requirements. – 2017 PPS key informant

Part of the hurdles that we encountered and still are encountering is not having the data to really estimate what our numbers really should be. In several projects, we might be wedded to numbers that at the time, we didn't have data to accurately estimate, especially within the confines of the application. That also made it a bit difficult to go forward. – 2018 PPS key informant

A number of key informants expressed that not knowing their PPS's attribution in advance led to particular difficulty with forecasting speed and scale targets. Attributions are the number of Medicaid members assigned to each PPS, based on a NYS DOH algorithm applied to a PPS partnered network. Many PPS regretted being stuck with inaccurate or unreachable service targets.

Everybody was getting recalculated attributions for quite some time, so you didn't even know who you were managing and if our projects even matched up with our attribution – 2017 PPS key informant

It definitely has to do with making the projections before we even knew what our attribution was going to be. It was a little bit of a blind projection and there was no ability to really go back and edit those based on the reality of the situation going forward. I think that was definitely a challenge. If we had re-forecasted based on the actual attribution

and actual membership within the PPS, I think we would have gotten a lot closer to achieving those targets on a prospective basis. – **2018 PPS key informant**

When we started the application phase, we were focusing heavily on a 10-county catchment area. As we went further along into the application period, we were approved for a five-county region, which was still a good amount of coverage geographically. Because everything we had been looking at for our application was nine or 10 counties in terms of patient/provider engagement and community needs, not being able to make changes to that after our size changed drastically continues to be a huge challenge. The number of providers we have committed to and patient numbers are totally wrong and unable to be changed. – **2017 PPS key informant**

Engaged partners largely echoed these frustrations. Some focus groups participants felt that project milestones were not realistic or tangible, which ultimately discouraged partner participation. They often felt their own targets were out of sync with their work.

I think all of the participants are rational participants, and the way Albany is defining metrics for the hospitals – the people in DSRIPs – they’re defined in some way that doesn’t encourage participation and doesn’t encourage success. The benchmarks they’re looking for really have nothing to do with improving care in the community. - **2018 hospital regional focus group participant**

4.2.1.4. Early Implementation Challenges

Key informants and partners identified several factors that slowed project implementation. Key informants from both large and small PPS recalled the immense resources required to get projects up and running. They described needing to reallocate staff from other departments, hire talent externally, and create new office spaces. In some cases, initial reliance on consultants led to a lack of staffed projects. The PPS and partners that needed to build more infrastructure noted that it was even more challenging to do without capital funding.⁸⁶

We doubled or tripled the size of our staff since the beginning of DSRIP. Trying to have the resources to organize this program and get it up and running was a very significant challenge. – **2017 PPS key informant**

Key informants pointed out that as a system transformation demonstration project, the DSRIP program required significant culture change. Groundwork needed to be established to prepare the health care system for the transformative work that would ensue through DSRIP program initiatives. Respondents expressed that simultaneously working to adjust administrative systems, develop workflows for reporting requirements, formalize contractual agreements with

⁸⁶ The Capital Restructuring Finance Program (CRFP) offered funds to PPS and partners to support capital projects but the evaluation of the PPS sponsored site applications took longer than anticipated. Therefore, PPS and partners had to move forward with the DSRIP program without knowing if they received a CRFP award.

partners, and carry out DSRIP program project requirements to ready the system was an initial challenge.

Formalizing agreements between different agencies in a different way was a unique challenge because there are certain timelines related to these legal and contractual documents which were sometimes outside of our hands, however were important to establish. DSRIP initiatives are incredibly important but are a catalyst for change within our service system, which predicates that the rest of the system is ready for that change. I think that administratively aligning the different initiatives, so we could actually transform the rest of the system, was also an administrative challenge. –2018 PPS key informant

The biggest challenge I had from the get-go is that we were not very top heavy. We were a skeletal staff, and the reporting requirements were immense. We felt like we needed a significant amount of manpower. I visited some other PPS, and they had giant office spaces and huge armies of employees, which was intimidating. My initial reaction was that we just didn't have the infrastructure in place. – 2017 PPS key informant

One of the things that was a challenge was that award letters came out in May [2015] by the time DSRIP had already started. The evolving requirements were difficult and continue to be difficult. We weren't working on the program until halfway through the first year. – 2017 PPS key informant

Key informants from several PPS reported that interim leadership at their PPS delayed all aspects of start-up, and in some cases perceived that a lack of decision-making or conservative approaches to project development by original leadership teams resulted in delayed outcomes.

Some study participants wished that the NYS DOH had saved the PPS time by defining some structures for them.

There was zero structure. There was a group of projects and a bag of money. The initially 50-some PPS that were combined into the 25 that we have now. And, each had to go out and figure out structure. – 2017 mental health and substance use regional focus group participant

Whether it was an EHR, connectivity consent form... Something. Give us some foundational things so that we didn't have to invent everything ourselves. Or, even just some guidance how the PPS were going to be structured so that each PPS was the same structure. – 2017 hospital regional focus group participant

There were probably ways that DOH could have maybe either guided some of those efforts or at least on best practices... It almost seemed like the default was that you were a PPS within a hospital system and already had those mechanisms in place. -2018 PPS key informant

4.2.1.5. Partner Engagement

Partner engagement also went slowly for some PPS. Given that some partner organizations were competitors prior to the DSRIP program, obtaining buy-in and aligning different objectives took time. Some respondents acknowledged that the nature of their PPS structure posed initial challenges with partner communication and workflows. Others mentioned that while they established large project workgroups to represent all provider types from their network, early buy-in and consensus building was difficult to reach among so many participants.

We attempted to build a workgroup comprised of 35-40 individuals from 35-40 partners, so all the different provider types that make up our network. Although there was a lot of engagement from the group, it was very difficult to obtain appropriate buy-in and come to conclusions with a group that large for some of the larger milestones... That was one of the challenges from an engagement perspective, just ensuring we can get buy-in and then coordinate toward one or two primary solutions that we can move forward with. – 2018 PPS key informant

Overall, the general consensus was that involving a broad-based group of partners early on was vital to a well-functioning group and continued engagement. Key informants often attributed early success to their partner engagement efforts, and emphasized the lengths to which they had gone to gain buy-in from their partners. Some ways PPS engaged partners early on included an advisory council with a consensus model or an active project advisory committee. In-person meetings were generally described as an effective way of increasing partner buy-in and camaraderie, despite scheduling difficulties. Other key informants reported that the project selection process brought partners together. For example, they led PPS-wide conferences for project selection, or used local agencies for the community needs assessment and then kept them on as partners.

Some focus group participants felt that the PPS initially brought too many people to the table which resulted in more confusion than action, and that it took PPS too long to fully roll out the DSRIP program, but others felt that their PPS did a good job organizing partners and getting work started in a timely manner.

At the onset of DSRIP, we were very fortunate to be partnered with [PPS], because we had a lot of forward thinkers in the PPS. We took our opportunity to not spend so much time thinking about how to perfectly manage this to get the outcomes that we want. In health care, we really like to control our outcomes, right? We want to make sure we have positive outcomes. With DSRIP, we had to make sure that we were moving. We didn't have five years to sit and talk about what we were going to do, we needed to put boots on the ground. So I think that coming to that decision really positioned the [PPS] and all of our organizations to move quickly and see results, and what we were able to do was rather than plan out how we were going to come to these excellent outcomes, we were learning as we went and tweaking the process as we went. I think that has been why we've been successful as a PPS, because we did not hold back and we just moved forward and corrected as we went. – 2018 hospital regional focus group participant

I think that we wasted the first year paying all those consultants, and that money could have gone to providers. The initial rolling out of it was a year behind before it even caught up and started getting any real traction. Consultants were driving everything and there was really a disconnect between PPS and consultants and providers. I think that was the first misstep. – **2018 mental health and substance use regional focus group participant**

The DSRIP-engaged partners were critical of the PPS when they were not included in early decision-making for defining network areas, project selection, and other formation issues.

What we found most frustrating about the process is that when we first became involved, the projects were laid out. The PPS selected the projects that the PPS would be involved in. – **2017 mental health and substance use regional focus group participant**

Respondents noted that with the multitude of DSRIP projects, it was often difficult for partners to fully understand the various project definitions, metrics, and patient populations. It was also a challenge to ensure that the correct stakeholders were at the table to discuss specific initiatives during the implementation phase, even within a single organization.

In the beginning, it wasn't very well organized, it was very confusing. You go into different group meetings and so many different boards were there and all these stakeholders; everybody was on a different level of what they do. There was no organization ... They never went over things. It was almost like they were rushing, they had all these deadlines and quick dates, so nobody gave a base in the beginning to have a level platform for connectivity. – **2018 hospital regional focus group participant**

Some of the other challenges...is that there are just so many initiatives with DSRIP and what we found is that a lot of partners just really struggled with what is what? When we're looking at this process outcome or trying to hit this metric or this target, how are we defining these things? What patient populations are we talking about? Even getting the right people within an organization or within a site in the same room, the people that would be working on the specific projects, was a challenge. -**2018 PPS key informant**

4.2.1.6. Governance Structure

The PPS overwhelmingly found their governance and committee structures to be beneficial from initial start-up.

We value a lot of the feedback that [committees] provide to us. For example, they know how to create a registry within EHR. There's always someone there to say whether it will or won't work. There is a high level of conceptual thinking that

happens, and then there is also feedback about what happens daily at a given level.
– **2017 PPS key informant**

A few reported changes to these structures over time, to foster continual improvement.

We had quarterly town hall meetings, which now have been moved to a less frequent basis, but these included partners from all types across the network. The discussions that occur within the clinical committee have transitioned as well. It used to be very project-related, and now it's related to discussing clinical implementation and the strategies related to that. It's now a forum for input from members in terms of increasing approval for what we are doing and extending projects to other partners to support our network. – **2017 PPS key informant**

The IT committee, compliance, and clinical committees meet on an as-needed basis. People have limited time, and committee meetings were taking up too much time. They meet now when they need to, and the governing body takes the lead on these issues. – **2017 PPS key informant**

Key informants at three PPS reported more hostile relationships with committees at the beginning of the DSRIP program, but described making structural changes that created better working relationships.

4.2.2. Operations

This section presents stakeholder experiences regarding several of the DSRIP program operations, including partnerships, performance measures, funds flow, PPS overlap, value based payment, data access and reporting, and workforce issues.

4.2.2.1. Partnerships

4.2.2.1.1. Collaboration

The most frequently noted operations change due to the DSRIP program was increased collaboration. This included collaboration between providers who were previously in competition with each other, as well as collaboration between providers of different types of services. Key informants reported that organizations that did not previously trust each other had the opportunity to work together toward common goals, and formed positive relationships that would not have occurred in the absence of the DSRIP program.

Because of DSRIP, we have accelerated the rate at which competing organizations work well together. Competing hospitals, nursing homes, [and] physicians at different practices are working together. It is unique and DSRIP helped make it possible. – **2018 PPS key informant**

I think the best part is that I sat at a table this size with all of our competitors in [location], and they asked us to brainstorm. And we all were able to apply to do a specific project. – **2018 hospital regional focus group participant**

According to stakeholders, partners began working together more comprehensively and cohesively. Key informants from several PPS described the formation of care collaboratives that met regularly. Additionally, they reported an increase in hospitals partnering with community-based organizations, and primary care practices collaborating with behavioral health providers. Bringing different entities to the table that had not collaborated previously was said to lead to new ideas and bring communities closer together.

We have made great strides with collaboration between organizations that without DSRIP would never have collaborated. We really pride ourselves on this; that we brought the community together. – **2018 PPS key informant**

Study participants said that collaboration became a standard process and habit which they expected to continue after DSRIP program funding ended.

We knew every provider within the community and they knew us, but we never sat at a table with everyone. I've said at many PPS meetings where we are able to sit with colleagues, that they really brought us together, and that was a very good thing. Those conversations will continue now, long into the future. – **2018 community-based organization regional focus group participant**

I think DSRIP has shifted the way that our providers think about health care. Just from the hospital side, our hospitals are thinking about social determinants of health. They're thinking about partnering with community-based organizations. They're thinking about food services, legal services, and they're thinking about how all these things impact someone's health. They're thinking about how they can partner with different types of organizations and work with people beyond their own walls. These are things that will have lasting impact beyond the five years of DSRIP. Beyond the projects we put in place, they've learned how to partner with different types of organizations beyond traditional health care organizations and think about health in a different way. – **2018 PPS key informant**

Shared provider accountability was singled out as a big step for the health care system. Key informants said that previously, hospitals felt their responsibility ended when a patient was discharged, but due to the DSRIP program, health care organizations developed connections that encouraged them to work together to maintain responsibility for their patients. These collaborations led to better care coordination between providers and improved care transitions, which are discussed further in the patient care section (see Section 4.2.4.4).

These patients were [previously] handed discharge papers and shuffled out the door. They were told to follow up with somebody and social factors were never really something that was brought to the forefront. We have teams that are helping people get

connections to places that can help them address these factors in a long-lasting sustainable way. Helping them get connections to [disability] benefits, to food pantries, to health homes, to legal services, to primary care practices and health coaches. They are not just handing them a paper referral, they are actually making sure they get there; they're getting them connections to recovery peers. I think we've seen through the data and through these interventions that this is having an impact. I think their quality of life is improving and we're seeing a drop in utilization for these people. – **2018 PPS key informant**

A majority of PPS key informants pointed to their new work with community-based organizations as fundamental to their success, and cited these partnerships as a vital change to the health care system. They said that development of more robust relationships with community-based organizations led PPS to have more successful collaborations, break down silos, and reduce hostility between medical and community providers. Community-based organizations that had not previously considered their organizations to be part of the health care system began seeing their roles a bit differently. Community-based organizations and health care providers developed a common vocabulary and were starting to “look at the same picture from almost the same perspective.”

One of our biggest successes has been our ability to work with, and integrate, community-based organizations into the project. When it was first rolled out, we had CBOs that were an integral part in developing the workflows, plans, and how the project would look. That was really important, because it wasn't just us saying, “This is how we're going to do it” and trying to find people who would want to do it our way. We really sat down with the organizations that were going to be doing the work in the community, with their staff, and valued their input. As a result of that, we've been able to grow it, we've been able to add a lot of other types of CBO partners to the project, and that has allowed us to reach a much bigger section of the population than we would have been able to do on our own. – **2018 PPS key informant**

We had a lot of pressure to give money to Tier 1⁸⁷, and we even got remediation on the mid-point assessment because we are working with the [community-based organizations] who need help in capacity building. It takes time. We finally are seeing them blossom... This is the beginning of doing transformational work in developing a community practice where we are sharing goals and ways of doing care. – **2017 PPS key informant**

CBOs don't necessarily know the clinical piece, so when we began to really have open discussions, those were successes. Really being able to see how we can learn and work together – it probably now is pushing us to look at how we can have collective impact and collective engagement. – **2018 community-based organization regional focus group participant**

⁸⁷ Non-Medicaid billing community-based organizations are considered Tier 1.

Most partners from community-based organizations were pleased with the expanded project scope they had been able to develop with DSRIP program funding. They reported increased service provision in some of their toughest service areas and gratitude for the ability to expand the scope of their health care workforce.

This has opened the doors for us to engage new clinical partners, develop relationships within those organizations, and get our services out to patients whose doctors would not know about it. We are reaching a new group of people in our own community. – 2018 community-based organization regional focus group participant

Some community-based organizations did struggle with figuring out how their organization fit into the DSRIP program. For example, the exposure to risk was new for many of them:

I know some of the initial bumps in the road and to be honest, that we still face today, is the amount of risk that this endeavor carries. We had to ramp up our HIPAA and our compliance end of things and it's still a work in progress. That was a major investment that we made on our own. We didn't write a funding request for anything from the [PPS]. So there's been a lot of investment, to get to us to this place. ...They really put us on the hook for everything. I mean, God forbid something were to happen. We are a three or four-million-dollar organization. I mean, everything can get wiped out in a heartbeat. Now, the payoff on our end is obviously that we can create new jobs, that we can grow and expand our mission beyond what it ever had been before. And, it gives us a place at the table that we have never been at before too. So, there is some payoff to that risk. Hopefully, that continues. – 2017 community-based organization regional focus group participant

4.2.2.1.2. Partner Engagement Challenges

While collaboration was viewed as a success by a significant majority of study participants, partner engagement challenges were also reported by about two-thirds of PPS. Challenges were most often experienced during the initial implementation phase, but some continued beyond that to a lesser degree.

Many noted that partners were already overloaded with their own tasks, and the additional DSRIP program-related responsibilities required further dedication of time.

On the partner side, it's been challenging because they have their businesses to run and we're trying to get in there and be disruptors of their day-to-day business. – 2018 PPS key informant

It has turned into a game of Health Home coordinators chasing primary care providers to get information, and primary care providers not really knowing who we are or what we do... And they just don't have the time, so we are still chasing them around and trying to get information, and trying to get a case conference in. It was like that before DSRIP and it is like that now. – 2018 primary care regional focus group participant

Although some suggested that participation in the DSRIP program was more difficult for larger organizations with multiple sites where more staffing was required, other key informants noted that smaller organizations were also significantly challenged. With more constrained staffing, DSRIP program engagement could be financially harmful to smaller practices.

Engaging our smaller partners, not necessarily CBOs, even smaller PCPs, was extremely challenging. They do not even have the resources to engage. The cost of engagement is the cost of seeing patients in their practice. Even taking an hour out of their day to talk about project implementation can be financially detrimental to their practice. It made us think about how much more effort we need to put forth to understanding the unique needs of those partners and how to tailor support to them based on their ability. – 2018 PPS key informant

Several PPS had trouble obtaining buy-in from partners they considered particularly important to engage.

As we get along to implementing our projects, we have very influential partners who are making decisions on whether to engage in projects based on whether the money they'd get from DSRIP is equal or more than the effort they will put into the work. It's a transformational effort, and the DSRIP dollars are a bridge to get them to a VBP world. They aren't buying into the system. These partners are looking very short-term to figure out next quarter gains, and if they spend more than they make, they won't do the activity. – 2017 PPS key informant

Partners, meanwhile, did not always see the benefit of participating in DSRIP projects, and were frustrated when offered contracts that were not financially feasible.

We were offered an opportunity for transitions of care at [PPS], and it was going to be a money loser from the word "Go." There's been more than one project that we had to walk away from, and it's not like we pay people gazillions of dollars. But there was no appreciation for the cost of delivering care or services, and we just had to say it was amazing that they wanted to work with us, but we couldn't afford to do that. Who is in a position where they can lose money from day one? So that was a real frustration. – 2018 hospital regional focus group participant

Sometimes partners found that larger organizations were unwilling to work with them collaboratively.

It just seems that historically, the large practices don't know how to work with the [substance use disorder] patients. They don't know how to develop good connections. One of the roles I had was outreach every FQHC, and only a handful actually got back and wanted to meet... Somebody is going to provide these services for [substance use disorder], and what we found is some of them try to provide it themselves. It usually looks good for patients, because it ends up being a very minimal touch. I am not sure what their outcomes are, but generally, when the client continues to use and is unable to

maintain, then they end up trying to refer them to us when the patient is more severe. Maybe if we could have gotten them earlier and actually provided the appropriate level of treatment. – **2018 mental health and substance use regional focus group participant**

A number of study participants noted that partners were not accustomed to the level of reporting or oversight that projects demanded, and this led to frustration on both sides.

[Partners are] struggling with understanding that we're asking them to implement an evidence-based intervention related to the project, and integrate some form of quality improvement to ensure they are reviewing what they are doing, and that they are doing it within acceptable standards. I think a lot of partners were used to being able to say, 'I did something,' but not having to demonstrate that they did it with any rigor. – **2018 PPS key informant**

If we want to become integrated, the paperwork that needs to happen for us to be able to provide medical care in our mental health clinics is crazy. – **2018 mental health and substance use regional focus group participant**

A lot of partners felt that PPS took too long to engage them initially, and that lag continued into the first years of the DSRIP program. They expressed frustrations about contracts taking too long to take effect and PPS committing to work that never actually got off the ground.

We have a project with a PPS where they're going to be putting nurse practitioner physician assistants in some of our programs and we're going to put social workers in some of the PCP offices in the community. That contract has taken over a year, not on our side, on their side, the PPS side, to formalize and sign. It also seems that the mental health providers are the ones that have to make all the changes, not so much the providers on the health side, the physical side of the PCPs. – **2018 mental health and substance use regional focus group participant**

I feel like it's Groundhog Day we keep having. It's been a year and we keep having the same conversation over and over again. You sit at the table – I won't mention the hospital – but you say you're going to work with us and this is where we need to go, and nothing happens – so are you just doing this for show? It's very frustrating because we do make so many changes. The CBOs make such efforts so they really want this work and they really want to form the partnerships, and the PPS come in and say, "Yes, we're going to do this," and nothing happens. – **2018 mental health and substance use regional focus group participant**

4.2.2.1.3. Educational Resources and Training

All PPS provided educational resources and training to partners, including education to improve organizational capacity to provide services and to participate in the DSRIP program as well as trainings for partners' service provision staff. Nearly all PPS key informants and a majority of focus group participants reported that the resources and training PPS provided to partners resulted in higher levels of engagement and participation. They believed that materials such as

community resource guides and project toolkits helped partners not only implement projects but think “outside the box” in their approaches. Partner staff trainings, which may not have been accessible to smaller organizations if they were not offered by the PPS, were said to improve service quality (for example, through cultural competency trainings) and capacity (for example, by training tobacco treatment specialists).

And training and education has been a very big thing – we've been able to get access to training that we would never have access to before, at a very high level. – 2018 community-based organization regional focus group participant

A number of PPS were successful with helping their partners achieve National Committee for Quality Assurance (NCQA) Patient-Centered Medical Home (PCMH) 2014 Level 3 Recognition. Key informants attributed this success to the additional resources and training that they were able to provide with DSRIP program funding, particularly for smaller practices which would not have been able to accomplish this otherwise.

The work getting primary care practices PCMH recognized, we ended up being able to touch a lot of practices especially the small ones that wouldn't have been able to do it on their own...close to 100 sites getting Level 3 recognition due to help and resources PPS was able to provide. - 2018 PPS key informant

Although many regional focus group participants reported positive thoughts on the education and training offered by PPS, some believed that the trainings could have been expanded to cover a wider array of topics and could have been targeted at specific organizations and positions. Additionally, several partners would have appreciated trainings on the services other partners provided so that everyone was familiar with each other's work and could make appropriate referrals.

So we're going to build these teams of care coordinators, but we're not going to let providers or primary care physicians know that there are these people that are not case managers, that are mainly focused on medical and mental health, are out there and can be a support and an ally in the community. That information was never shared, or maybe to the extent that it should have been. - 2018 primary care regional focus group participant

4.2.2.2. Performance Measures

In Demonstration Year 2, clinical improvement (Domain 3) Pay for Performance measures began, and in Demonstration Year 3, all system transformation (Domain 2) Pay for Performance measures shifted to Pay for Performance. As the DSRIP program continued, funding progressively shifted from Payment for Reporting to Payment for Performance. By the end of DSRIP Demonstration Year 4, Domains 2 and 3 would be completely Pay for Performance.

Key informants from PPS reported being unsure where to direct their efforts as Pay for Performance measurement began. They noted that many PPS focused so heavily on meeting the project milestone requirements early on, it was difficult to later shift focus toward meeting performance measures.

Part of my concern with that is that we are moving into Pay for Performance, but we are spending a lot of time in our practices working with EHRs⁸⁸ and changing workflows when really, we have to be focused on the outcome or performance measures. With so much of the focus now on performance, we are still spending a lot of time trying to build the EHR screen and the workflows around getting this done. My concern is that we aren't spending enough time on more of the performance-related requirements. – 2017 PPS key informant

The way the program requirements were laid out initially, it really drew our attention to the details around meeting project requirements and checking some boxes (I hate to say that, but there was a lot of box checking that went on to satisfy those project requirements). The other thing was the emphasis on that, as opposed to some of the performance aspects early in the formation of the program, really sent a lot of the PPS down the path for both an incentivization model for the partners and a focus on the activities and resources that we brought on board to execute on the project requirements, but they were worth a relatively small amount of money and I think just took a disproportionate amount of resources. It was also the clearest path we had initially, we knew what was expected and we could march in that direction, where the performance improvement pieces were a little more ambiguous, especially given the data challenges. – 2018 PPS key informant

Respondents expressed that the initial emphasis on project milestones did not align with subsequent performance measures, which had the unintended consequence of diverting focus away from building a meaningful infrastructure and completing projects.

Of the [number] projects that we chose, some of the requirements of those projects, process milestones, had no relation to how you were later judged in DSRIP as far as pay for performance. There were some things that were sort of contrary to actual pay for performance measures. You may have spent your time hiring nutritionists to meet a requirement, but you're later going to get judged on medication adherence. We spent two years setting up projects that were valuable to impact patient care but might not have the impacts that we're being evaluated on in the latter years. – 2018 PPS key informant

There's been a tremendous focus on getting project requirements met, but what we are finding is that it doesn't necessarily translate to performance on outcome measures unless other innovative things are done. – 2017 PPS key informant

⁸⁸ Electronic Health Records

We spent the first 18 months of DSRIP working on the projects and the milestones required by them, and now we've made what we fondly refer to as the pivot, where those projects are operational and being managed, but we are almost doing wholly separate work on the specific goals. We had a DSRIP phase 1 and a phase 2, and we've had to flex our resources between the two. A lot of the early milestones had nothing to do with the performance measures, but now we are working on the performance measures. – 2017 PPS key informant

A number of partners were concerned that this shift toward Pay for Performance might leave them behind.

I think some of those infrastructure issues that have hampered our participation, I think of this junction as they move into performance-based payment is just leaving us behind, and the medical folks are going to move forward. Because we don't have that capacity, when interestingly the biggest effect on the scores are going to occur by our participation. – 2017 mental health and substance use regional focus group participant

4.2.2.2.1. Challenges with Domain 4: New York's Prevention Agenda

Each PPS selected and committed to at least one (and up to two) projects from Domain 4, which focused on priorities in New York State's Prevention Agenda and were designed to impact population-wide health. Performing Provider Systems could select project categories that corresponded to, but did not duplicate, efforts related to their Domain 3 projects in the following topic areas: promote mental health and prevent substance abuse, prevent chronic disease, prevent HIV and STDs, and promote healthy women, infants and children.

Under Domain 4, while PPS appreciated the flexibility that came with developing their own milestones in the sense that they could focus more directly on their work, the lack of predefined targets sometimes created confusion during project implementation. Respondents stated it was difficult to develop and guide projects without clear, pre-established deliverables.

With the [Domain 4 project], it appeared like the group was struggling because there weren't direct targets to go after, or direct metrics. It seemed that they had been floundering for a little while deciding what it was they actually wanted to do. I think that was a different sort of set of challenges as opposed to having metrics that were hard to decipher in some way or were sort of ambiguous. Not having output metrics to guide project development was kind of equally confusing for people. – 2018 PPS key informant

When the group came together, there was a lot of enthusiasm, but it was like, "What exactly are we supposed to do?" We'll define what we are going to try to accomplish and make our own milestones, but each step of the way there was a sense of, "Are we doing what we are supposed to? Are we doing the right thing?" Lack of definition in Domain 4 was sort of a curse in that respect, but also a blessing in that people were relieved to have the freedom to identify the goals they thought were the most important, and not be spending a great deal of time trying to configure reports to meet some specific

reporting metric that had been defined by DOH. It was a relief not to be caught in that bureaucratic exercise, and to focus on the work. – **2018 PPS key informant**

Some key informants also stated that the lack of strong requirements and flexibility within Domain 4 had the unintended effect of making it difficult to prioritize those efforts.

I think all the Domain 4 projects are so vague...sometimes the things that are vague or don't have strong deliverables can take a back burner. It would almost have been unwise to prioritize that over things that were actually due. If I were doing it again, I don't know that I could recommend a 'blank slate' that was the Domain 4 projects. – **2018 PPS key informant**

Way back in the beginning (probably even while we were still in Year 0) for Domain 4, coming from DOH, these projects were referred to as "free money," as basically Pay for Reporting. That made it very challenging to make them priorities and really get them as much attention as some of the other projects. In some ways that was justified, but the whole thing where they were referred to as "free money" was really not helpful in getting some momentum behind them. – **2018 PPS key informant**

4.2.2.2.2. Criticism of the Projects Approach

Some respondents felt that the projects reinforced the health care delivery system's siloed approach and distracted them from reaching the broader DSRIP program transformational goals.

The emphasis on the projects in the beginning may have been the wrong emphasis if the state were hoping for mass systems change. It may have been a little too specific, and while resulted in sort of really good Microsystems of care, it may have not resulted in the "health care systems of the future" that they were looking for. It may have only moved us more incrementally in that direction. – **2018 PPS key informant**

I woke up one day and realized we weren't providing patient care. We did an excellent job along the way checking off the boxes on our projects, but I can't say whether that has made a change for patients. We've been extremely successful wasting dollars on the projects. We've gotten the marks for getting the boxes all ticked. Once you get out there bringing these community neighborhoods together, you realize the transformation is not about specific projects. It's about bringing people together, determining what the goals and objectives of the referral relationships [are], and connecting people with each other through IT systems in some form or fashion. Care management from the simplest form of it to the most complicated is the key to the whole thing, but it's care management from people who are not organizationally related except through referral relationships. That's where transformation takes place. The biggest problem with the projects is that they have interfered with the meaningful transformation. Our challenge has been, "How do we do something meaningful while checking the boxes?" We have had

some success doing that, but all the boxes we've had to tick have gotten in the way, and we could have done more, faster, at less cost if we didn't have to do that other stuff. – 2017 PPS key informant

I would like to see them become focused on tangible, meaningful goals, not arbitrary metrics. The goal is to save money for the health system. The goal is to reduce hospitalizations. I would like them to engage in projects that have near-term, tangible, measurable results that do those things as opposed to these pie-in-the-sky ideas, which likely will never come to fruition. – 2018 hospital regional focus group participant

From the very beginning, we thought it was very ironic that the purpose of DSRIP was to break down the silos in the delivery system, and then it was designed to do so through siloed projects. – 2018 PPS key informant

The collaboration we have seen among our partners in the last year or so has really been gratifying and amazing, but if we were able to focus on the activities with our partners that we feel will have the biggest impact and decrease the focus on some of the specific requirements of those projects, I think we could probably advance this thing better and faster. – 2017 PPS key informant

4.2.2.3. Funds Flow

The amount of time it took PPS to distribute funds to their partners varied. In some cases, partners' experiences with funding differed based upon the level of PPS infrastructure that existed prior to the DSRIP program. New Corporation (NewCo) PPS, without established infrastructures, more often struggled with delays and lapses in the flow of funds. However, some partners preferred the direct payment model of the new entities, rather than the hospital or health-systems based PPS, which they described as having more indirect payment models.

Many PPS were successful in quickly moving the funds out to partners, and felt they were rewarded for those efforts.

One of our successes is that we've received 97% of the available funds to date. We are a small, lean-running PPS, so we don't put a lot of money into building capital. More than 85% is put back into our partners, and all of that has gone to our partners successfully. We are very transparent with our funds flow and how it works and how funds cycle back to them. We try to maximize all available funds, and it's been a great success. – 2017 PPS key informant

We were able to get money quickly out to partners, which helped us out in the long run. We created educational documents and webinars for the partners to teach them why we were doing things in a certain manner. It allowed us to have an opportunity to flow our funds quickly, and the required documentation and information was submitted timely and accurately, so it made our jobs easier when these partners were on board and up to date. We knew exactly what we needed, so

our partners were on the ball in terms of providing things to us. – 2017 PPS key informant

Other PPS described why they dispensed funds more slowly.

We had challenges with funds flow. This whole idea of getting funds out to partners as quickly as we can, but having some accountability for what they do with those funds without having mature reporting structures, expectations, and deliverables... It concerns us to this day. We were trying to be very conservative, cautious, and accountable in what we were doing, but we were also trying to meet the demand that our state and our partners had in trying to get funds out the door. – 2017 PPS key informant

Funds flow was difficult for us at the beginning. We had to flow dollars to organizations that would make meaningful changes, while also flowing dollars to the CBOs. In addition, we have a 5% cap on CBOs for safety net providers. We got called out on the funds we were flowing, and we had to justify why funds weren't flowing to the CBOs, but it was difficult to figure out how to do it in a meaningful way. – 2017 PPS key informant

Several PPS key informants perceived that the Independent Assessor's reports did not accurately reflect the progress they had made in pushing out the funds, especially to community-based organizations.

I'm proud of that and the fact that we've done a really good job as financial stewards of the funds we've received. The pushback, then, that none of the money was flowing down to the CBOs, much of that was an artifact of how we had to report. We spent a lot of money that was going to care providers, and it went to the hospitals first, but a great majority of it was going to people providing flow. It was a categorization problem as well as a reporting problem. We've started to switch the way we report so that it's more of an accurate report of the way we spend. – 2017 PPS key informant

A number of partners and key informants said that the 5% funding limitation⁸⁹ to non-safety net providers versus the 95% to safety net providers had alienated key partners that were fundamental to the DSRIP program's success.

We are a private practice in a rural county and see about 17% Medicaid but do not meet the criteria as a safety net provider. The resource sharing seems too heavily weighted towards safety net providers who are not typically as efficient or as

⁸⁹ This designation is described in the DSRIP program requirements outlined by the MRT Waiver Amendment STC. Relevant excerpts include: (1) "DSRIP funds provide incentive payments to reward safety net providers when they undertake projects designed to transform the systems of care that support Medicaid beneficiaries and low income uninsured." And (2) "non-qualifying providers can participate in Performing Provider Systems. However, non-qualifying providers are eligible to receive DSRIP payments totaling no more than 5% of a project's total valuation."

nimble in the market place as we have to be in private practice. – 2017 partner survey respondent

The 95/5 rule has been a great challenge for us, because we have been supporting our Tier 1 CBOs throughout our region, but getting hung up on that we're being held to we can only support them with only 5% of that funding. Keeping in mind that CBOs support nearly every other non-preventative project with regards to the social determinants of health, basically retraining and training our workforce partners and also with the patient engagement project, so that's been a definite challenge. – 2018 PPS key informant

Many partners reported a desire to see the NYS DOH monitor whether funds flow was indeed making its way to non-hospital participants, including community-based organizations and clinical practitioners.

The State should more closely monitor the funds flow between PPS and the community-based partners. The community partners are engaged but are not sufficiently compensated for their time/effort. – 2017 partner survey respondent

Unquestionably to get appropriate and effective funding to CBOs, CMS and the State will have to "carve out" real funds for CBOs to implement projects. Since the CBOs have had so little opportunity within DSRIP to demonstrate what their programs can do--many of which may not fit into the "siloeed" official DSRIP projects but do bring down hospital use---they will be in an even worse position for VBP. – 2017 partner survey respondent

I think one of the challenges has been to actually get the funds. My understanding is that the hospitals are holding onto the money and they're not really releasing it to the CBOs that really need it to do the work and are helping the hospitals meet their targets. There's a lot more being put on the CBOs – more responsibility in treating clients and keeping them out of the hospital, but without the necessary funding that we really need. – 2018 mental health and substance use regional focus group participant

[Hospital] has got the money from the state; they have not distributed that money to practices. They have not. They have kept their money in their pocket. I know because I have been to practices on behalf of [hospital], and they don't even pay me, let alone the practices. – 2018 primary care regional focus group participant

We're not really getting the money that we need to do this work, and you don't want to get yourself so in the red that you need to close a program. You have to be very smart about how you balance that. We got a lot of mixed messages. You started with how it affected behavioral health and SUD⁹⁰. Most of the PPS wasted the first two years before they even thought about behavioral health and SUD. Our services are the ones that really impact emergency room costs, also there are other ones that could help achieve

⁹⁰ Substance use disorder

most of the goals on 2.a.i., 3.a.i., and most of the integration projects. Of the nine [PPS] that we are in, seven of them stood on the sidelines scratching their heads and collecting money. Most of them never paid DY1, DY2 incentive dollars to behavioral health and SUD providers. Despite lengthy emails and exchanges that they are going to include us, three and four years later, "You never executed an agreement, all you executed was an attestation." I am not a lawyer; send me an agreement. – **2018 mental health and substance use regional focus group participant**

Meanwhile, partners from hospitals reported that the funds were not significant enough to make meaningful change to the health care system.

The funds flow to partners, especially hospitals, has not been significant enough to propel change that will transform the way we provide services. Rather, DY0-2 has felt like an exercise in "checking boxes" to meet goals on paper. Until VBP is here across all payers hospitals still need to operate within the FFS⁹¹ system. Until funds flow to hospitals to truly offset the cost of a volume decrease of 25%, there won't be incentive to change. – **2017 partner survey respondent**

I would increase PPS reimbursement rates for hospital partners. Prior to DY3, hospital systems were reimbursed for the coordination of services for Medicaid discharges. However, current funds flow models reimburse hospital systems simply for a report of the Medicaid discharges monthly. – **2017 partner survey respondent**

Partners also reported challenges with delays related to funding and other contractual hurdles to their work with the PPS. For example:

[PPS] has presented its contracts to us both years at least six months late, creating tremendous cash flow problems for us. In fact, this year's contract just arrived last week; they changed key provisions without even asking us... – **2017 partner survey respondent**

My organization still does not have a contract for this year...so we have no funds flow. I know how much we've earned and I know how much we've gotten paid and there's a very big discrepancy between the two because the payment doesn't happen until there's a contract and of course that's way above my pay level, but that concerns me. – **2017 primary care regional focus group respondent**

But in terms of us as an organization -- what we also do, we what really do -- this, there's nothing there. Luckily enough, we had income to fund ourselves until we could receive payment for the project that we were doing. We didn't break even for almost a year, in terms of the salaries for the workers, the training that we provided, the day-to-day of providing the service. – **2018 hospital regional focus group participant**

⁹¹ Fee-for-service

4.2.2.4. PPS Overlap

In New York, 33 of the state's 62 counties had only one PPS entity, while the remaining 29 counties had an overlap of between two and six PPS. In regions with PPS overlap, some providers worked with multiple PPS on DSRIP projects.

Partners were often frustrated with conflicting interpretations of DSRIP program rules by different PPS. For example, a partner in two different PPS sometimes received different guidance on how to handle a rule change or project guidelines. Partners sometimes felt overwhelmed by working with multiple PPS administrations, and struggled to meet DSRIP project reporting requirements.

A number of our high attribution partners are spread across/participating in more than one PPS, and each PPS has their own strategy, tactics to carry out, the DSRIP required work, and long-term required strategies that differ. A lot of our partners seem to try to find a common denominator among all the PPS, and sometimes that is the minimal type of work you can expect back from partners, when our PPS may be asking for a little more aggressive-type work. – 2018 PPS key informant

These partners want more alignment across PPS so they aren't doing things three different ways for three different PPS. It's hard for us to change course later on. We've had to collaborate with partners after the fact, which has been immensely challenging. It would have made sense not to have 10 PPS in the NYC area, but at this point, it is what it is. Some partners complete four different surveys for four different PPS. – 2017 PPS key informant

Being a part of nine different PPS, they all have their own intricacies and things. Sometimes it was difficult to work with the staff because, depending on what PPS was involved in that particular area, it was working on different projects. So where one project may be working on peer services, another may be working on integration, another may be working on integrating medical services. – 2018 mental health and substance use regional focus group participant

When partners first learned about DSRIP, they signed up to participate with multiple PPS, and along the way became fatigued and either did not comply with the contractual obligations or simply said, "I want to remain a partner, but I can't get anything done this year because I'm busy with my other PPS obligations." Fatigue impacted their ability to implement projects and to demonstrate their implementation of those projects through reporting. – 2018 PPS key informant

Respondents described challenges with keeping track of which patients were attributed to which PPS, and felt that the need to focus only on “their” patients was sometimes a distraction from their work or encouraged other PPS to transfer patients to their own partners.

We may be affecting outcomes of patients that are attributed to a different PPS than our own. How well our outcomes improve are not only related to our own efforts, but to the efforts of the other PPS downstate, which made it a benefit for us to align projects together. – **2017 PPS key informant**

When they go into the hospital, the first thing they try to do is move you over to their doctors, even though you are happy with your primary, because this hospital's [PPS] doesn't have enough patients yet. – **2018 hospital regional focus group participant**

I love that answer. "You weren't in our attributed lives." What is so crazy is we are living where we are, we all impact each other, and that elderly person moves now to their daughter's house in a different place; it's a moving target. If we are going to impact change, allow us to impact change and don't worry about your specific attributed lives. - **2018 hospital regional focus group participant**

I think we are challenged in this area more than some because of the way our PPS overlap and also with our shifting attribution. At the last all-PPS meeting they referenced that attribution didn't shift that much, but I think there's a handful of PPS that really had a lot of attribution shifts, and I don't know if that's because of our overlapping nature. – **2018 PPS key informant**

Some PPS key informants said that attribution shifts made it more difficult to provide feedback to providers, resulting in missed opportunities to engage clinicians and illustrate their efforts and results.

With that attribution problem, it's really hard for us to, again, go back to the clinicians and make it real to say, "These are definitely the patients that you are caring for that are driving these measures," and making that linkage so that they can understand that. So that has been, from a data standpoint, the biggest challenge is really being able to give that feedback loop back to the providers to say, "Okay, you implemented this project or this program and this is the effect it had on your patients," and making that real from a reporting standpoint. -**2018 PPS key informant**

Most respondents in overlapping PPS said that it would have been preferable if there was only one PPS per region. They said this would prevent confusion and fatigue among PPS partners, as well as reduce inefficiencies in the investment of time and resources in areas where other PPS were established. Key informants from PPS noted that they had not originally built their service models to be collaborative; thus, they found overlap difficult.

I hope the state sees this as a lesson learned to not have multiple PPS in one region. We have a problem with attributed membership going back and forth between multiple PPS. This causes a lot of confusion for the CBO partners being part of multiple PPS, deciding which PPS to align with, but you still have attributed membership that is part of all of the organizations. Multiple PPS in one county is a problem. – **2018 PPS key informant**

I think there's been a lot of issues derived from mixing counties across PPS. It's incredibly impractical for us to dedicate resources to patients in a county that we do very little business, in a county that already has infrastructure set up at the PPS level and is already doing this work. It's at best an inconvenience and I just think it's very inefficient. I guess the question for me would be "why?" – 2018 PPS key informant

There should not have been overlap on projects. In hindsight, maybe it sounded wonderful when they were designing it, but with all of this effort to work together, things are still not operating at 100%; the providers and partners are getting different things from each PPS. A lot of providers were doing multiple surveys on the same topics, and we couldn't coordinate fast enough. There has to be a better way next time. – 2017 PPS key informant

Finally, while PPS key informants acknowledged challenges with overlapping PPS at the design and initial implementation phase, some felt they had overcome these challenges by collaborating with other PPS to develop similar reporting requirements and alignment of other procedures.

We deal with a lot of overlapping providers, and we had to discuss early on as to how to divide and conquer the work. It was a challenge, but we had some elegant solutions to that. The PCPs only had one PPS to work [with] within this agreement, which was really helpful for us in the end. Behavioral health providers are involved in both PPS and are committed to shared outcomes and shared goals. It is a real commitment regionally. – 2017 PPS key informant

We've gotten challenges with providers in two or three of our sister PPS, but on the other hand, we've placed more emphasis on collaborating to try to overcome those challenges with an "all must rise" philosophy. The medical directors have tried to come up with similar sets of reports that would be easier for our participating partners to fill out one set of forms, rather than multiple different sets. They've really worked hard to try to coordinate the efforts, and we did one community needs assessment for the entire region. – 2017 PPS key informant

The other thing I think for partners is that they had multiple potential sources of support. One PPS was offering technical assistance for the PCMH, the other one was offering funding for the RHIO connection, meaning that whatever you as a partner needed, there was three stores you could go shop at, not just one. So I'm hopeful that it made them actually able to close their gaps more easily. – 2018 PPS key informant

We have developed pretty good systems for working together. In the beginning, there was not a lot of understanding of what it meant to sign up for a PPS, so I think letters and information were sent out to many providers within the community and people signed up for multiple PPS... so from the attribution methodology, could be in both PPS. We have worked very collaboratively with [other PPS] leadership and have developed ways of "we're only going to reach out to these providers, they're only going to reach out to

those" and we have developed ways of working around that but also collaborating especially in the behavioral health area and a few other areas...and partnered 100% on those and we do joint funding to all of our partners in that area. – 2018 PPS key informant

4.2.2.5. Value Based Payment Preparedness

Partners and PPS reported devoting a lot of attention to preparing for value based payment (VBP). While several PPS key informants stated that all DSRIP program activities were preparing partners for the move towards value based payment, they believed that the trainings and resources provided to their partners were particularly helpful. Almost all PPS provided significant partner education activities for the shift to value based payment, including trainings, videos, webinars, workshops, conferences, and symposiums, and the NYS DOH offered “VBP Bootcamp” and “VBP University” programs as well. Key informants felt that the trainings were well-received and helpful in educating partners about how to operate in a value based payment environment.

A lot of what we do is tied to the shift to value based payment. We had some VBP educational series ourselves that we launched to our partner organizations in conjunction with our overlapping PPS. We've created an account management team that focuses on going out to visit partner sites to educate on how the work they do as it relates to DSRIP ties to VBP and how they can align themselves with VBP. – 2018 PPS key informant

Focus group participants had mixed responses about the value based payment education they received. While many partners felt that the value based payment trainings they participated in were well done and helpful, others did not like the format of the trainings, did not believe useful information was provided, or did not feel they gained enough knowledge to enter the value based payment landscape confidently.

Best practices and things like that have not been shared broadly, or have only been shared in a finance-directed way, and not so much in a general administration way. What needs to be done to support the contracts? Not how do you write the contract or negotiate the contract? All of the VBP boot camps I have gone to have been very finance-driven or contract management-driven, where it's about how to negotiate contracts -- not from the health care administrator perspective, which is how to develop the organization to support these contracts, or poised the organization to be successful in these contracts. – 2018 hospital regional focus group participant

One thing I would like to change is the VBP training. I had to take the VBP training⁹² because that was a requirement. When I clicked the YouTube link, I laughed. Everyone, all the staff who had taken the training, they laughed because it was really a total waste

⁹² VBP University Freshman Year

of money. I don't know, did they pay to create that thing? – 2018 community-based organization regional focus group participant

Each PPS had partners that started from different points of value based payment preparedness, and many PPS launched surveys and listening tours to learn more about their partners' needs. A number of PPS key informants reported targeting some support specifically towards community-based organizations, since they were often less prepared for the shift to a value based payment environment than medical providers.

As we move towards the VBP model, we're working with each of those [CBO] partners to determine, "Well, if we're going to contract with an MCO, what is your contribution? What should you be measuring? What should you be saying is your value statement?" so that when we get into potentially risk-based or capitated models, that they can say, "Okay, this is the part I contributed to the overall success and I get paid on that." That's a very challenging formula for a primary care office; it's a near impossible formula for a CBO. We're really trying to tackle that...we're actually hosting roundtables and stuff like that with the CBOs to work through some of those questions. – 2018 PPS key informant

Because we recognized early on that many of our social service providers did not have the infrastructure or the capacity to successfully compete in a VBP-arena, we realized we needed to do some of the work to be able to guide them along the road. We offered the capacity-building assessment to 90 of our providers and 62 picked up the offer and went through an elaborate assessment process, which then had learning collaboratives specifically for social service providers. Our CBO partners were extremely grateful that we were paying attention to their sector in particular, because most of the work has focused on health care providers. We want them to be able to have conversations with MCOs about how their services impact the social determinants of health and increase health outcomes. – 2018 PPS key informant

Despite these efforts, focus group participants voiced frustrations about the value based payment system excluding community-based organizations. Even when trainings were aimed at bolstering their strengths, they believed that the model was not set up to include them.

The value based payment system still was only clinical and medical, it was not based or built on CBO. – 2018 community-based organization regional focus group participant

In addition to education activities, PPS invested in infrastructure to prepare for value based payment. Specifically, PPS used DSRIP program funds to increase information technology connectivity and data analytics capabilities to better prepared their partners to operate in a value based payment environment.

[Information technology] connectivity, the ability to subscribe to activity happening outside of their organization, prepares [partners] for VBP so they don't order repetitive tests; we're helping them set up systems so they can see outside of their organization. – 2018 PPS key informant

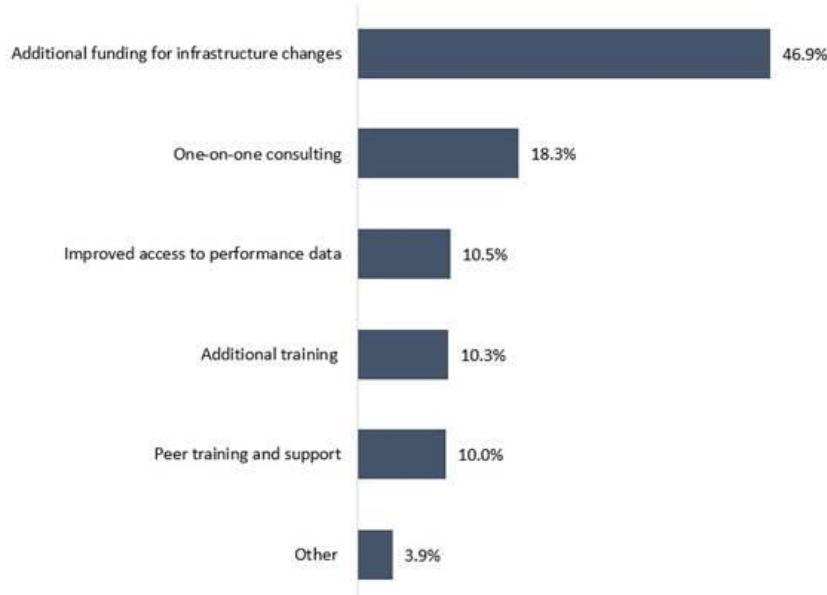
Several PPS key informants also increased engagement of managed care organizations, which they saw as key for a successful transition to value based payment. Having managed care organizations at the table was viewed as crucial since they will be negotiating contracts with partners in a value based payment environment. In addition, a number of PPS key informants reported hiring consultants to help them with the transition to value based payment.

Partner survey results suggested that these activities were fairly successful at educating partners about value based payment. More than three-quarters of respondents characterized themselves as “very knowledgeable” or “somewhat knowledgeable” about value based payments (82.2% in 2017; 78.9% in 2018). About three-fourths of respondents’ organizations had made changes to prepare for value based payment (73.7% in 2017; 78.9% in 2018). However, most still said they required more resources to facilitate the shift to value based payment (83.7% in 2017; 80.4% in 2018). In 2018, over 90% of respondents at clinics and behavioral health organizations said they required more resources, while fewer than 75% of respondents working at skilled nursing facilities, hospice/palliative care, government offices, non-primary care practitioner offices, and pharmacies required additional resources.

Partner survey respondents who said they needed more resources to facilitate the shift to value based payment were asked which resource would be most helpful. Almost half (46.9%) said they most needed additional funding for infrastructure changes, and almost one-fifth requested one-on-one consulting. About 10% listed improved access to performance data, additional training, or peer training and support (see Exhibit 4.4).

There was some variation in these resource needs by organization type. More than two-thirds of respondents from hospitals and more than half of community-based organizations cited additional funding as most helpful. One-on-one consulting was chosen by at least one-quarter of respondents from non-primary care providers, clinics, and government offices. At least one-fifth of respondents from substance use treatment organizations, clinics, and health home/care management programs selected improved access to performance data. Peer training and support was most common among respondents from skilled nursing facilities and hospice/palliative care centers.

Exhibit 4.4. Which of these resources would be MOST helpful to your organization's shift to value based payment? (N=688)



Source: Authors' analysis of the 2018 statewide partner survey.

Note: Responses do not total 100% due to rounding.

Within the framework of value based payments, many PPS described tensions that they were facing before the full transition to a value based payment environment. Key informants at PPS and partners noted that as they had early successes in meeting performance measures like avoidable emergency department visits, they were losing financially, as their hospital admissions went down:

There has been a constant tension in this program that we are moving to VBP, because the more we reduce avoidable visits, the less we get paid. If we do our job and have success, we lose pay. That doesn't mean we aren't moving to VBP. This group is really tuned into that. It makes reimbursement precarious in some respects, though. – 2017 PPS key informant

We went from 24% to 13% of emergency department patients being admitted. It has had an impact on us in terms of reimbursements. There is a disconnect at the State level because the money hasn't caught up to what the State needs us to do (i.e., reduce hospital visits). They should be giving grants to those who are making the change. We are losing money by implementing. – 2017 PPS key informant

When asked if value based payment would help sustain DSRIP program projects, PPS key informants provided mixed responses. Some believed that the projects were not important in the end, but were primarily a means for the PPS to organize and identify what they would need to proceed with value based payment. Others felt that since value based payments were not aligned with the work being done through the projects, they would not be sustainable beyond the DSRIP program. Many of these respondents believed that collaboration with managed care

organizations was integral to sustainability, and that DOH should have facilitated these collaborations as part of the DSrip program. However, several PPS key informants said that if negotiations with managed care organizations were fair, their projects would be sustainable. Additionally, a few reported that although they were less optimistic about sustaining projects in the short-term after the DSrip program ended, they believed that in the long-term, after more health care transformation took place, projects would be sustainable. Focus group participants voiced concerns about being able to demonstrate their value for value based payment contracts. Many partners reported they lacked the data access and capabilities to show managed care organizations the value they provided, which made them fear they would not be able to sustain their work.

If we had data from the payers, we would know when our patients were rehospitalized, because we don't see claims. I don't know how that would all work, but it's hard to know what kind of value we are producing or creating because we don't see the whole picture. That's a challenge. - 2018 hospital regional focus group participant

It's very hard for community-based organizations to understand how you fit in, how you can price your services, because we don't have data that isolates what our value is. After all this time, we understand that's what we need, but there really hasn't been much emphasis on trying to tease that out to see what we contribute to the overall picture because we don't have directly billable services in many cases that you can look at claims to see. We're part of the value based purchasing world. Probably almost all of our organizations are involved in one form of network or another that's forming [independent practice associations] so that we don't lose our place, but again, it's very hard to understand how to price out our services within that, put a value on them. Even though we all kind of know it, we don't have the hard data. – 2018 community-based organization regional focus group participant

4.2.2.6. Data Access and Sharing

Data access and sharing was a significant issue throughout DSrip program implementation. The PPS and partners were frustrated by difficulties accessing data provided by NYS DOH, and PPS were not always able to access the data their partners were collecting. Respondents described substantial challenges with data lag, data access, and data sharing.

4.2.2.6.1. Accessing Data from NYS DOH

The PPS did not have full access to NYS DOH electronic data during Demonstration Years 0-2, which made it difficult to obtain the information they needed to develop projects and track progress. Performing Provider System key informants were frustrated by the delays in gaining access to the full spectrum of needed data.

Once data access was obtained, ongoing reporting lags remained a significant challenge that prevented PPS from knowing their current performance level and adjusting interventions as necessary. Key informants from PPS found the Salient Interactive Miner (SIM) and the Medicaid

Analytics Performance Portal (MAPP) to be useful, but less actionable than it could be for PPS and partners. Without real-time data, it was not clear whether efforts were influencing outcomes, and it was a challenge to provide effective guidance to partners.

It would have been helpful to lessen the lag with the outcomes data so that partners can see their investment, and how their investment is or is not paying off. Either way, it is a challenge to say, “you’re still not getting it right, because the data is showing that,” or, “you’re hitting it out of the park and doing great,” or, “you’re supposed to be hitting it out of the park, so adjust your efforts a little bit and try to make it happen.” By the time they get data it is so long after they put in the effort. –2018 PPS key informant

Partners echoed frustrations with their inability to measure real-time impacts due to the data lag time.

We are doing the work, but we just don’t know what the outcomes are. We rely on PSYCKES⁹³, which is great, but it doesn’t really have up-to-date data. It’s Medicaid generated, so things are not seen for three months. We don’t know if a client did go for their test or not, or did they pick up their meds? All the data that we need, we can’t really extract real-time data. –2018 mental health and substance use regional focus group participant

PPS key informants also reported that certain types of data they expected were not available. Overwhelmingly, PPS and partners struggled to obtain data from managed care organizations, noting the importance of managed care organization data and collaboration to system transformation. Some key informants expressed they lacked necessary claims data for Pay for Performance measures, and explained that data on cost associated with care would have been helpful for partners to understand their financial impacts in preparation for value based payment opportunities. Other respondents felt limited in their ability to provide care for patients with substance use issues without access to patient substance use data.

I was at several meetings at several different PPS, and people around the table would say, “We need someone from managed care here. Why isn’t there anyone from managed care here?” That was two years ago, and finally, they just gave up asking. I don’t know if they couldn’t get them to the table, I don’t know what the reason was, but a lot hinges on them and them giving us claims data so that we can see how we can make an impact. If we want to do a before and after study on asthma, for example, we need to know if this child has had multiple hospitalizations, and what was the cost before the intervention so that we can show that it made a difference. – 2018 hospital regional focus group participant

I don’t think anyone sufficiently considered at the launch of DSRIP the fact that the PPS, as a PPS, are not legally entitled to contract for care; and absent the contract for care,

⁹³ Psychiatric Services and Clinical Knowledge Enhancement System for Medicaid

most of the MCOs would not and will not share data directly with the PPS. –2018 PPS key informant

It would be great to know the cost associated with the care so we can have a better sense of what we're trying to do with value based care. We don't know the value if we don't know the dollar signs. We have great statistics that show over 50% reductions in emergency room visits, but we really don't have the sense of what the financial impact of that reduction is. –2018 PPS key informant

4.2.2.6.2. Sharing Data with Partners

Patient privacy regulations also prevented PPS from sharing some types of data with partners, which reduced its utility.

Here we are in Measurement Year 5 and even if we had all the data at our fingertips, the reality is that we are very limited as a PPS with what we can share downstream. There's been a tremendous amount of confusion and dialogue and limited documentation; and even with documentation, confusion about comingling of data ("what does that mean?"), what we can share with our partners downstream, even what defines a partner relative to attribution. We do talk to our PPS colleagues, everybody seems to interpret it very differently...we err on caution on things because we are obviously very concerned. We share minimum information with partners downstream, we have not really shared much with the CBOs. Where we've wanted to implement some interesting interventions and activities, particularly around patient engagement and unengaged patients, if you can't give a partner (particularly a CBO) a patient's address, for example (because that is not allowed, at least in our interpretation), it's meaningless. –2018 PPS key informant

The State knows who the super-utilizers are, and they've provided PPS with the patient data. I've been saying it for three years, if they just provide the patient data to us, we could tell you exactly how we can impact this, and we probably could have been doing it two years sooner. – 2017 mental health and substance use regional focus group participant

What we attempted to do to get around [patient privacy regulations] was to use claims data to identify which providers had touched those patients so that we could send the information to those providers. The State has now said that we can't put the data in that RAM⁹⁴ environment and use it externally. Even though we aren't taking any of the claims data outside of that environment, we are only taking the data we put into it and the data we created that cannot be put into the state's file—they said it's contaminated now, and that we are not allowed to share it. They give us access, but then put handcuffs on so we aren't allowed to share it. – 2017 PPS key informant

⁹⁴ Restricted Access Model

The PPS key informants wished they had more assistance from NYS DOH with data sharing issues.

All PPS continue to struggle with patient consent component. There is not much guidance from DOH in terms of data sharing...they pretty much said "figure it out, it's your own legal responsibility." Each PPS has approached it a little bit different, and when you have PPS overlapping in the community, it is challenging to work with partners in multiple PPS to gain an understanding. –2018 PPS key informant

4.2.2.6.3. Data Systems Developed by PPS

Because of data lag, data sharing barriers, and data security and privacy protocols, many PPS developed their own internal data systems to provide more real-time feedback. The majority of PPS key informants reported that they built dashboards or other platforms which largely made use of online partner portals to gather partner data. Some PPS data analytics teams were able to use partners' electronic health record data along with state-provided data to share aggregate results and guide efforts to close gaps in patient care and meet performance targets.

We've really defaulted more to our internal reports and building the HEDIS⁹⁵ measures using our internal [EMR] data, so that we have complete and real-time and actionable reports that the teams can use. I would say prioritizing those reports has been the most important work we've done in terms of driving improvement but has also come with challenges... We share the measurement year reports from the state. Teams are frustrated that they're old, so we share them, but the team really spends the most time looking at the internal reports we've created. The PPS has done a really good job working with each of the reporting teams to talk though the logic and understand that we're all on the same page about what's being reported, but it has been a huge effort to get us to this place. –2018 PPS key informant

Real-time information, as it relates to most of the 43 Pay for Performance measures, is critically important. We have been able to take that data to evolve dashboards where users can look up their status on any given day and respond. PCP practices can respond. You can only do that with real-time information—not with claims data. For Pay for Performance, we've had to rely on new systems for this. –2017 PPS key informant

We listened to our partners early on in DSRIP and began having the discussion with them a little over a year ago around implementation and improvement work to drive improvement/performance measures, and they needed actual data opposed to snapshot/outdated information that the state typically has provided to us with an 8-month lag. We began collecting [data] on a monthly basis from our highest attribution partners. We placed it in a dashboard that is a little more user-friendly to understand their patient population, which patients have care gaps, and specific to each of our performance measures we want them to focus on. –2018 PPS key informant

⁹⁵ Healthcare Effectiveness Data and Information Set

From a data collection perspective for managing our clinical outcomes, we are finally in a position where we are not relying on the State's data. We have gotten data from our two lead hospital systems that are feeding pre-adjudicated claims. – **2017 PPS key informant**

Several respondents saw these systems as a waste of resources, and believed that NYS DOH could have provided better support to avoid the need to create so many separate data systems statewide.

I wish they had figured out the IT thing before they had started DSRIP. Every PPS has a different vision, they have a different platform, they use different RHIOs, they're creating their own thing, and as an organization – and most of us are in a bunch of different PPS – how do you do that? You can't. We can't, anyway. – **2018 hospital regional focus group participant**

I happen to know how much was spent on IT here, in a big bucket way, and if you multiply that number time 25 across the state, that money could have invested in the SHIN-NY⁹⁶ – even a part of it. So we're allowing each PPS to decide what they need in terms of IT and spend as much as they want to spend. Who are you benefiting at the end of this? When you watch systems get developed that are so costly and have no real value in the long haul, except getting your portion of the 8.4 billion dollars, it's really obvious. – **2018 primary care regional focus group participant**

4.2.2.6.4. Accessing Data from Partners

While PPS-developed data systems were useful, they generally required partners to provide data directly to PPS, which was also a challenge. Partners used a wide variety of electronic health records systems, and some partners (particularly community-based organizations) did not have electronic health records at all. The lack of integrated systems created challenges with project implementation, data sharing, and reporting. Information technology development and ongoing support were required, and this was new to some partners.

One of our biggest challenges has been technology for PPS partners. There is still a struggle to create an integrated IT system and there is a lot of fragmentation. Partners have challenges in terms of knowledge, staffing, and finances. – **2018 PPS key informant**

One of the barriers are the various EHR systems and interoperability challenges that we face. Since we're not a single health system with one EHR (we probably have over 40 EHRs in use and that may not include [all partners]), that presents some challenges, especially when some of the project components weave in use of EHRs and registries and

⁹⁶ The Statewide Health Information Network for New York (SHIN-NY) allows the electronic exchange of clinical information statewide and is described in more detail in Section 4.2.2.6.5.

it requires IT onboarding and things of that nature with smaller practices not familiar with having to do this type of technological work. –2018 PPS key informant

Nearly all respondents reported challenges with health records data infrastructure, but some felt their solutions to those challenges were a success. Some PPS set up their partners with new electronic health records systems or provided support to enhance the ones they already had. Key informants from PPS felt that they came a long way with data connectivity, and that the DSRIP program was the impetus for that.

We've definitely given many providers support with their EHRs, support with the RHIO⁹⁷, to be able to start running reports so they can find the metrics that are meaningful to them and use that information, and are working to do that more in real time. –2018 PPS key informant

4.2.2.6.5. Connecting with Qualified Entities

To facilitate the shift towards improved care coordination and value based care, the DSRIP program served as a mechanism to promote clinical data exchange among providers. Providers that offered clinical services or had electronic health records were required to connect to their Qualified Entities (QEs), previously known as Regional Health Information Organizations (RHIOs), by March 2018⁹⁸. Qualified Entities are regional networks where electronic health information is stored and shared; there are eight in New York State.

In some cases, this connection was successful:

Very early on, we had our partners connect to [the Qualified Entity], sign agreements, and then we were able to work with [the Qualified Entity] to create what we call a population health gateway server. That collects our clinical information based on one-to-one agreements and connects to our analytics platform so we're able to have clinical data to support our claims data that we have from the state. We're just implementing this now, but the connectivity requirement of 2.a.i. really helped us energize our partners to sign agreements and get connected. – 2018 PPS key informant

While some PPS key informants reported success with providers ultimately connecting to the Qualified Entities, many felt the NYS DOH should have taken a stronger role in emphasizing and leading the process of connectivity to lay a foundation for later transformative work.

The challenge is their ability to physically get connected. There's some interface issues, the RHIOs not being able to be responsive, but the partners themselves truly want to be

⁹⁷ Regional Health Information Organization (RHIO), further described in Section 4.2.2.6.5.

⁹⁸ Domain 1 Project Requirements Metrics and Milestones; Project 2.a.i – Requirement 4

https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_domain1_project_requirements_milestones_metrics.pdf

able to get that information and they want that information flowing to them. It's just the challenge of making that a smooth transition for them. –2018 PPS key informant

There are QE connectivity requirements prescribed by the DOH, but they require PPS to engage as a vendor. This has not been encouraged by DOH. The QE has been slow in responding to our area and understanding what our needs are. –2017 PPS key informant

But as just happened recently, we've passed now the March 31st timeline where all the safety nets who need to be connected, should be connected, and I suspect our PPS, as many PPS, were not able to meet that deadline. Obviously, that work still needs to be ongoing, but after this year there is no further incentive from the state for that to occur. –2018 PPS key informant

Patient privacy regulations were noted to be an additional barrier to effective use of Qualified Entity data. The Statewide Health Information Network for New York (SHIN-NY) was created to permit electronic health record information exchange between clinical professionals across the state. Because patient data is protected by the Health Insurance Portability and Accountability Act (HIPAA), Qualified Entity participants were only able to access patient information if a patient signed a written consent form. PPS reported struggles with this process, noting it hindered the ability to access and review comprehensive patient health information for coordinated clinical work.

The rules and regulations regarding sharing information with the Regional Health Information Organization were barriers because you have to get consent every single time a patient interacts with a new provider, so each new provider has to get their own consent. It would have been much better if the RHIOs were run on an opt-out model as opposed to an opt-in. –2018 PPS key informant

4.2.2.7. Workforce

The PPS reported both successes and challenges in workforce development. Key informants relayed that they hired hundreds of people and trained thousands in their efforts to get the PPS and its projects operational. Additional positions were created and introduced new people to the health care industry.

In general, what DSRIP has highlighted, I think, for a lot of people, is we need more people in the workforce that are trying to reduce the total acute care utilization of our patients. And that is something that is relatively new. People that fall under that are care managers, navigators, project managers and the DSRIP team, there's a lot of people. – 2018 PPS key informant

Key informants from PPS specifically mentioned successes in the following areas:

- Training health workers in care coordination, motivational interviewing, and LGBTQ health care competency.
- Recruiting and training emergency department staff to significantly reduce potentially preventable admissions.
- Bringing their workforce into historically underserved areas; one respondent said the changes that were happening in their community through workforce deployed through the projects were “mindboggling.”
- Developing scholarship and apprentice programs to increase staffing in needed fields, including certified nursing assistants, community health workers, and social workers.

However, the struggle to recruit and retain staff, specialty providers, was widely noted to be a barrier to getting projects up and running.

A lot of our challenges from my project was the hiring of staff. A lot of what we wanted to do, and what we had in place to do, was hard to get it going because it was slow going with getting our teams staffed up to where they needed to be. – 2018 PPS key informant

So there's a workforce shortage in the field right now, particularly Article 31 clinics⁹⁹. The work demand now, especially because of a lot of the DSRIP work that we're doing and all of the added documentation, has led to experienced staff not really applying for jobs at Article 31 clinics. We're getting students who are literally right out of school. So the staffing has become an issue...It's problematic to do the work with less staff and green staff. We definitely needed to identify a coordinator. We had someone, and unfortunately, that person left the organization. We're plagued with quite a bit of turnover. – 2018 mental health and substance use regional focus group participant

Recruitment in general took a while because when all the PPS were starting, there was a recruitment spree across New York State for qualified providers and front-line staff. IT development was not always in sync with the speed at which you were able to set up your project. Either you recruited 5 NPs¹⁰⁰ and they were live one day and their IT was not ready for two months, or you had your IT but no staff to use it. That was an issue in the first two years. – 2018 PPS key informant

Since smaller organizations did not have the capabilities to hire additional staff upfront in hopes that DSRIP program funding will cover the costs, partners reported workforce shortages that placed DSRIP program responsibilities on staff who were already contributing a lot of their time and effort, often causing employee exhaustion.

I don't think there was any understanding or appreciation for the fact that most organizations cannot upfront hire staff. – 2018 hospital regional focus group participant

⁹⁹ Office of Mental Health licensed mental health clinic

¹⁰⁰ Nurse practitioners

I think at the community-based organizations, where we don't have additional people to do this work, it just was work that was added on to the senior management to really be involved because we couldn't keep putting more onto other people... We're really small, compared to some of these organizations; we have a \$12 million budget, and we're not the smallest CBO. However, we knew DSRIP was really important, so we participated, we volunteered on more committees. It was very important to do and we're happy we did it, and we really believe in it. We have done everything we can to keep it going. However, our days are long. A 12-hour day turns into a 16-hour day, and that's the reality of it. The workload has just poured on top of existing stuff to carry out. – **2018 community-based organization regional focus group participant**

4.2.3. Support Systems and Accountability Structures

The PPS provided feedback regarding the Account Support Team, the Independent Assessor, KPMG's Medicaid Accelerated eXchange (MAX) facilitation, data tools, and communication from NYS DOH.

4.2.3.1. Account Support Team

The Account Support Team (AST) role is provided by an independent contractor to fulfill programmatic needs for the NYS DOH and the PPS. The Account Support Team's main functions are to informally check in on PPS progress one-on-one on a monthly basis, provide technical support to the PPS, facilitate policy and protocol questions and answers between PPS and NYS DOH, and promote cross-PPS collaboration and learning. The Account Support Team meets with each PPS monthly (usually via conference calls) and conducts site visits annually. Each PPS has a single point of contact (the relationship lead) and additional support from the performance facilitators and team analysts. The Account Support Team role was originally performed by KPMG beginning with the PPS DSRIP application phase in 2014 but shifted to the Public Consulting Group (PCG) in March of 2016. The PPS were critical of the support provided by KPMG during the beginning of the DSRIP program and said that high turnover and inexperienced staff impacted their ability to be supportive at a critical time of PPS start up. KPMG faced challenges in this role because the DSRIP program was just being launched and program operational requirements were being further refined. Several PPS key informants believed that they were provided with incorrect information, causing them to commit to milestones and targets that were ultimately unattainable.

After PCG assumed the role of the Account Support Team as KPMG contracted staff rolled off, PPS reported slightly higher levels of satisfaction with responsiveness, helpfulness, and clarity. They noted that PCG was particularly helpful to project leads around cultural competency and health literacy:

PCG was really instrumental in helping project leads around cultural competency and health literacy. They convened meetings across the state with project leads and helped us process/understand what was being asked of us...and put us in touch with

appropriate folks at various PPS who were working on a similar strategy. -2018 PPS key informant

Our PCG consultants are really valuable and really responsive and we appreciate their guidance and connection to the state. They are very thorough in their responses. -2018 PPS key informant

However, many PPS key informants felt that the Account Support Team was often unable to answer their questions and directed them to either the Independent Assessor team or NYS DOH instead:

On the AST side...that side is much more responsive, wants to be much more helpful, but I feel like they almost can't be just because it's the nature of what their paths can do. They're supposed to be getting the updates, they answer questions that they can answer, but then a lot of times they're directed to direct us back to the IA...so we get put in this strange loop of 'we can't get things resolved or answered.' – 2018 PPS key informant

The name "Account Support Team" is a little deceiving because they are incapacitated in their ability to provide support. They are not the authority to give guidance, and we tend to find ourselves in waiting queues for answers, and some of those answers might not be accurate or come to pass. They're in a difficult spot. They're largely communication facilitators, and we don't always see or appreciate the message. – 2017 PPS key informant

Many PPS reported that answers from the Account Support Team, NYS DOH, and the Independent Assessor were not always consistent. Different interpretations across PPS were challenging and they wished for a repository of responses for more transparent implementation and operation of the DSRIP program.

The Account Support Team also assists to organize the DSRIP program annual Learning Symposium as required by the STC. There was a consensus that the Learning Symposia are very rich in content and information. PPS key informants reported that the speakers at the Learning Symposia were high quality, and that the face-to-face interactions with other PPS representatives and colleagues were valuable for creating comradery and learning from each other.

4.2.3.2. Independent Assessor

The Independent Assessor (IA) has three primary functions throughout the DSRIP program: (1) project plan application reviews, (2) a mid-point assessment, and (3) regular monitoring of PPS progress. Monitoring occurs through quarterly reports and determines the semi-annual performance payments. Independent Assessor responsibilities are also contracted to PCG, but a firewall was created between the Independent Assessor and the Account Support Team to reduce the likelihood of any conflicts of interest related to the Independent Assessor's official

duties. Key informants from the PPS had mixed reactions to working with the Independent Assessor. Some PPS felt that the Independent Assessor was supportive and responsive:

The IA is more open than others to having discussions and is responsive to questions and comments. – 2018 PPS key informant

I think it's been wonderful. Our questions that go to the Independent Assessor do get answered, and over the course of time, our understanding has been clarified in certain areas we were really dependent on. – 2017 PPS key informant

Other PPS described challenges working with the Independent Assessor. Several PPS key informants felt that the Independent Assessor was unable to provide them with meaningful answers to their questions.

Regarding the IA and the grading of the quarterly reports, we had very specific questions and sometimes the answers were vague. It was kind of like the professor who doesn't want to give away the answer to the question before the test, yet we were struggling just to "get our ducks in a row" and report the way we were expected to be reporting. – 2018 PPS key informant

4.2.3.3. Medicaid Accelerated eXchange (MAX) Facilitation

The Medicaid Accelerated eXchange (MAX) Series, facilitated by KPMG into early Demonstration Year 4, was focused on improving care for high utilizers and sustaining that change. It consisted of three full-day structured and dynamic workshops, followed by fast-tracked action periods to implement change over a 5-6 month period. Several of the PPS reported that the MAX Series was helpful and they were seeing positive outcomes in patient care and reduction of emergency department visits. Many PPS key informants attended the train-the-trainer series through MAX and felt that it provided valuable information. The PPS key informants credited the MAX Series for a greater awareness of the social determinants of health, the creation of “daily huddles” to identify high utilizers, the development of behavioral health innovations, and for serving as a resource for collaboration, workforce development, and educational purposes. Additionally, PPS reported that MAX was useful in developing partnerships and workflows that were sustainable even after they had completed the Series:

I think overall, it was really helpful to have that sort of focused attention on super utilizers and to be given the training and framework for addressing the needs of that population...We actually adopted MAX methodology: the concept of the action teams and focusing on high utilizers, and incorporated that into all our contracts with all our network hospitals within the PPS. – 2018 PPS key informant

The MAX has been helpful to network and learn what other PPS partners are doing across-projects and projects we have in common. It's great to see some of the accomplishments and challenges they've had. – 2018 PPS key informant

One thing I can point out that I thought was a huge success and really highlighted ways the health department thought about these projects is what [name] did with the MAX series. It was very clear- identifying the problem and actually put hands-on help in getting people to change and help them maintain that change...I just want to point the eye to a real success of lasting change and getting everybody on board was that MAX series. I thank the project workgroups for doing that because it incorporated all of those critical elements in on that change and it was very high incentive. – 2018 PPS key informant

Regarding MAX, [we participated in that series], and it was one of the best exercises we have undertaken. It jump-started our focus on care management and coordination. KPMG facilitators have been extraordinary. That's been a remarkable process. We are in the process of rebuilding our operation here in network development and provider relations – we are in a rebuild and reset mode. – 2017 PPS key informant

4.2.3.4. Data Tools

The PPS key informants reported that the Salient Interactive Miner, which provides in-depth access to the state's Medicaid claims and encounter data, and the Medicaid Analytics Performance Portal (MAPP), which houses DSRIP program performance tools, were useful.

The support around Salient is great. They are very responsive to questions that are coming up. It's not an easy tool, and there's a lot of understanding in trying to teach how to use it. – 2017 PPS key informant

However, while the data provided through these tools was noted to be timelier as the DSRIP program progressed, the ongoing data lag since DSRIP's inception remained a significant challenge and prevented that data from being as actionable as it could be for PPS and partners.

Things have progressively gotten better with the tools that the state is providing us but we're nearing the end of the road here...we've basically taken advantage of any tool that the state will offer us, but it's been challenging not only with getting access to those tools but understanding the requirements that you need to achieve to get access for those tools. The lag in MAPP and Salient has made it very challenging for real-time population health management. – 2018 PPS key informant

Further discussion of data issues is included in the section on data access and sharing (Section 4.2.2.6).

4.2.3.5. New York State Department of Health Communication and Support

Key informants from PPS reported mixed feedback on the support they receive directly from the NYS DOH. Support from NYS DOH included sending out weekly emails to keep PPS informed, hosting webinars for project and program area clarity, retaining guidance documents

in the PPS-specific Digital Library, maintaining an up-to-date DSRIIP program website, hosting all-PPS meetings, and facilitating regular enhanced oversight check ins with specific PPS that need more support and guidance. Several PPS key informants believed that NYS DOH was responsive and was able to provide answers to questions and resources that neither the Account Support Team nor Independent Assessor were able to:

The DOH team is really responsive and helpful. They understand what is going on, on the ground. We are in a different place than we were a few years ago. Initially it was very frustrating, but our contacts now seem responsive and able to provide us with answers.

– 2018 PPS key informant

Other PPS key informants reported that the communication and support they received from NYS DOH was poor to nonexistent. They explained that NYS DOH was unable to provide clarity on expectations and made little effort to engage with the PPS aside from the regularly scheduled check-in meetings, which put them at risk of missing measures and being financially penalized.

Key informants from PPS also reported mixed feedback on the in-person all-PPS meetings hosted by NYS DOH throughout the year. While some PPS key informants believed that the all-PPS meetings were helpful, many reported that they did not feel that they required travel across the state since most of the information presented could be shared electronically. Several PPS suggested that the all-PPS meetings should be less of an “information dump” by NYS DOH, and more of an opportunity for PPS to collaborate and share their best practices.

Annual Learning Symposiums are super valuable. All-PPS meetings are sometimes helpful, sometimes not. – **2018 PPS key informant**

The nature of some of the topics at the all-PPS meetings doesn't necessarily require all of the PPS to come in-person to one location. We just had a meeting in New York City, and that was tough for some PPS outside of the city. The agenda could have been balanced over a webinar for a lot of the content. More thought could have gone into what's important to get people together for. In the space we were in, there wasn't room for networking or other benefits of getting folks together. – **2017 PPS key informant**

4.2.4. Perceived Outcomes and Observations

This section presents perceived outcomes from Performing Provider System (PPS) key informants who participated in interviews and project partners that participated in the partner survey or focus groups.

4.2.4.1. Findings from the Statewide Partner Survey

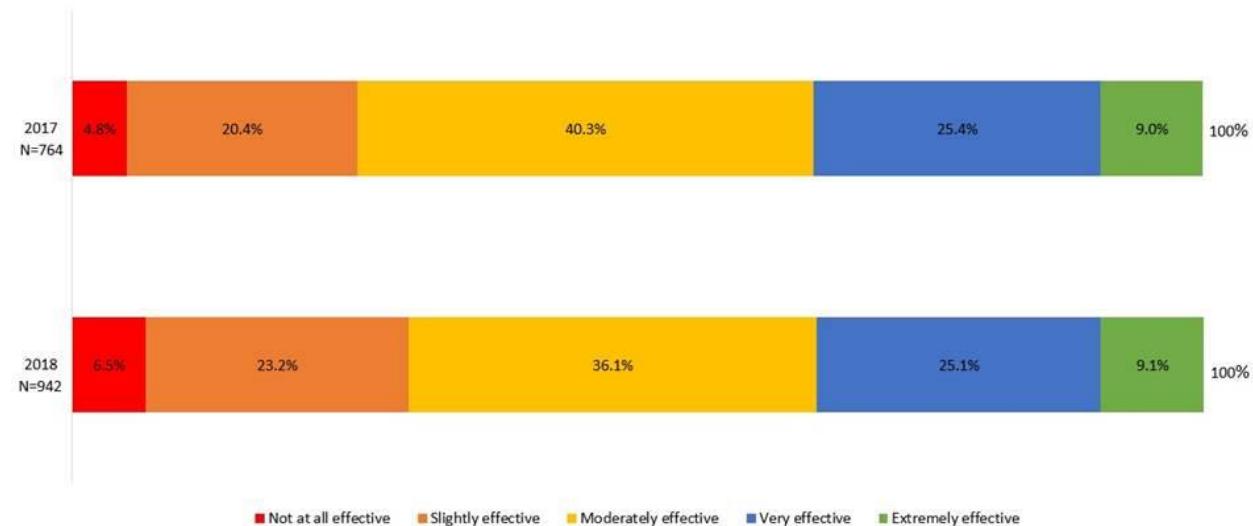
As noted in the Study Design section (see Section 3.3.4), an electronic survey was administered to project-associated partners from all PPS in September 2017 and September 2018. A total of

897 partners in 2017 and 1,071 partners in 2018 provided usable responses to the survey. The total number of respondents in the exhibits vary because response rates varied for individual survey questions.

4.2.4.1.1. Perceived Effectiveness of the DSRIP program

Most respondents (74.7% in 2017; 70.3% in 2018) reported the DSRIP program to be extremely, very, or moderately effective (see Exhibit 4.5). Between 20.4% and 23.2% perceived it as slightly effective, and between 4.8% and 6.5% as not effective at all.

Exhibit 4.5. How effective do you perceive the DSRIP program to be overall?

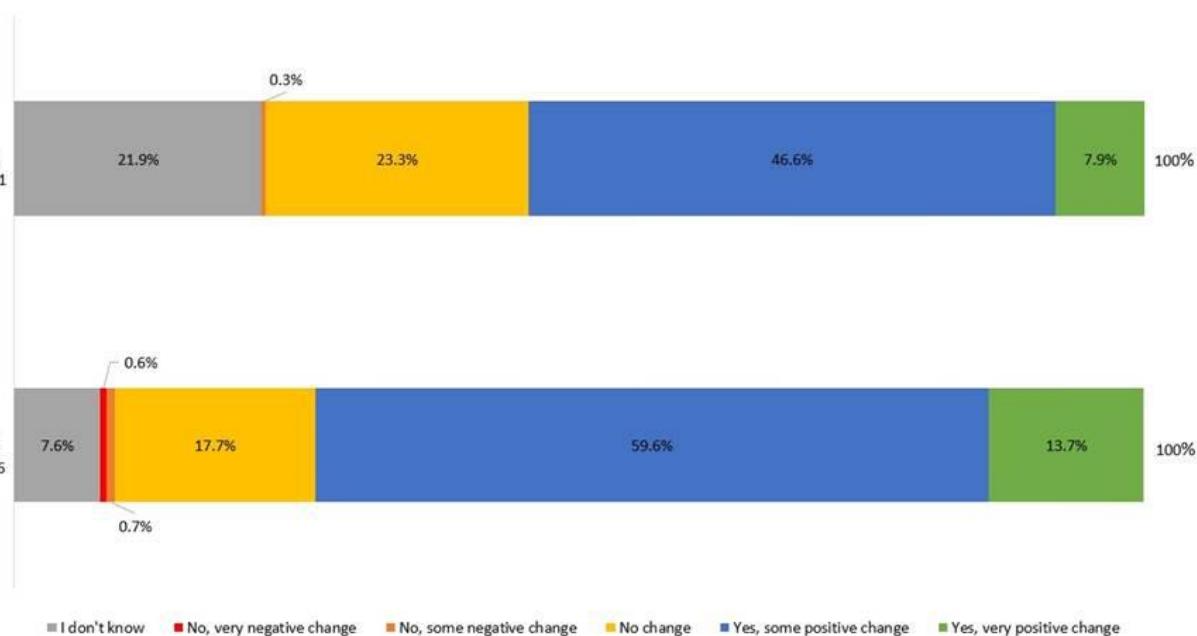


Source: Authors' analysis of the 2017 and 2018 statewide partner survey.

Note: Responses do not total 100% due to rounding.

Most (54.5% in 2017; 73.3% in 2018) also believed that the DSRIP program had positively affected population health in their service area (see Exhibit 4.6).

Exhibit 4.6. Do you believe the DSRIP program has changed any aspect of population health within your service area?

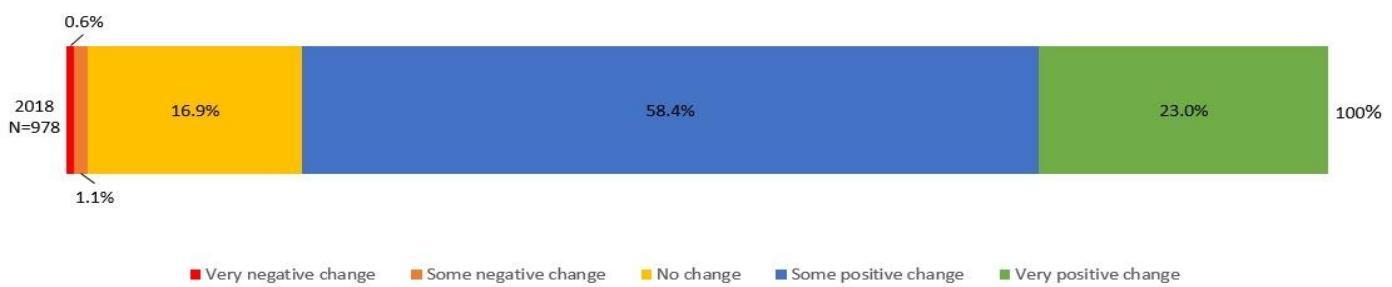


Source: Authors' analysis of the 2017 and 2018 statewide partner survey.

Notes: Responses do not total 100% due to rounding.

In the 2018 partner survey, 81.4% of respondents reported that the services or clinical care at their organization had changed for the better since the DSRIP program was initiated (see Exhibit 4.7).¹⁰¹

Exhibit 4.7. How have the services or clinical care at your organization changed since the DSRIP program was initiated?



Source: Authors' analysis of the 2018 statewide partner survey.

¹⁰¹ Direct comparison to the 2017 statewide partner survey is not possible for this survey item due to some wording changes to improve clarity.

Partner survey participants in 2018 were asked what type of organization they worked for (Exhibit 4.8). Over one-quarter of respondents worked for community-based organizations, and 22.4% of respondents worked in primary care.

Exhibit 4.8. Partner survey respondents by organization type

Type of Organization	N	Percent
Community-based organization	280	26.3
Primary care provider	239	22.4
Skilled nursing facility/ nursing home	119	11.2
Hospital	100	9.4
Clinic	63	5.9
Behavioral health organization	59	5.5
Home care agency	43	4.0
Government office	35	3.3
Substance use treatment organization	32	3.0
Health home/ care management	29	2.7
Non-primary care practitioner	13	1.2
Hospice/ palliative care center	12	1.1
Pharmacy	4	0.4
Other	38	3.5

Source: Authors' analysis of the 2018 statewide partner survey.

Note: Five participants did not select an organization type. Respondents were able to self-select their organization type. The survey did not define each organization type for respondents (see Appendix 6 for survey instrument).

Perceptions of the DSRIP program varied somewhat by organization type (see Exhibit 4.9). Respondents working at hospitals were more likely to report that the DSRIP program was effective (79.8%), changed population health for the better (84.3%), and changed services or clinical care at their organization for the better (92.6%). Approximately two-thirds of respondents working at community-based organizations perceived the DSRIP program to be at least moderately effective (65.9%), and almost three-fourths of these respondents believed that the DSRIP program changed population health for the better (73.1%) or led to positive changes at their organizations (72.7%).

Exhibit 4.9. Effectiveness measures by organization type

Organization type	Percent perceived DSRIP program to be at least moderately effective	Percent believed DSRIP program changed population health for the better	Percent reported services at their organization or clinical care changed for the better
Hospital	79.8	84.3	92.6
Behavioral health or substance use treatment organization	73.5	79.5	87.2
Skilled nursing facility/ nursing home	72.5	60.9	82.7
Primary care provider, non-primary care provider, or clinic	71.8	75.5	88.3
Community-based organization	65.9	73.1	72.7
All other organization types	64.2	68.1	71.4

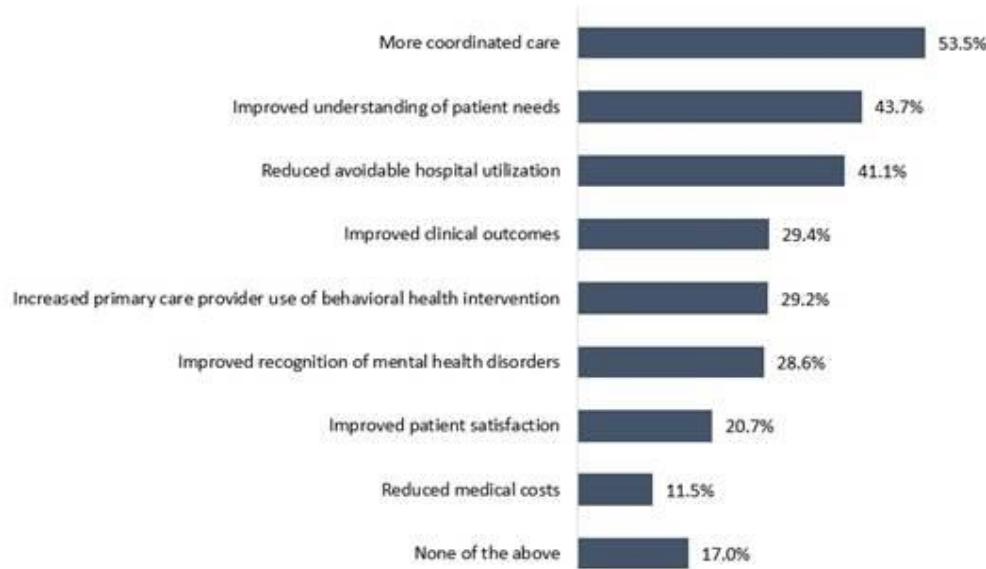
Source: Authors' analysis of the 2018 statewide partner survey.

Note: All other organization types includes those that selected hospice/palliative care center, home care agency, government office, pharmacy, health home/care management program, or "other" as their organization type. Respondents were able to self-select their organization type. The survey did not define each organization type for respondents (see Appendix 6 for survey instrument).

4.2.4.1.2. Benefits Attributed to the DSRIP Program

Survey participants were asked if they observed any of the following benefits from the DSRIP program (see Exhibit 4.10). In 2018, more than half perceived more coordinated care. Over 40% observed improved understanding of patient needs and reduced avoidable hospital utilization. Approximately 29% reported improved clinical outcomes, increased primary care provider use of behavioral health intervention, and improved recognition of mental health disorders. About one-fifth saw improved patient satisfaction, and about one-eighth observed reduced medical costs.

Exhibit 4.10. Benefits attributed to the DSRIP program (N=971)



Source: Authors' analysis of the 2018 statewide partner survey.

Note: Percentages do not total 100% because respondents could select more than one item.

In the 2018 partner survey, for each of the above benefits they selected, respondents were asked whether they expected that benefit to continue after DSRIP program funding ended. About three-quarters believed that the benefits would continue, ranging from 71.4% of those selecting “reduced medical costs” to 82.4% of those selecting “improved recognition of mental health disorders” and “increased primary care provider use of behavioral health intervention.”

These responses were affected by organization type (see Exhibit 4.11). Respondents from hospitals and behavioral health or substance use treatment organizations were more likely to observe improvements to care coordination. Those employed at skilled nursing facilities and hospitals were especially likely to perceive reductions in avoidable hospital utilization. Respondents from primary care provider or non-primary care provider offices, clinics, or skilled nursing facilities were more likely to see improvements in clinical outcomes. Increased primary care provider use of behavioral health interventions and improved recognition of mental health disorders were most often perceived by respondents from hospitals, primary care provider or non-primary care provider offices, clinics, or behavioral health or substance use treatment organizations.

Respondents from community-based organizations and skilled nursing facilities were less likely to perceive most benefits, and more likely to say they had seen none of the above benefits.

Exhibit 4.11. Benefits attributed to the DSRIP program by organization type

	Coordinated care	Patient needs	Reduced avoidable hospital use	Improved clinical outcomes	PCP use of behavioral health	Recognition of MH	Patient satisfaction	Reduced costs	None of the above
Hospital	74.5%	47.9%	55.3%	30.9%	52.1%	43.6%	23.4%	19.1%	9.6%
Behavioral health or substance use treatment organization	64.7%	29.4%	49.4%	27.1%	40.0%	34.1%	22.4%	12.9%	10.6%
Primary care provider, non-primary care provider, or clinic	57.0%	50.2%	32.1%	41.2%	44.8%	35.7%	29.2%	14.4%	13.0%
Community-based organization	43.3%	40.6%	30.7%	17.3%	13.0%	23.2%	13.8%	8.3%	26.0%
Skilled nursing facility/nursing home	42.3%	37.8%	64.0%	36.9%	9.0%	10.8%	19.8%	8.1%	17.1%
All other organization types	51.4%	45.9%	43.8%	22.6%	21.9%	25.3%	13.7%	8.2%	19.9%

Source: Authors' analysis of the 2018 statewide partner survey.

Abbreviations: Primary Care Provider (PCP), Mental Health (MH)

Notes: All other organization types includes those that selected hospice/palliative care center, home care agency,

government office, pharmacy, home health/care management program, or "other" as their organization type.

Respondents were able to self-select their organization type. The survey did not define each organization type for respondents (see Appendix 6 for survey instrument).

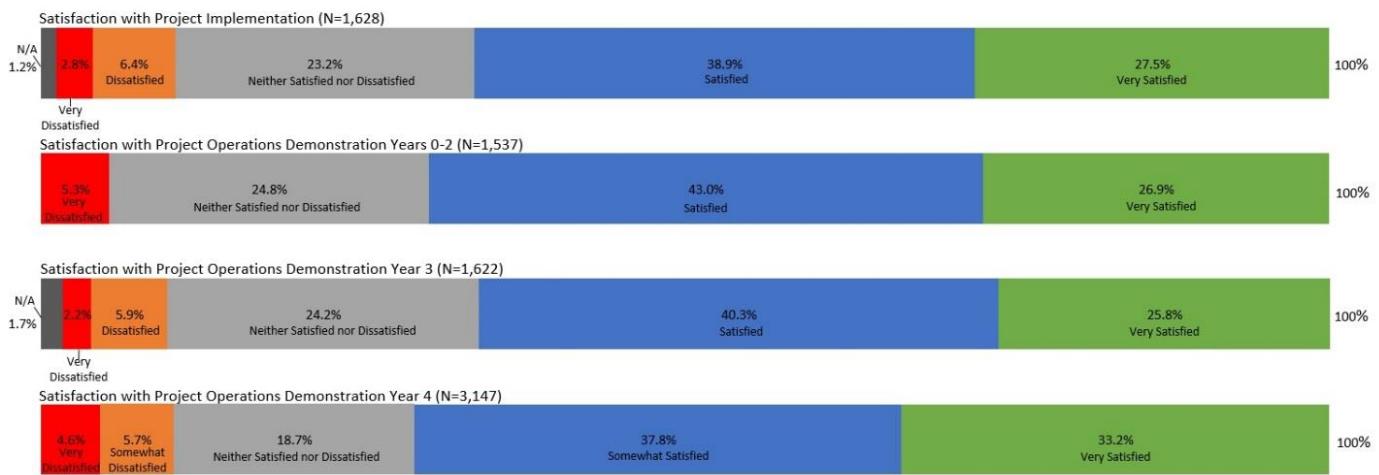
4.2.4.1.3. Project Satisfaction and Effectiveness

The partner survey asked providers about their experiences with individual projects as well as their experiences with the DSRIP program overall. In 2017, respondents had the opportunity to provide feedback about up to three projects they worked on, and 1,689 project-specific responses were collected. In 2018, respondents could provide feedback about all of their projects, and 3,621 project-specific responses were collected.

Partners' satisfaction ratings of projects are shown in Exhibit 4.12. In 2017, survey participants were asked about their satisfaction with project implementation, operations during Demonstration Years 0-2, and current operations (Demonstration Year 3 at the time of the survey). In 2018, participants were asked about their satisfaction with operations of the project over the past 12 months (Demonstration Year 4 at the time of the survey). About two-thirds of

respondents were satisfied or very satisfied with project implementation (66.4%), operation in Demonstration Years 0-2 (69.9%), Demonstration Year 3 operation (66.1%), and Demonstration Year 4 operation (71.0%).

Exhibit 4.12. Project satisfaction ratings

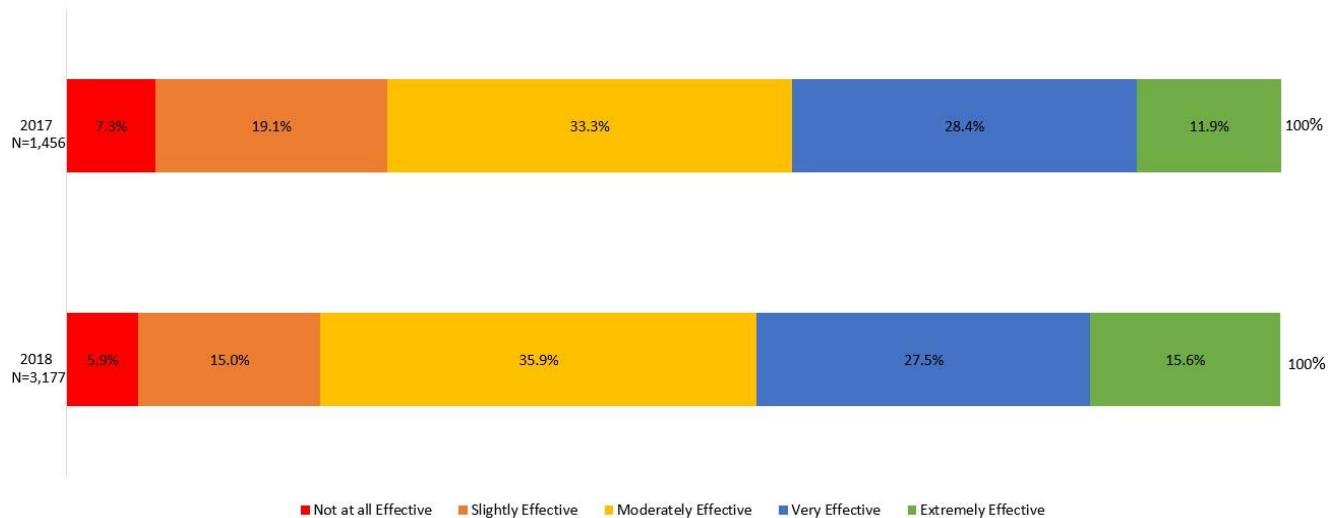


Source: Authors' analysis of the 2017 and 2018 statewide partner survey.

Notes: The results shown in the top three bars are based on the 2017 statewide partner survey. The results shown in the bottom bar are based on the 2018 statewide partner survey.

In both years, participants were asked how effective they currently perceived the project to be at meeting its intended goals. About three-quarters (73.6% in 2017; 79.0% in 2018) viewed projects to be extremely, very or moderately effective (see Exhibit 4.13).

Exhibit 4.13. Project effectiveness ratings



Source: Authors' analysis of the 2017 and 2018 statewide partner survey.

Note: Responses do not total 100% due to rounding.

The 2018 satisfaction and perceived effectiveness responses were also evaluated by project, to determine whether some projects were evaluated more positively than others. As some projects received only a few evaluations, a minimum of 20 total responses across PPS was set as a floor for inclusion. The possible score range was between 1 and 5, with smaller numbers indicating greater satisfaction or effectiveness. Among the 24 projects with a sufficient number of satisfaction evaluations, mean satisfaction ratings ranged from 1.68 to 2.36. Projects 2.c.i (Development of community-based health navigation services) and 3.c.i (Evidence-based strategies for disease management in high risk/affected populations) had the highest satisfaction ratings (both 1.68), and projects 4.d.i (Reduce premature births), 2.a.iii (Health home at-risk intervention program), and 4.a.iii (Strengthen mental health and substance abuse infrastructure across systems) had the lowest (2.36, 2.32, and 2.32).

Among the 24 projects with a sufficient number of effectiveness evaluations, mean effectiveness ratings ranged from 2.09 to 3.25. Projects 2.a.ii (Increase certification of primary care practitioners with PCMH certification and/or Advanced Primary Care Models), 2.b.vii (Implementing the INTERACT project), and 3.c.i (Evidence-based strategies for disease management in high risk/affected populations) had the highest effectiveness ratings (2.09, 2.25, and 2.25), and projects 4.d.i (Reduce premature births), 2.a.iii (Health home at-risk intervention program), and 2.d.i (Implementation of patient activation activities to engage, educate and integrate the uninsured and low/non-utilizing Medicaid populations into community based care) had the lowest (3.25, 2.96, and 2.96).

4.2.4.2. Positive Perceptions of the DSRIP Program from Interviews and Focus Groups

Key informants from PPS and focus group participants were also asked about their perceptions of DSRIP program outcomes. Consistent with the partner survey, most felt that the DSRIP program had laid a foundation for changes to the health care system. Care transitions, the integration of primary care and behavioral health, and encouragement of innovation were most often specifically cited as positive outcomes of the DSRIP program.

4.2.4.2.1. Care Transitions

Care transitions between inpatient and outpatient and clinical and community settings improved during the DSRIP program, according to study participants. Increased partner communication and collaboration led to easier care transitions since partners were more aware of appropriate referral tracks. The addition of community health workers and transitional care managers resulted in a better understanding of patients' needs and higher rates of patient engagement, which improved care transitions and reduced the rate of emergency department utilizations.

What we did early on is bring together inpatient and outpatient substance abuse providers to think about the transition from inpatient to outpatient. They had never really talked before. When people were being discharged, the inpatient provider was not

confident that they were releasing to the appropriate outpatient...We have identified and worked to correct many of these issues. – 2018 PPS key informant

Before DSRIP...hospitals didn't do that much to keep people out of the hospital. Here, you have all of the administration of the hospital trying to figure out how to keep people out. It's interesting, where they're investing in care transition staff to get people out, investing in initiatives to keep people out of the emergency room. I think without DSRIP, you wouldn't have had this huge push from the hospital staff to do this. – 2018 PPS key informant

We noticed that there was this drop-off from hospital utilization to follow-up, and one of the solutions was to have the community health group spend one day a week at the hospital and be able to provide a warm handoff. Sure enough, just the face time with the health providers helped increase referrals that way. This is a small hospital [in location], so I don't know how functional or easy that would be to translate to the really busy places. But that was something that we realized – when you have a warm handoff, you are less likely to fall through the cracks. – 2018 hospital regional focus group participant

Anytime anybody entered the emergency room with a behavioral health or SUD issue, after triage, my peers were called in to work with those folks to see if we could get them out of the emergency room and into either an inpatient detox, inpatient rehab, an outpatient detox, or an outpatient facility, based on their clinical needs to properly service them, so that they weren't constantly coming back to the emergency room for expensive care that they didn't need. – 2018 mental health and substance use regional focus group participant

4.2.4.2.2. Integration of Primary Care with Behavioral Health

A majority of PPS key informants described successes with the integration of primary care and behavioral health. They noted an increased focus on behavioral health in primary care practices, including a significant increase in depression screenings. Respondents referred to this integration as the breaking down of a silo, and while some primary care providers were reluctant at first, many became committed to funding the integration of behavioral health after the DSRIP program ends. Primary care providers obtained better resources to care for behavioral health patients, and there was increased awareness of the connections between physical and behavioral health and a realization that these systems should not be segregated.

Behavioral health has been one of the greatest successes for our DSRIP implementation. In the primary care space, we have been able to integrate behavioral health into a number of primary care practices. When we started that journey, many PCPs were pretty reluctant, and they have now really embraced the program. Practices that don't have behavioral health resources are really eager to get started with the programs. Primary care providers are committed to helping find funding for these individuals once DSRIP ends, so that's been really great. As part of that initiative, we also saw a dramatic increase in depression

screenings in primary care practices. Our PHQ¹⁰² screenings went from about 20 percent to almost 80 percent at most of our sites, and that was a real credit to medicine's support and willingness to get on board with the initiative. – 2018 PPS key informant

The mental health staff are learning a lot more about primary care and the importance of primary care. We are learning about chronic diseases, so it's opening up realms of new discovery for staff. And I do agree that integrated approach isn't really new, and it didn't have this term before, but creating systems for that is a great idea. – 2018 mental health and substance use regional focus group participant

We have co-located behavioral health services in our primary care facilities who can do treatment for the patient right then and there with a warm handoff. Similarly, in the behavioral health setting, there is a primary care screen done on every single patient on every single visit, and if they have a primary care need, they can do a warm handoff to the primary care provider in that setting. This is occurring across all of our clinics, in all of our outpatient clinics for behavioral and primary care, and that is a big impact. In that setting, I think it helped to reduce stigma for behavioral health, and also capitalized in meeting the patients where they are. – 2018 hospital regional focus group participant

4.2.4.2.3. Innovation

Some PPS key informants said that the DSRIP program encouraged partners to work on innovative programs, permitting them to experiment and pilot programs which may not have been attempted otherwise. The funding provided more flexibility and creativity than budgets typically allowed. While these programs were not necessarily transforming the entire delivery system, they were filling important gaps.

Overall, we've seen a number of our partners take up innovative efforts that hadn't been in place before. – 2018 PPS key informant

What DSRIP allowed us to do was create a remarkable model program. For [this type of intervention] across the country, academic medical centers and community-based organizations have been frustrated. DSRIP really enabled us to do all the things we had been talking about but never could actually pull all together. – 2018 PPS key informant

4.2.4.2.4. Other Positive Outcomes

Participants cited increased awareness of social determinants of health, best practices, new interventions, care coordination tools, and population health management as further transformative effects of the DSRIP program.

[DSRIP] has created an awareness of different interventions that can be applied to different populations of patients. It also has created an awareness of people who are

¹⁰² Patient Health Questionnaire

high utilizers and social factors that are driving high utilization. It has created an awareness of IT tools that can be applied. It has created an awareness around effective peer-coordination processes. From a clinical perspective, the providers are more aware of the different tools that can support better care coordination and better patient outcomes. More importantly, DSRIP has created an awareness as a whole: where everybody who either works in a hospital or is a part of the network knows there are these different tools, strategies, and different populations of patients who need to be treated with different methods in our region. – **2018 PPS key informant**

Just in terms of moving everybody from thinking about individuals to thinking about populations. It has forced in a positive way this mind shift to working with CBOs to a degree. – **2017 PPS key informant**

I had gone to a [PPS] training session, and they were talking about they were doing the deep dive on the ER hospitalizations, which is a main focus of DSRIP. They found a patient had gone to the ER 94 times because they wanted food, so they got him hooked up with the food bank. Another patient likes the hospital beds, so he had 50-60 stays in the hospital because he likes the hospital bed. So [hospital] got him a hospital bed purchase for his home. The thing is, the PPS looked at the data and defined what they can do to reduce their ER hospitalizations, because some of these things the practice cannot do at their end, and they have to solve for those. – **2018 primary care regional focus group participant**

Also, in some PPS, hospitals began devoting resources to reduce admissions, which was a significant paradigm change.

Before DSRIP...hospitals didn't do that much to keep people out of the hospital. Here, you have all of the administration of the hospital trying to figure out how to keep people out. It's interesting, where they're investing in care transition staff to get people out, investing in initiatives to keep people out of the emergency room. I think without DSRIP, you wouldn't have had this huge push from the hospital staff to do this. – **2018 PPS key informant**

4.2.4.3. Less Positive Perspectives of the DSRIP Program from Interviews and Focus Groups

Not all key informants and focus group participants felt that the DSRIP program was changing the health care system.

Many study participants did not think that five years was enough time to make a substantial difference in health care delivery because of all the system-level changes that needed to take place.

Much of this change is cultural, it's a culture shift. Five years, given that at the beginning we had to set up our own infrastructure, does not allow for much time left to get the work rolling and change made. This is a lot of significant change in terms of things outside our control: transportation, housing, regulatory bodies with different sets of rules and ideas, so that becomes very challenging for us. – **2018 PPS key informant**

I do not think that in five years we are going to change all of the behavior, cultural and environmental constructs, political constructs, and financial constructs that enabled the way we have been delivering care for the last thirty years. – **2018 PPS key informant**

Some believed that rather than making fundamental changes to their service models, a subset of providers was waiting for systems to go back to “business as usual” at the end of the DSRIP program.

One of the ways that we are trying to change mindsets about DSRIP is as a project that will begin and end. They [some partners] think that once it ends, it's back to business as usual. – **2018 PPS key informant**

Partners participating in focus groups often said that hospitals should not have had as much control over PPS, and a few PPS key informants agreed. They said that hospitals remained incentivized to admit patients, and in some cases, hospitals used DSRIP funds to build their own capacity rather than distribute funds to other organizations that were already providing services.

Early on, several years ago, they were talking about how a lot of the hospital systems were increasing their beds. They were taking the funds that were supposed to be reducing avoidable emergency room visits, and they were expanding their bed capacity. – **2018 mental health and substance use regional focus group participant**

Whenever there was a gap, the hospitals were higher staffed and put it [a referral] in the hospital instead of putting it out in the community. If you want the hospitals to only have patients that they should really see, then you don't want to always be putting the resources in the hospital when they really should be a community type of resource. – **2018 community-based organization regional focus group participant**

To fundamentally change how health care is delivered, you've got to take the hospitals out of control a little bit and move the center of gravity more towards non-hospital care. – **2018 PPS key informant**

Get rid of hospitals...I know they have ulterior motives, but they won't come out and say it and they won't see it because they are holding the purse strings. You have actually given the keys to the kingdom to the people who you don't want to give it to. – **2018 hospital regional focus group participant**

The shift from an inpatient to outpatient care focus became a new way of thinking for many clinical sector professionals, and the DSRIP program's goal to reduce potentially preventable emergency department visits and potentially preventable hospital readmissions was noted to conflict with the current payment and reimbursement structure:

Across all the partners, especially some of the larger institutional partners, it was very challenging to engage their current culture and push through systems and expectations in a very aggressive way. The DSRIP Year 0 came and went and DSRIP Year 1 came and we started building very quickly....but there are cultural norms and cultural expectations that exist for many years with our partners. Pushing through some of that to get them to grasp new ideas and want to change the way they've done work for a while was very challenging. Many have moved in a way that they're able to accept the new systems and workflows, but the cultural settings need to be engaged and maybe a bit slower next time. Shifting resources and shifting the thinking from an in-patient focus to ambulatory is a huge move for many in the hospital field. Also, the insurance companies and state DOH still pay for in-patient care more than they do for ambulatory care and ambulatory behavioral health. Obstacles still in the way are billing, and managed-care infrastructures are what we get paid for in the industry. – 2018 PPS key informant

An overarching challenge is convincing providers, hospitals, partners, etcetera, to do work in a way that is very different from how they've done it and is sometimes at odds with the way they are reimbursed. We definitely share the message and speak the language that VBP is coming and quality is going to drive payments and fee for service won't be here anymore. It's hard though (even with all of that, because I think they've heard that for a long time and fee for service is still very much here), to convince providers they should start acting in a way that doesn't necessarily generate more money for them and in some cases generates less money for them. I think here now in DY4, there are VBP contracts that are happening and we are making moves in that direction, but it doesn't seem at the end of DSRIP that fee for service will be anywhere close to completely gone. I think that's been, at a high level, one of the challenges with trying to get providers on board with what we're overall trying to accomplish through DSRIP. – 2018 PPS key informant

Key informants explained that it has been a struggle to get hospitals on board with reducing emergency department visits because of the consistent source of revenue. Without value based contracts in place, there was no incentive, in a fee-for-service system, to keep patients out:

We've gotten a lot of pushback from the hospitals because of the loss of value that has to do with decreasing the ED visits. That part wasn't very well thought out. We wanted to do it, we wanted to do it right, we knew it was the right thing to do...but it created kind of like a division within the hospital. – 2018 PPS key informant

We do not want these patients coming to the emergency room but when paramedics pick up a patient, they are not paid unless they bring the patient to the emergency room. – 2018 PPS key informant

Some partners were already implementing projects before the DSRIP program was implemented and found it to be a duplication of efforts. Others saw state regulations as hampering transformation efforts. Several didn't think significant change would be seen until payment models were aligned with transformation goals. A few pointed out that community-based organizations didn't always have capacity for referrals.

Our program has always had an integrated model where our community health workers actually come in with equipment and supplies to address the asthma triggers in a very hands-on way, and teach the caregivers how to do it alongside them. This model excluded that. The model that was decided was to outsource the remediation to a third party, an outside company, so effectively changing our model and forcing us to figure out, on a case by case basis, if we should deny a more comprehensive service to one patient when we are providing a comprehensive service to another patient that's attached to a different funding stream. – **2018 community-based organization regional focus group participant**

I don't know that DSRIP itself has been transformative for me as a substance use provider, in terms of how I do business. I wouldn't use the word "transformative" to describe any relationship between DSRIP and the clinic having a transformative response in how they are operating. – **2018 mental health and substance use regional focus group participant**

The very interesting dilemma with DSRIP is we were given funds to transform healthcare until the payors got there. At the end of the day, until the payment model truly changes so you are compensated for a "total person care," there are limitations, in my sense, on how much it is going to truly change the patient. The MAX¹⁰³ process, a lot of providers like it, but their payment model hasn't necessarily changed to compensate for the work they are doing. In the sense of really making the full swing to improving care for patients, now we need the payment models to reflect the changes in work. – **2018 PPS key informant**

I think that there were some partners that were already implementing these projects before DSRIP started, so in that case, it hasn't changed the health care system because there was already a move towards it to begin with. – **2018 PPS key informant**

While most PPS key informants and focus group participants cited improvements in care transitions as a positive outcome, several focus group participants did not agree and believed that the DSRIP program missed the opportunity to make a lasting positive impact on care transitions.

¹⁰³ Medicaid Accelerated eXchange

But in the spirit of engagement, I believe if we don't fix care transitions, none of this works... I haven't seen a bit of that come to reality, sadly, and I don't see that there's a real desire to fix that – that is at the core of reducing avoidable hospitalizations in our patients. We know all the reasons why we get the bounce back, and many times maybe it's because nobody wanted to talk to anybody else, or share information, or whatever that is. We're so close to the end of DSRIP now that I don't see it changing in any significant way. – **2018 primary care regional focus group participant**

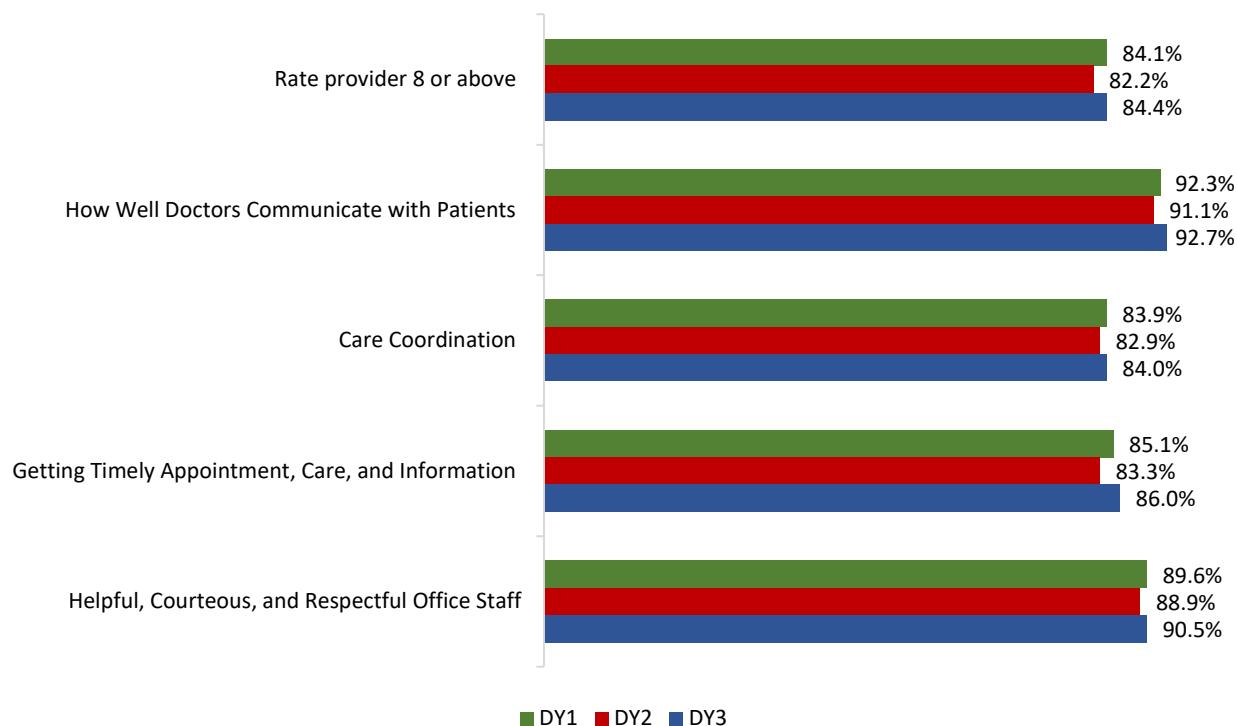
I think they think they're changing, but if you're not engaging the people touching those patients – I said, "How are you teaching your residents and fellows about the courtesy of a phone call, or some kind of communication with the primary care provider who is going to receive that patient on the outside?" I get, "Oh no, they're not in this." When you ask a resident, they have heard of DSRIP, but they don't know anything more than that – "Delivery System Redesign. Isn't that what that means?" - **2018 primary care regional focus group participant**

4.2.4.4. Patient Experience

4.2.4.4.1. Patient Survey

The Clinician & Group Consumer Assessment of Healthcare Providers and Systems (version 3.0) (CG-CAHPS) surveys completed in Demonstration Years 1, 2, and 3 (DY1, DY2, and DY3) showed that overall, patients were satisfied with their health care providers (see Exhibit 4.14). On a scale of 0 to 10, where 0 was "Worst provider possible" and 10 was "Best provider possible," between 82.2% and 84.4% rated their provider eight or above each year. Over 90% felt their provider was a good communicator, and between 82.9% and 90.5% reported that they received good care coordination; received timely appointments, care, and information; and experienced helpful, courteous, and respectful office staff. Given the high level of satisfaction in DY1, large improvements in satisfaction would not be expected to be seen in subsequent years (i.e., it is difficult to make substantial improvements when satisfaction levels are already very high). Rather, it is notable that patient satisfaction was high in DY1 and remained high in DY2 and DY3. Appendix 8 contains responses to the items comprising these composite scores.

Exhibit 4.14. Patient satisfaction with providers, Demonstration Years 1, 2, and 3



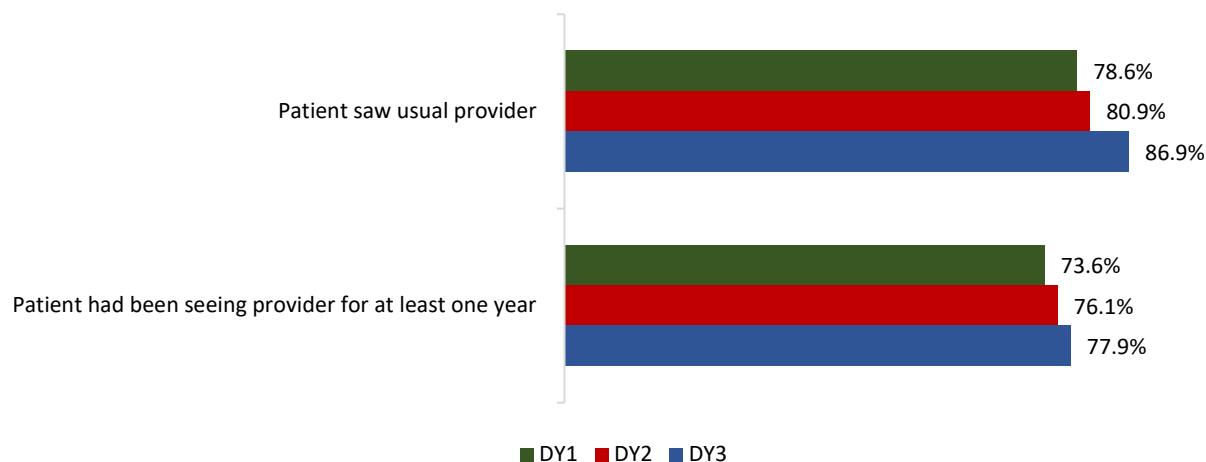
Source: Authors' analysis of the Clinician & Group CAHPS 3.0 survey.

An established relationship with a primary care provider has been shown to improve health outcomes, reduce the cost of care overall by providing preventive interventions, facilitate access to the rest of the health care system, and reduce preventable hospital visits.¹⁰⁴ Thus, the CG-CAHPS survey included items about continuity of care.

For more than three-quarters of respondents (78.6% in DY1; 80.9% in DY2; 86.9% in DY3), the provider from whom they received care was the provider they usually saw if they needed a check-up, wanted advice about a health problem, or got sick or hurt (see Exhibit 4.15). Nearly as many (73.6% in DY1; 76.1% in DY2; 77.9% in DY3) had been seeing this provider for at least one year. The percentage of respondents reporting a usual source of care and that they had been seeing the same provider for at least one year increased somewhat between DY1 and DY3, although data were not available to assess whether these trends were statistically significant. These observed increases may suggest that the DSRIP program was more effectively connecting and maintaining patient access to primary care, but it is not possible to say whether this change is meaningful until more years of data have been collected.

¹⁰⁴ Starfield, B., Shi, L., & Macinko, J. (2005). Contribution of primary care to health systems and health. *The Milbank Quarterly*, 83(3), 457–502. <http://doi.org/10.1111/j.1468-0009.2005.00409>.

Exhibit 4.15. Patient relationship with provider, Demonstration Years 1, 2, and 3

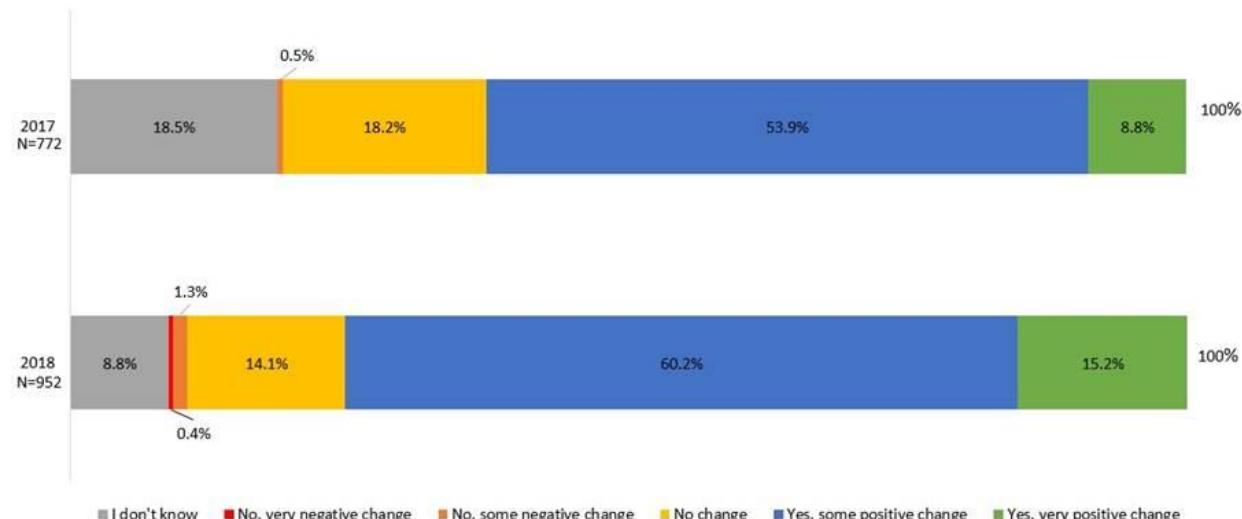


Source: Authors' analysis of the Clinician & Group CAHPS 3.0 survey.

4.2.4.4.2. Partner and Key Informant Perspectives on Patient Care

Most partner survey respondents reported that patient care had changed for the better since the launch of the DSRIP program. A total of 62.7% survey respondents in 2017 and 75.4% in 2018 said that patients were experiencing some positive change or very positive change in care (see Exhibit 4.16).

Exhibit 4.16. In your view, are patients experiencing better care since the launch of the DSRIP program?

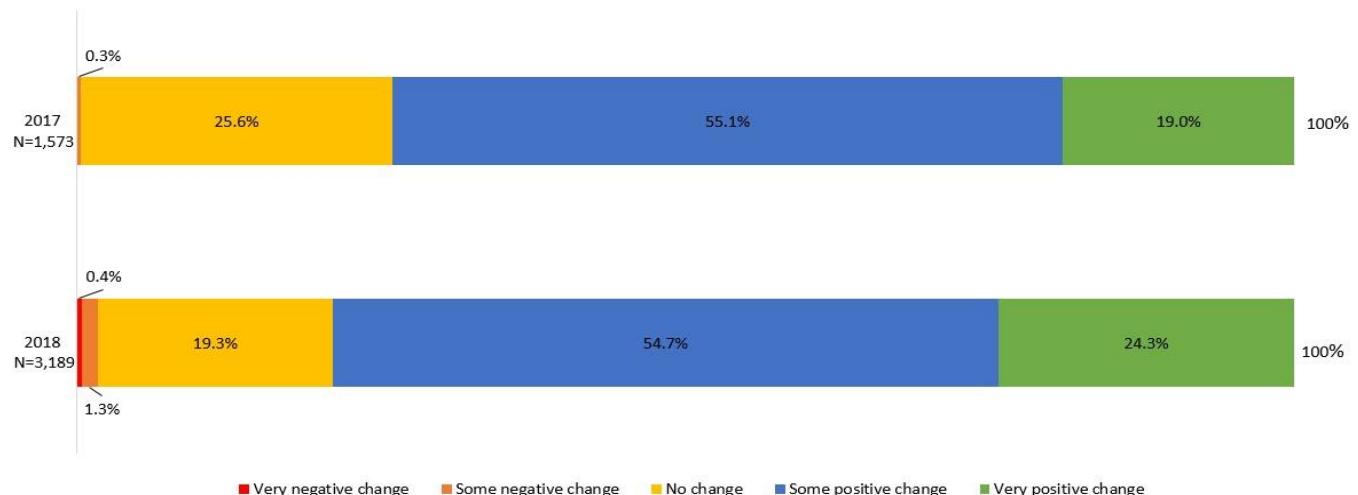


Source: Authors' analysis of the 2017 and 2018 statewide partner survey.

Notes: Percentages do not total 100 due to rounding. The 2018 Statewide Annual Report did not include the "No change" and "I don't know" responses for this item.

Partners were also asked to rate the degree to which they perceived each of their projects were changing patient care. (Survey respondents were able to answer separately for each project in which they participated.) About three-quarters of responses indicated that projects were leading to some positive change or very positive change; 74.1% in 2017 and 79.0% in 2018. (see Exhibit 4.17)

Exhibit 4.17. Please indicate the degree to which you perceive the project is changing patient care



Source: 2017 and 2018 statewide partner survey.

Supporting the survey results, a significant majority of the partners and administrators who participated in the focus groups and key informant interviews emphasized improvements in patient care coordination as a result of the DSRIP program. Respondents shared that patients were connected to health homes, received more appropriate referrals to both specialists and community-based organizations, received more integrated behavioral health services, and experienced more support after hospital discharge.

A lot of patients when they are discharged are not compliant and don't go to their follow-up visits. So we follow the patients. We make sure that they have a follow-up visit, and if they're not consistent or they don't go, we send a [provider] home to them for a one-time transitional visit so they don't lose their insurance, they don't lose their primary physician. – 2018 hospital regional focus group participant

At the patient level, our patients don't know about DSRIP per se, but have they felt it locally? I would say yes, absolutely. The fact that they can go to the emergency room... and engage with a navigator, have a community health worker support them in the community, have a care manager who is helping them coordinate logistics of appointments in their home and insurance. All of these are things that the local system was very challenged with pre-DSRIP and just completely under-resourced. So at the patient level, they have absolutely felt it. – 2018 PPS key informant

It has helped us uncover new ways to go to business and take care of the patient. And it has helped us focus more on a holistic approach to a patient than just a hospital or primary care approach. – **2017 mental health and substance use regional focus group participant**

The providers are now looking to treat patients in terms of making referrals. If they are screening a patient, they understand this patient may have social, behavioral health, or substance abuse issues. Providers are using resources available through DSRIP to make appropriate referrals. Patients are being tracked now and have better engagement because of DSRIP initiatives and tools. – **2018 PPS key informant**

The financial incentives of the DSRIP program raised awareness of the social determinants of health and led to increased efforts to address them. A more holistic view of patients allowed better connections to social services such as housing assistance.

Hospitals, from a traditional perspective for our vulnerable patients...these patients were handed discharge papers and shuffled out the door. They were told to follow up with somebody and social factors were never really something that was brought to the forefront...We now have teams that are helping people get connections to places that can help them address these factors in a long-lasting sustainable way. Helping them get connections to [disability] benefits, to food pantries, to health homes, to legal services, to primary care practices and health coaches. They are not just handing them a paper referral, they are actually making sure they get there; they're getting them connections to recovery peers. I think we've seen through the data and through these interventions that this is having an impact. I think their quality of life is improving and we're seeing a drop in utilization for these people. – **2018 PPS key informant**

I do think it is helping, to some degree, with some of the “silo-ing” that had happened and realizing that we may be touching the same lives, just in different ways. – **2017 primary care regional focus group participant**

Patient engagement efforts were a significant part of this improvement in coordination. Educational outreach taught patients proper medication administration, provided instruction about when it was appropriate to go to the emergency department rather than making an appointment with their primary care provider, and empowered patients to take better care of themselves in their own homes. Care navigators were utilized to provide the appropriate level of care in the way patients wanted to receive it; meeting people where they were through integration services, home visits, and assistance with system navigation.

We've been able to educate patients on a deeper level in their home than we otherwise would have ever, so I think that has been the biggest benefit of DSRIP for us. – **2018 hospital regional focus group participant**

Being able to go in and improve quality of life, empowering the families to know how to administer their medication, just making them a little more aware of what they need to be doing; I feel like that has been a wonderful aspect of this. – 2018 hospital regional focus group participant

For other folks, a lot of it is, how do you tap into outreach services? Part of what we do under the health home is outreach, which is actually going out and trying to find people based on lists or your own connections in the community. I think that that is important. Community events are important. – 2018 primary care regional focus group participant

The DSRIP program provided the ability for participating organizations and providers to pay for items beyond direct medical services, such as community health offerings (e.g., yoga classes) and home-use products (e.g., air purifiers for asthma patients). Providing transportation to health care providers and pharmacies was said to increase compliance with specialist and mental health care services. Partners also reported that the DSRIP program supported in-home paraprofessional services (e.g., food delivery, shoveled walkways), which were seen as reducing the need for emergency services.

A minority of study participants did not perceive positive changes in patient care. Some felt that bureaucratic requirements had increased for patients; for example, they had more forms to read and sign. Others saw money being spent in ways that improved their performance measures, but they felt it was not the best use of funds overall for innovation or patient-centered care. Although the majority of participants reported patient engagement successes even though patients were unaware of the DSRIP program, a few believed that patient engagement and education were lacking. Some stated that if the DSRIP program failed to educate the consumers of services about the transformation efforts and include their perspectives, then no real systemic change could occur.¹⁰⁵

A lot of the stuff that we've implemented or that we've done has been more on the provider and institution side and not considering the voice of the patient, what they need and what's not working for them. If you ask me if it's changed, I'd probably say no, it hasn't. Until we change that perspective and allow the patient to actually have a voice in what is happening in the health care system, I think in some aspects it's going to remain the same. -- 2018 PPS key informant

4.2.5. Stakeholder Input

This section synthesizes stakeholder input for future implementations of health care reform programs.

¹⁰⁵ The DSRIP program's STC require a consumer education campaign to be conducted statewide to help educate Medicaid and uninsured populations about the benefits of health care transformation. The workstream of the patient focus groups was launched in DY3, the recommended educational strategy is to be concluded in DY4, and rollout for the recommended educational messaging and consumer campaign is to be launched in DY5 and beyond.

4.2.5.1. Communication

Stakeholders' ability to receive clear information on all aspects of the DSRIP program was important, as it affected daily tasks, coordination of in-house and between-provider services, and overarching implementation decisions. Despite a wide range of communication platforms utilized by all stakeholders (e.g., newsletters, email blasts, webinars, and in-person meetings), a lack of communication was reported across many entities: NYS DOH-to-PPS, PPS-to-PPS, PPS-to-partner, and partner-to-partner. Stakeholder themes included:

- **Continue to target communications and reach out to DSRIP stakeholders.** While NYS DOH made significant improvements to its communication protocols since the start of the DSRIP program, stakeholders still reported a desire for additional targeted communications, especially around the topics of value based payment, funds flow, and sustainability planning.
- **Revise annual meeting structures.** Stakeholders reported interest in additional opportunities for PPS and partners to meet with other PPS and partners to discuss challenges and successes. Suggested topics included treatment of at-risk populations; ways to overcome obstacles to patient engagement; effective data strategies; and community outreach and buy-in.
- **Raise awareness of information repositories.** Although the NYS DOH created a centralized FAQ and webinar repository, PPS key informants continued to report belief that different PPS received different guidance. They requested more transparency in answers to questions from stakeholders so that all PPS were informed of clarifications.
- **Continue to increase communication between partners.** While collaboration between partners grew, partners hoped to see real-time communication improve when their patients sought care from other providers, so that they could engage those patients and avoid potential re-hospitalizations.
- **Improve referral tracks from partner-to-partner.** Although partners became more aware of each other, some reported disappointment with the number of referrals they received from within their PPS network. Partners wished to see referral platforms (such as NowPow, a referral platform which allows health care providers to refer patients to community-based organizations) more highly utilized and felt that partners should focus on referring patients to other partners in their PPS.
- **Develop transparency for upcoming value based payment contracting.** Partners were eager to hear about the decisions managed care organizations would make in regard to value based payment contracting.

4.2.5.2. Training

Training and education of partners were critical components of ongoing implementation. Partners appreciated the training provided on DSRIP objectives, implementation, and accomplishments. Their feedback included:

- **Continue providing value based payment resources.** Despite provider-based assessments that they were largely knowledgeable of value based payment, many stakeholders requested additional educational resources to aid implementation, such as one-on-one consultations.
- **Tailor training for partner types.** Trainings that were not relevant to all partners were frustrating and demoralizing. For example, non-Medicaid-billing community-based organizations reported that some trainings were not relevant to their situations and that they remained unsure of how to move toward value based payment.
- **Include the right people in DSRIP program training.** While partners felt that management staff who were on board since the start of the DSRIP program received adequate education about the program and its goals, they believed that frontline staff should have received more training about the changes that were occurring, since they were the ones who had direct impact on patients. Partners also wanted new employees to receive training.
- **Revisit training types and locations.** Partners requested in-person and hands-on training that fostered more dialogue than the distance training (such as webinars) most often provided currently. In-person training could also facilitate intergroup discussions to understand how various providers were transforming their practices.

4.2.5.3. Data and Information Technology Infrastructure and Support

The following feedback focused on critical data infrastructure needs that were necessary to support continued system transformation efforts and produce efficient patient record management.

- **Provide more timely data.** While acknowledging that claims data would always be reported with a lag, stakeholders continued to request more real-time comprehensive clinical data in order to track performance and provide more robust patient care.
- **Obtain data from managed care organizations.** Stakeholders explained that cooperation from managed care organizations related to data access was essential to health care transformation, but was lacking throughout the DSRIP program. More support from NYS DOH was requested to help facilitate collaboration in accessing essential data.
- **Obtain additional sources of data: cost data, substance use data, and data related to patient experience.**
 - **Cost data.** In preparation for value based payment opportunities, stakeholders expressed that data on the costs associated with care were key to understanding the financial impacts of their efforts. While stakeholders sometimes had statistics to show reductions in emergency room visits, for example, they could

- not determine the financial impact of that reduction from a total cost perspective without these data.
- **Substance use data.** Key informants from PPS explained that data could be obtained from participating entities covered under a Business Associate Agreement (BAA) which fit the definition of the Organized Health Care Arrangement (OHCA). This allowed them to create patient lists, analyze data, and provide reports for partners so they could make informed decisions and prioritize resources. However, even with BAAs in place, stakeholders reported that federal regulations restricted access to data related to patients being treated for a substance use disorder. They requested that substance use data be made more easily available to them, as these patients tended to be high utilizers of the emergency room and substance use disorders had an impact across the entire health spectrum.
- **Data related to patient experience.** Some key informants and partners believed that until patient perspectives were incorporated into all health care efforts, true system transformation could not occur. Stakeholders said that the Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys captured data related to patient experience at the primary care level, but did not adequately assess patient experience in other health care sectors. Additional data collection to obtain additional patient perspectives was suggested.
- **Ensure that all stakeholders are clear on current interoperability progress.** As each clinical system in New York State was unique, partners voiced frustration with the interoperability of electronic health records. While acknowledging that NYS DOH provided substantial resources to improve information sharing and that there were ongoing federal/business initiatives regarding interoperability, partners reported significant challenges to sharing patient information among themselves, due to the lack of standardization in information sharing platforms. Partners requested more support from the NYS DOH in promoting better Qualified Entity partnerships or leveraging other data sharing capabilities.

4.2.5.4. DSRIP Program Payment Models

The DSRIP program's financial model was complex and changed over time as goals move from Payment for Reporting to Payment for Performance. Many of the PPS were successful at distributing funds to partners, but some partners reported that they did not perceive fair funds flow. A consensus in the non-hospital focus groups was that non-hospital partners felt that funds were directed much more generously to hospitals over other partners. Stakeholder feedback included:

- **Review payment model fairness.** Stakeholders reported inequities in how funds were distributed to partners. Many partners' viewpoint was that hospital-based PPS kept

funds internal to hospitals. They believed that if that was the preferred model and unlikely to change, then the PPS that maintained a more internal funding model should have been transparent about this with their partners, who may have developed different expectations at earlier stages of the project.

- **Include community-based organizations more fully.** Stakeholders requested an increase in the involvement of community-based organizations in funding decisions. Community-based organizations had the ability to increase community engagement and patient buy-in beyond health care partners' capabilities and were a key component of DSRIP program success. However, community-based organizations reported that their involvement was hindered by lack of infrastructure and resources to make those linkages. They requested additional opportunities to demonstrate value, more capacity building assistance, and increased funds flow.
- **Update billing codes and payment regulations.** A number of stakeholders reported that for the activities of the DSRIP program to be sustainable, billing and regulation practices needed updating. Current billing codes were not sufficient to support the projects, especially the integration of primary care and behavioral health. Several PPS key informants pointed out telepsychiatry and telehealth as services that should be more broadly billable in order to sustain their integration work.¹⁰⁶ Stakeholders were worried that projects that could not currently bill for services would disappear at the end of the DSRIP program. Additionally, stakeholders described regulatory challenges to sustainability, such as Article 28, which prevented billing for behavioral health services provided by social workers unless it was for pregnant mothers or children under age 18, and Article 30, which dictated EMT staffing standards for voluntary ambulance services and did not allow EMTs to provide certain services outside of the emergency room.

4.2.5.5. Programmatic Changes

Several suggestions related to the programmatic scope of the DSRIP program emerged:

- **Broaden focus on non-Medicaid populations.** Partners reported that guidelines for serving both Medicaid and non-Medicaid patients would be helpful. The focus was on Medicaid populations, without as much guidance for those with no insurance or those dually eligible for Medicaid and Medicare. Stakeholders reported that while groups such as individuals with intellectual and developmental disabilities may not have fit directly under the DSRIP program, they were affected by project implementation and should be considered.
- **Eliminate PPS overlap.** Stakeholders voiced frustrations regarding inefficiencies in the investment of time and resources caused by PPS overlapping geographically. They recommended designating only one PPS per county.

¹⁰⁶ Changes have since taken place that allow more telemedicine services to be billed to Medicaid in New York State.

- **Consider an extension of the DSRIP program timeline to effect systems-level change.** A majority of PPS key informants and partners reported uncertainty about what was going to happen after DSRIP program funding ended. Stakeholders wanted to see DSRIP program funding continue after the initial five years, and feared that if funding abruptly stopped their progress would regress. Many felt that five years was not long enough to achieve the systemic change the DSRIP program was intended to develop, and would like to see an extension to finish the work that they started.
- **Encourage collaboration with managed care organizations.** Because stakeholders considered collaboration with managed care organizations to be fundamental to project sustainability, they believed that the DSRIP program should have encouraged managed care organizations to engage with PPS. Many stakeholders viewed lack of engagement with managed care organizations as a missed opportunity for the DSRIP program.

4.3. Assessment of Changes in Health Care Quality

This section addresses RQ-B:

Did health care quality improve as a result of clinical improvements in the treatment of selected diseases and conditions? (CMS RQ2)

Summary At-A-Glance

The Interim Report focused on two common measures of health care quality: (1) the asthma medication ratio, and (2) medication management for people aged 5-64 with asthma. The asthma medication ratio assesses appropriate medication prescribing to members with persistent asthma, with a ratio of controller medications to total asthma medication of 0.50 or greater indicating high quality clinical care.¹⁰⁷ The asthma medication management measure assesses adherence, and it is defined as the percentage of members with persistent asthma who were dispensed appropriate asthma medication and remained on their prescribed asthma controller medications for at least 75% of the treatment period. Preliminary results among the PPS that selected the asthma project revealed that the asthma medication ratio displayed worsening performance in the pre-DSRIP period, but following DSRIP initiation the trajectory subsequently changed and the PPS are now improving. In addition, the level of asthma controller medication management has remained steady overall.

¹⁰⁷ These measures use Healthcare Effectiveness Data and Information Set (HEDIS) measure specifications by the National Committee for Quality Assurance (NCQA) for health plans and other health care organizations. For more information, see: NCQA. (n.d.). Medication management for people with asthma and asthma medication ratio (MMA, AMR). Retrieved from <https://www.ncqa.org/hedis/measures/medication-management-for-people-with-asthma-and-asthma-medication-ratio/>

At the statewide level, at baseline 60.5% of members with persistent asthma had an asthma medication ratio of 0.5 or higher, and 32.1% of members who were on a controller had 75% or more of their treatment days covered. The asthma medication ratio declined in the pre-DSRIP period and in the early portion of the post-DSRIP period. Thereafter, the trend shifted and performance improved with a positive rate of increase in the asthma medication ratio performance. The level of asthma medication management among members who were prescribed a controller remained constant throughout the period. It is not unexpected that the asthma medication ratio showed improvement while the medication management measure did not, as it takes longer to improve long-term adherence.

There are several important cautions for interpreting these findings, which will be explored in more detail for the final summative report. First, the Interim Report does not contain a comparative analysis for these measures, as only 13 PPS selected the project. Additional work to compare these PPS, as well as other time trends will be considered in the final summative report. There is a limited study time period, so the Interim Report only examines changes in the early phases of DSRIP implementation; these trends will evolve over time and thus findings in the final summative report may differ. It is not uncommon to see initial drops in performance when implementing a new program, followed by improvements; the additional time points will allow for more detailed exploration in the final summative report. There was considerable variability in the asthma medication measure which may have contributed to inconclusive findings, and the final summative report will consider alternative measures to fully understand differences across PPS and time. The Interim Report focused on asthma measures among the 13 PPS that selected that project. Additional quality outcomes, including those relevant to other PPS, will be explored for the final summative report.

4.3.1. Statewide Trends in Quality of Care Measures

Exhibits 4.18 and 4.19 illustrate the monthly statewide trends in the *Asthma Medication Ratio (5-64 Years)* among attributed members and the *Medication Management for People with Asthma (5-64 Years) – 75% of Treatment Days Covered*, two common quality of clinical care indicators. The asthma medication ratio assesses appropriate medication prescribing to attributed members with asthma, whereas the asthma medication management measure focuses on access and adherence to care among those prescribed a controller medication. The *Asthma Medication Ratio (5-64 Years)* measure quantifies the percentage of members with a controller-to-total asthma medication ratio of 0.5 or higher, among attributed members aged 5 to 64 years with persistent asthma who received at least one asthma medication (either controller or reliever). A controller-to-total asthma medication ratio of 0.50 denotes high quality clinical care.¹⁰⁸ The *Medication Management for People with Asthma (5-64 Years) – 75%*

¹⁰⁸ These measures use Healthcare Effectiveness Data and Information Set (HEDIS) measure specifications by the National Committee for Quality Assurance (NCQA) for health plans and other health care organizations. For more information, see: NCQA. (n.d.). Medication management for people with asthma and asthma medication ratio

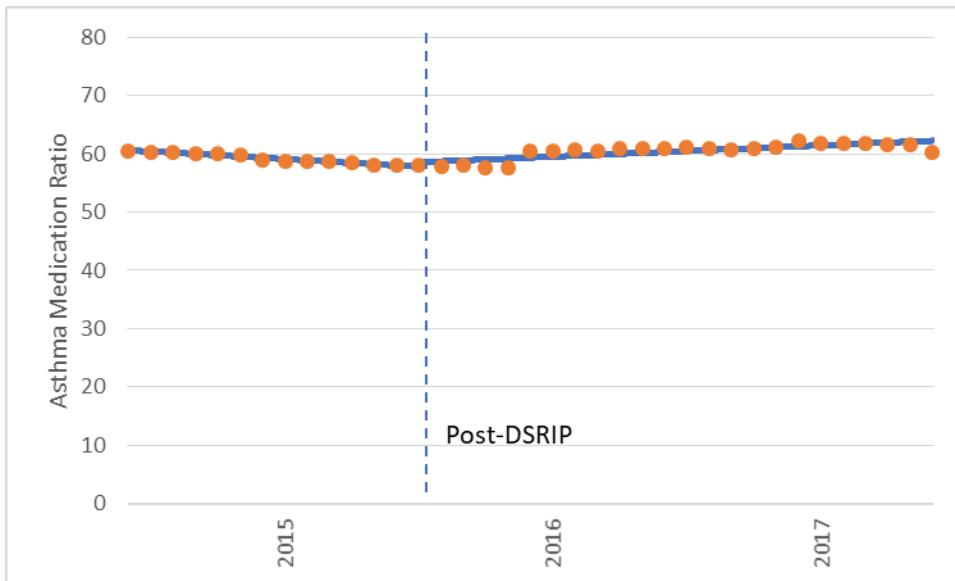
of Treatment Days Covered assesses the percentage of members who filled prescriptions for asthma controller medications during at least 75% of their treatment period, among attributed members aged 5 to 64 years with persistent asthma and who received at least one controller medication. Both measures have values from 0% to 100%, and higher values indicate better quality of care.

These plots have fitted linear trend lines to illustrate changes in performance at the statewide level during the study period, from the start of MY1 through the end of MY3. The interrupted time series model, described in more detail below, tests whether there is a level and/or slope change in the post-DSRIP initiation period. That corresponds to the study hypotheses and research questions regarding whether these measures improved following the DSRIP program's initiation. To be consistent with the regression specification, these plots have a disjunction at the start of the post-DSRIP initiation period to illustrate early differences after the initiation of the DSRIP program. The pre- and post-DSRIP initiation periods have separate fitted lines to show whether there are slope changes after the DSRIP program's initiation. The immediate drop following the initiation corresponds with the level change.

The asthma medication ratio had a slight decline in the pre-DSRIP period followed by an improvement. At the end of MY0, the baseline value, 60.5% of members with persistent asthma had an asthma medication ratio of 0.5 or higher. This declined by 4.1% to 58.1% at the end of MY1. Immediately following DSRIP initiation, there was no level change but there was a perceptible slope change and thereafter the trend had a positive trajectory signaling an improvement in this measure.

Although the asthma medication management measure fluctuates slightly across the period, overall the pre- and post-DSRIP trend lines are similar indicating a level trend and limited change across time. At the end of MY0, the baseline value, 32.1% of members aged 5 to 64 with persistent asthma had 75% or more of their treatment days covered. The fitted linear trend in the pre-DSRIP period appears flat, indicating there is no change in this percentage by the end of MY1. After the initiation of the DSRIP program, there is a no meaningful increase or decrease in the level of this outcome (level change) and the post-DSRIP initiation slope appears flat similar to the pre-DSRIP period.

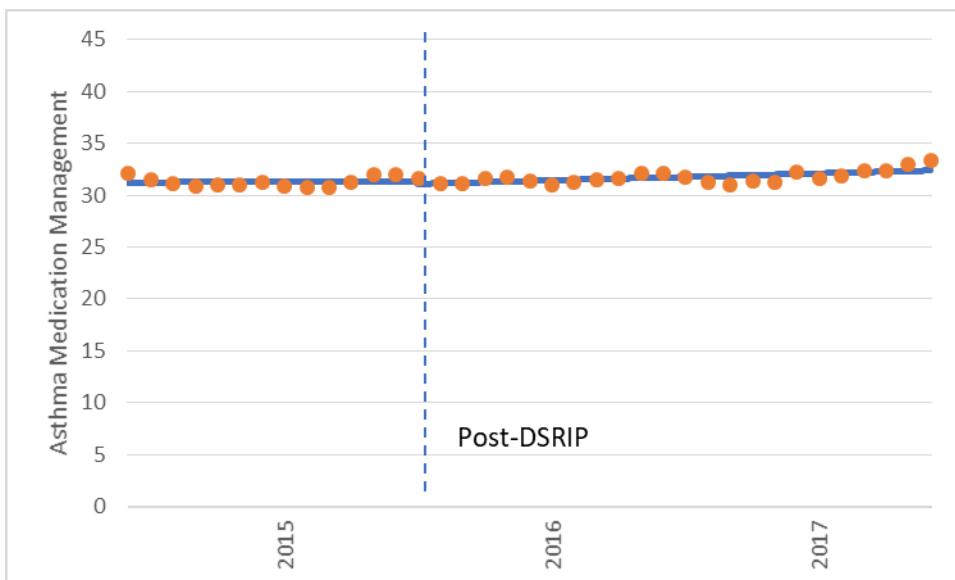
Exhibit 4.18. Monthly changes in asthma medication ratio



Source: Authors' analysis of the DSRIP Dataset.

Notes: Asthma medication ratio is measured as the percentage of members with a controller-to-total asthma medication ratio of 0.5 or higher, among attributed members aged 5 to 64 years with persistent asthma who received at least one asthma medication. June 2014 through June 2015 (MY0 and MY1) is pre-DSRIP, and July 2015 through July 2017 (MY2 and MY3) are post-DSRIP. Results are restricted to the 13 PPS that selected the asthma project.

Exhibit 4.19. Monthly changes in the asthma medication management



Source: Authors' analysis of the DSRIP Dataset.

Notes: Asthma medication management is measured as the percentage of members who filled prescriptions for asthma controller medications during at least 75% of their treatment period, among attributed members aged 5-64 with persistent asthma who received at least one controller medication. June 2014 through June 2015 (MY0 and MY1) are pre-DSRIP, and July 2015 through July 2017 (MY2 and MY3) are post-DSRIP. Results are restricted to the 13 PPS that selected the asthma project.

The statewide interrupted time series (see Exhibit 4.20) quantified the magnitude and statistical significance of post-DSRIP initiation changes in asthma medication management and the asthma medication ratio across the 37-month study period. There are three sets of coefficients because a separate regression model was developed for each outcome measure. For each outcome, the interrupted time series has three main coefficients: (1) a *Trend* that captures the slope in the pre-DSRIP period, (2) a *DSRIP* dummy variable that is coded as 1 in the post-DSRIP initiation period and 0 in the pre-DSRIP period to estimate the level change in the post-DSRIP initiation period, and (3) a *Trend*DSRIP* coefficient that assesses whether the slope changed in the post-DSRIP initiation period. The *Constant* term refers to the baseline level at the start of the study period (last month of MY0). For the coefficients, a p-value of $p<0.01$ is considered strong evidence, $p<0.05$ is considered moderate evidence, and $p<0.1$ is not statistically significant but provides suggestive evidence for a possible relationship with the outcome variable.

Exhibit 4.20. State-level time series regression model

Variable	Asthma Medication Ratio	Asthma Medication Management
	b (SE)	b (SE)
Trend	-0.218*** (0.054)	0.004 (0.036)
DSRIP	-4.535*** (0.713)	-0.929* (0.472)
Trend*DSRIP	0.379*** (0.058)	0.052 (0.039)
Constant	60.805*** (0.430)	31.242*** (0.285)
Observations	37	37
Adjusted R2	0.710	0.362

Source: Authors' analysis of the DSRIP Dataset.

Notes: * $p<0.1$, ** $p<0.05$, *** $p<0.01$. Results are restricted to the 13 PPS that selected the asthma project.

For the asthma medication ratio measure, the regression model showed a worsening trend prior to the DSRIP program, and thereafter the trend reversed and the measure improved. The *Trend* coefficient was negative and statistically significant ($b= -0.218$, $p<0.01$), indicating that each month prior to the DSRIP initiation is associated with a 0.2 percentage-point decline in the percent of patients with an asthma medication ratio that meets quality of care standards. Following DSRIP initiation, the *Trend*DSRIP* interaction term, which quantifies the slope change in the post-DSRIP initiation period, was positive and statistically significant ($b= 0.379$, $p<0.01$). This is strong evidence that the trend improved in the post-DSRIP initiation period and confirms the visual plot that shows a positive trajectory after DSRIP initiation.¹⁰⁹

¹⁰⁹ Although the *DSRIP* dummy variable is negative and statistically significant ($b= -4.535$), the decline between the end of MY1 and the start of MY2 is not meaningful. The immediate post-DSRIP initiation change is calculated using

For the asthma medication management measure, the regression model confirmed the visual plots that this outcome has remained at a steady value throughout the study period, and there was no significant change in the level or trend following the initiation of the DSRIP program. The *Trend* coefficient ($b= 0.004$) was not statistically significant, providing no evidence that these values changed in the pre-DSRIP period. The *DSRIP* coefficient ($b= -0.929$) and *Trend*DSRIP* interaction term ($b= 0.052$) were both insignificant at the $p<0.05$ level, suggesting that the percentage of patients who filled their asthma prescriptions for at least 75% of their treatment days has remained at a constant level.

4.3.2. Comparative Analysis of Quality of Care Measures among Performing Provider Systems

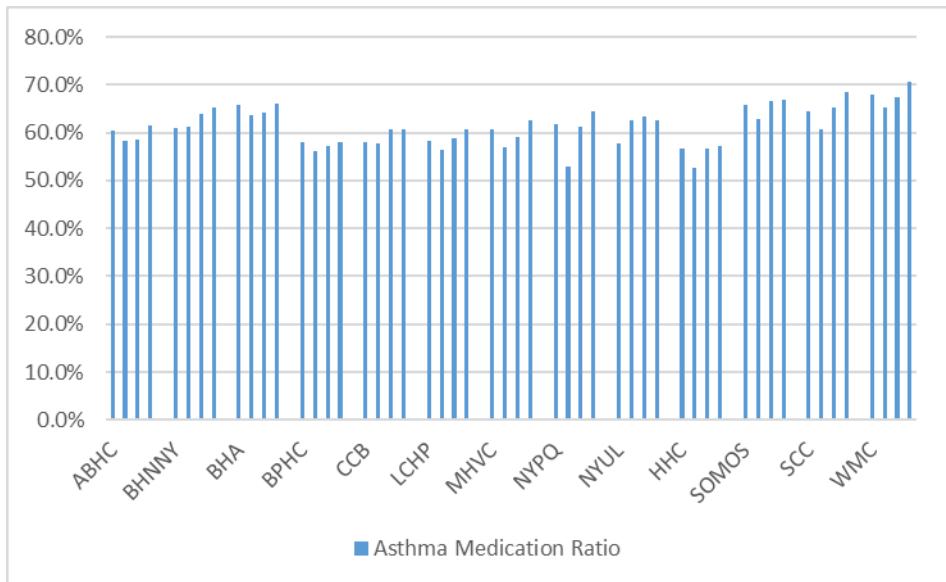
Exhibits 4.21 and 4.22 display the two measures in MY0, MY1, MY2, and MY3, by PPS. Findings are limited to the 13 PPS that selected the asthma project. Each PPS has one bar per MY. Although monthly data are available, these graphs only present the last observation in each MY for ease of interpretation. The performance outcomes in the DSRIP Dataset are 12-month rolling averages, so the last value of the MY captures the prior year's average performance.

Across PPS which selected the asthma project, there was variability in the percentage of members meeting the asthma medication ratio benchmark (MY0: from 56.8% to 67.8%, MY1: from 52.7% to 65.2%, MY2: from 56.8% to 67.4%, MY3: from 57.2% to 70.6%). All but one PPS had an improvement from MY0 to MY3, consistent with the statewide trend that showed improvements following DSRIP initiation (see Section 4.3.1).

Across PPS which selected the asthma project, there was variability in the percent of members meeting the asthma medication management benchmark (MY0: from 25.0% to 35.1%, MY1: from 26.1% to 40.6%, MY2: from 24.6% to 36.1% in MY2, MY3: from 24.6% to 37.0%). In contrast to the asthma medication ratio measure, the 13 PPS exhibited variations in their trends over time. For example, Better Health for Northeast New York (BHNYY) had a steady rate around 34% in all years, and Bronx Partners for Healthy Communities (BPHC) had a steady rate in MY0, MY1, and MY2 (32.1%, 32.0%, and 32.7%, respectively) and an increase in MY3 (35.7%). Leatherstocking Collaborative Health Partners (LCHP) has a notable improvement in the pre-DSRIP initiation period (MY0: 33.5%, MY1: 40.6%), and thereafter the levels lowered but were still an improvement from the initial MY0 value (MY2: 36.1%, MY3: 37.0%). SOMOS had a decline in performance over the study time period (MY0: 32.0%, MY3: 30.5%). This variability in performance trends warrants further analysis in the final summative report.

the predicted values, using $t=13$ and $DSRIP=0$ for the last month of MY1, and $t=14$ and $DSRIP=1$ for the first month of MY2. The predicted values for these months are 58.0 and 58.5, and there is no substantial level change.

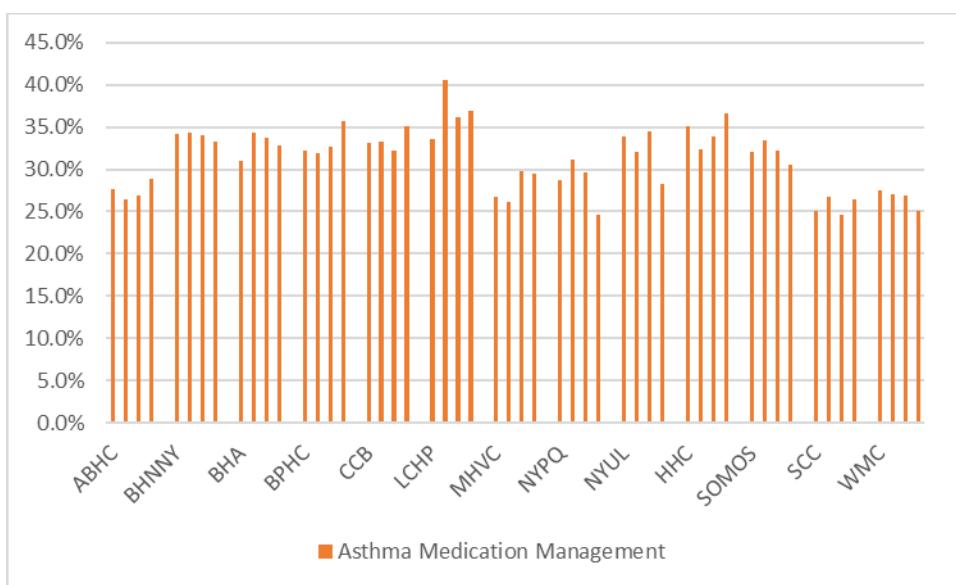
Exhibit 4.21. Annual changes in asthma medication ratio from MY0 to MY3, by PPS participating in an asthma project



Source: Authors' analysis of the DSRIP Dataset.

Notes: Asthma medication ratio is measured as the percentage of members with a controller-to-total asthma medication ratio of 0.5 or higher, among attributed members aged 5 to 64 years with persistent asthma who received at least one asthma medication. July 2014 through June 2015 (MY1) is pre-DSRIP, and July 2015 through July 2017 (MY2 and MY3) are post-DSRIP. Results are restricted to the 13 PPS that selected the asthma project. Each PPS has four bars, one per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position followed to the right by MY1, MY2, and MY3.

Exhibit 4.22. Annual changes in controller-to-total asthma medication management from MY0 to MY3, by PPS participating in an asthma project



Source: Authors' analysis of the DSRIP Dataset.

Notes: Asthma medication management is measured as the percentage of members who filled prescriptions for asthma controller medications during at least 75% of their treatment period, among attributed members aged 5-64 with persistent asthma who received at least one controller medication. July 2014 through June 2015 (MY1) are pre-DSRIP, and July 2015 through July 2017 (MY2 and MY3) are post-DSRIP. Results are restricted to the 13 PPS that selected the asthma project. Each PPS has four bars, one bar per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position followed to the right by MY1, MY2, and MY3.

4.4. Assessment of Changes in Population Health

This section addresses RQ-C:

Did population health improve as a result of implementation of New York's DSRIP initiative? (Sub-question: Were racial and ethnic disparities on specific population measures reduced following the DSRIP program?) (CMS RQ3)

Summary At-A-Glance

The Interim Report focused on population health measures in four areas: (1) mental health and substance abuse, (2) chronic disease prevention, (3) HIV, and (4) racial/ethnic disparities in chronic disease prevention and HIV. The DSRIP program's Domain 4 measures and PPS projects are closely aligned with the New York State Prevention Agenda 2013-2018, and the population health measures presented here are consistent with the Prevention Agenda measures and relevant to projects that were selected by the PPS. If the DSRIP program were successful in achieving system transformation and shifting towards increased use of preventive services, population health measures should also improve. It is anticipated that there would be a larger lag time between the implementation of the DSRIP program and changes in population health measures. Consequently, the interim report aims to provide a snapshot of New York's recent trends from MY0 to MY3, and current performance compared to the state's Prevention Agenda and national indicators. Additionally, many of the data sources used for population health measures involve the larger statewide populations beyond Medicaid members. Currently, the statewide population is 19.5 million and the Medicaid population is 6 million.

Several population health measures improved during the first few years of the DSRIP program's initiation (i.e., reduced if an unwanted event, or increased if a desired event): prevalence of poor mental health, prevalence of current cigarette smoking, newly diagnosed HIV cases, racial/ethnic disparities in premature deaths, and racial/ethnic disparities in newly diagnosed HIV cases. Among these measures that improved, the newly diagnosed HIV cases and racial/ethnic disparities in newly diagnosed HIV cases also exceeded the statewide Prevention Agenda targets. In addition, the prevalence of binge drinking among adults exceeded the statewide Prevention Agenda target, although it did not decline during the time period examined in this interim report.

Other population health measures have room for improvement. The suicide death rate, percentage of premature deaths, and percentage of adults with up-to-date colorectal cancer

screenings remained steady throughout the study period and did not yet meet the Prevention Agenda targets. Although the prevalence of cigarette smoking and racial/ethnic disparities in premature deaths declined, these measures did not yet meet the Prevention Agenda goals by the end of MY3.

There are several cautions in interpreting these interim findings. The population health measures were collected through existing public health surveillance data systems, and so their years do not align precisely with MY. The small number of data points for these annual measures, with two years pre-DSRIP and two years post-DSRIP initiation, make it difficult to isolate changes that occurred due to the DSRIP program. Without additional information on these measures over a longer period of time, it is not possible to quantify the degree to which their trajectories were altered following the DSRIP program's implementation. More importantly, as discussed in more detail in Section 6, the Prevention Agenda launched in 2011 and has been a large focus for New York, NYC, and local health departments. Concurrently, New York initiated in 2014 the nation's first Ending the Epidemic initiative to achieve a first-ever decline in HIV prevalence, including a focus on reducing health disparities. The DSRIP program is aligned with these important population health initiatives and has served as an accelerator for their activities. Given the limited number of data points and the close alignment between New York's DSRIP program and other state initiatives, it is difficult to isolate the contribution that is solely attributable to the DSRIP program.

As described in Section 2.2.4, the DSRIP program's Domain 4 measures align closely with the New York State Prevention Agenda 2013-2018 and projects in this domain are an accelerant to other statewide population health initiatives. These are reported publicly at the statewide and county levels, to allow communities to assess their performance and improvements over time. If the DSRIP program were successful in achieving system transformation and shifting towards increased use of preventive services, then population health outcomes should also improve. It is anticipated that there would be a larger lag time between the implementation of the DSRIP program and changes in population health measures. Consequently, the interim report focuses on providing a snapshot of New York's recent trends and current performance compared to the state's Prevention Agenda and national indicators.

Exhibit 4.23. summarizes the baseline values and goals for the Prevention Agenda indicators that are most relevant to the DSRIP program, categorized by focus area. These are referenced in the following sections, to contextualize the findings from the DSRIP program's statewide performance measures. The Domain 4 measures come from multiple existing public health data surveillance systems, and they reflect calendar years rather than DSRIP measurement years (MY). For the purposes of DSRIP reporting and evaluation, they are converted to MY. For consistency with the other Interim Report findings, the population health measures are presented in MY and are derived from the DSRIP Dataset.

Exhibit 4.23. Baseline values and goals for New York State Prevention Agenda indicators

Focus Area	Indicators and Data Sources	New York State Prevention Agenda Statewide Objectives
Mental health and substance abuse population health outcomes (Section 4.4.1)	Age-adjusted percentage of adult binge drinking during the past month (Data source: Behavioral Risk Factor Surveillance System (BRFSS) and Expanded BRFSS)	Reduce binge drinking by 10%, to ≤18.4%. (Baseline: 20.4% in 2011.)
	Age-adjusted percentage of adults with poor mental health for 14 or more days in the past month (Data source: Behavioral Risk Factor Surveillance System (BRFSS) and Expanded BRFSS)	Reduce the reported poor mental health (14 or more days in the last month) by 10%, to ≤10.1%. (Baseline: 11.2% in 2011)
	Age-adjusted suicide death rate per 100,000 (Data source: Bureau of Biometrics)	Reduce the age-adjusted suicide rate by 10%, to ≤5.9 per 100,000. (Baseline: 6.6 per 100,000 in years 2007-2009.)
Chronic disease prevention population health outcomes (Section 4.4.2)	Percentage of adults aged 50-75 years who received a colorectal cancer screening based on the most recent guidelines (Data source: NYS BRFSS)	Increase the percentage of adults who receive up-to-date colorectal cancer screening by 5%, to ≥71.4%. In November 2015, a revised target of 80% was set for 2018. (Baseline: 68.0% in 2010)
	Percent of cigarette smoking among adults aged 18 and above (Data source: NYS BRFSS)	Decrease the prevalence of cigarette smoking by adults by 17%, to ≤15.0%. In November 2015, a revised target of 12.3% was set for 2018. (Baseline: 18.1% in 2011)
	Percentage of premature deaths, defined as deaths before age 65 (Data source: NYS Vital Statistics)	Reduce the percentage of premature deaths (before age 65 years) by 10%, to ≤21.8%. (Baseline: 24.2% in 2010)
HIV population health outcomes (Section 4.4.3)	Newly diagnosed HIV case rate per 100,000 (Data source: HIV Surveillance System)	Reduce the newly diagnosed HIV case rate by 25%, to ≤14.7 new diagnoses per 100,000. In July 2015, indicator baseline and trend data were updated and a revised target of ≤16.1 new diagnoses per 100,000 population was set for 2018. (Baseline: 19.6 per 100,000 in 2010; updated baseline: 21.5 per 100,000 in 2010)
	Percentage of premature death, ratio of black non-Hispanic to	Reduce disparities by 10%, to ≤1.87. (Baseline: 2.08 in 2010)

Focus Area	Indicators and Data Sources	New York State Prevention Agenda Statewide Objectives
Population health disparities (Section 4.4.4)	white non-Hispanic (Data source: NYS Vital Statistics) Percentage of premature death, ratio of Hispanic to white non-Hispanic (Data source: NYS Vital Statistics)	Reduce disparities by 10%, to ≤1.86. (Baseline: 2.07 in 2010)
	Newly diagnosed HIV case rate per 100,000, difference in rates of new HIV diagnoses between black non-Hispanic and white non-Hispanic	Reduce disparities by 25%, to a rate difference of ≤45.7 per 100,000. In July 2015, the indicator baseline and trend data were updated, and a revised target of ≤46.8 per 100,000 was set for 2018. (Baseline: 60.9 per 100,000 in years 2006-2010; revised baseline: 62.4 per 100,000)
	Newly diagnosed HIV case rate per 100,000, difference in rates of new HIV diagnoses between non-Hispanic and white non-Hispanic	Reduce disparities by 25%, to a rate difference of ≤22.3 per 100,000. In July 2015, the indicator baseline and trend data were updated, and a revised target of ≤26.6 per 100,000 was set for 2018. (Baseline: 29.8 in years 2006-2010; revised baseline: 35.5 per 100,000)

Source: New York State Department of Health Prevention Agenda website.¹¹⁰

Notes: Values are for the New York State Health Improvement Plan associated with the Prevention Agenda 2013-2018.

4.4.1. Statewide Trends in Mental Health and Substance Abuse Population Health Outcomes

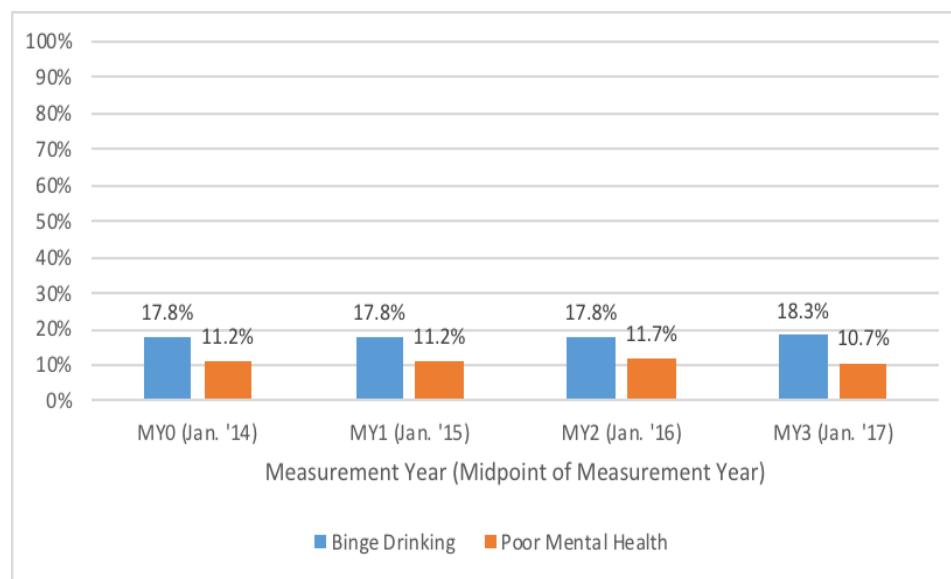
Exhibit 4.24 displays annual values of the age-adjusted percentage of adults reporting binge drinking in the past month (blue bars) and the age-adjusted percentage of adults reporting poor mental health for 14 or more days in the last month (orange bars). Exhibit 4.25 displays annual values of the age-adjusted suicide death rate per 100,000. In both exhibits, lower values are desirable.

Across the four MY, the population health outcomes of binge drinking among adults and the suicide death rate remained at a steady level, while the percent of adults with poor mental health declined slightly between MY2 and MY3. Across the four MY, between 17.8% and 18.3%

¹¹⁰ New York State Department of Health. (2015, March 16). New York State Prevention Agenda 2013-2018: priorities, focus areas, goal and objectives, 1/25/2013 (revised March 16, 2015). Retrieved from https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/tracking_indicators.htm

of adults reported binge drinking, which is slightly higher than the national reported average of 16.3% (in 2015) but meets the statewide Prevention Agenda target of 18.4%.¹¹¹ In the study period, the percentage of adults reporting poor mental health increased slightly from 11.2% in MY0 and MY1 to 11.7% in MY2. Thereafter, it declined by one percentage-point between MY2 and MY3, to 10.7% in MY3. This is slightly lower than the national reported average of 12.5% (in 2012) but does not yet meet the Prevention Agenda target of 10.1%.¹¹² The suicide death rate from MY0 to MY3 was relatively steady with values from 7.9 per 100,000 to 8.0 per 100,000 across the measurement years. That is lower than the national average of 13.3 per 100,000 (in 2015) but does not yet meet the Prevention Agenda target of 5.9 per 100,000.¹¹³

Exhibit 4.24. Statewide annual trends in binge drinking and poor mental health from MY0 to MY3



Source: Authors' analysis of the population health data available in the DSRIIP Dataset.

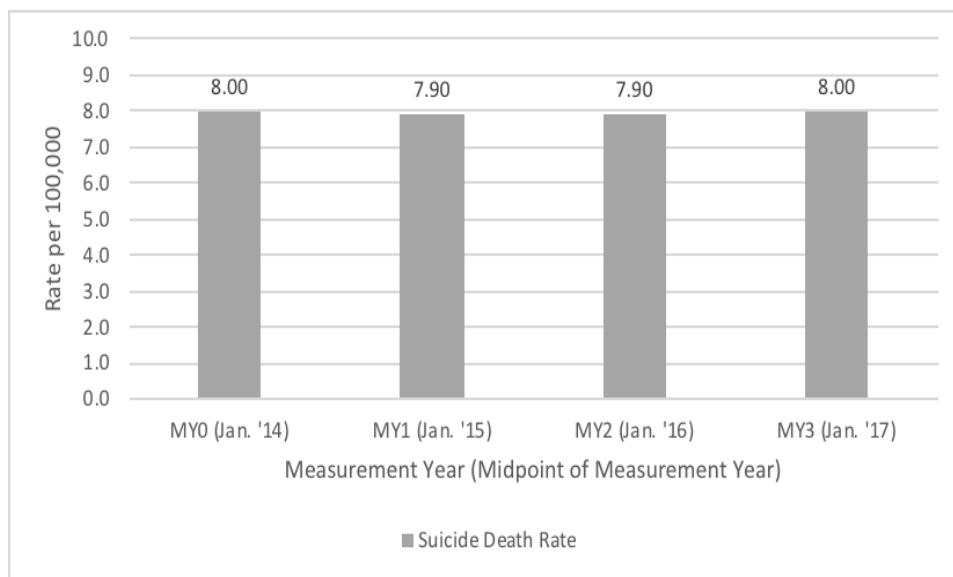
Notes: Binge drinking and poor mental health are measured as the age-adjusted percentage of adult binge drinking in the past month, and age-adjusted percentage of adults with poor mental health for 14 or more days in the last month. The coverage is the NYS general population and not limited to Medicaid members.

¹¹¹ Centers for Disease Control and Prevention. (n.d.). BRFSS prevalence & trends data. Retrieved from <https://www.cdc.gov/brfss/brfssprevalence/index.html>

¹¹² Dwyer-Lindgren, L., Mackenbach, J.P., Van Lenthe, F.J., & Mokdad, A.H. (2017). Self-reported general health, physical distress, mental distress, and activity limitation by US county, 1995–2012. *Population Health Metrics*, 15, 16.

¹¹³ National Institutes of Mental Health. (n.d.). Suicide. Retrieved from <https://www.nimh.nih.gov/health/statistics/suicide.shtml>

Exhibit 4.25. Statewide annual trends in suicide death rate from MY0 to MY3



Source: Authors' analysis of the population health data available in the DSRIIP Dataset.

Notes: The suicide death rate is measured as the age-adjusted suicide death rate per 100,000. The coverage is the NYS general population and not limited to Medicaid members.

4.4.2. Statewide Trends in Chronic Disease Prevention Population Health Outcomes

Exhibit 4.26 displays annual values in two chronic disease prevention population health outcomes: the percentage of adults aged 18 and older who report currently smoking cigarettes (blue bars); and percentage of premature deaths, defined as deaths among individuals aged 64 and younger (orange bars). Lower values are desirable. Exhibit 4.27 displays a third chronic disease prevention population health outcome, the percentage of adults aged 50-75 years who received a colorectal cancer screening based on the most recent screening guidelines. Higher values of colorectal cancer screening are desirable.

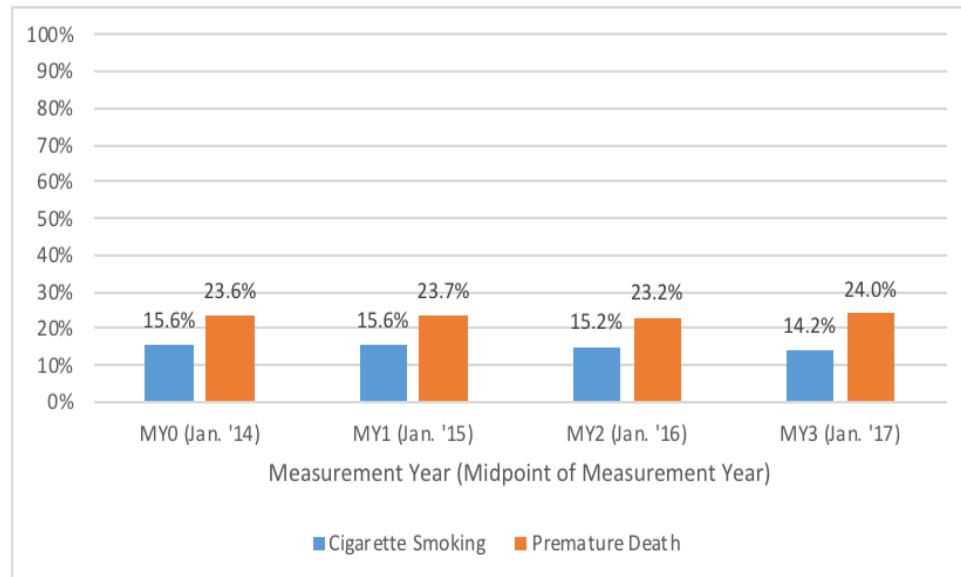
The smoking outcome improved over the period, while the premature death and colorectal cancer screening outcomes fluctuated but did not decline. The prevalence of smoking among adults declined steadily each year, from 15.6% in MY0 to 14.2% in MY3. This outcome did not yet meet the statewide Prevention Agenda target of 12.3%,¹¹⁴ but it was lower than the national average of 15.5% in 2016.¹¹⁵ The percentage of deaths that were premature had a relatively steady trend with annual values ranging from 23.2% to 24.0% during the period, which did not yet meet the statewide Prevention Agenda target of 21.8% but was lower than

¹¹⁴ The Prevention Agenda target was updated following a change in the indicator baseline and trend; the value here reflects the updated target.

¹¹⁵ Centers for Disease Control and Prevention. (2018, September 24). Current cigarette smoking among adults in the United States. Retrieved from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm

the national average of 27.0% in 2016.¹¹⁶ The percentage of adults aged 50-75 who received up-to-date colorectal cancer screening ranged from 68.5% to 70.5% during the period. That is about 2 to 3 percentage points higher than the national average (66.2% and 63.7% in 2014 and 2016, respectively),¹¹⁷ although it did not yet meet the Prevention Agenda target of 71.4%.

Exhibit 4.26. Statewide annual trends in cigarette smoking and premature deaths from MY0 to MY3



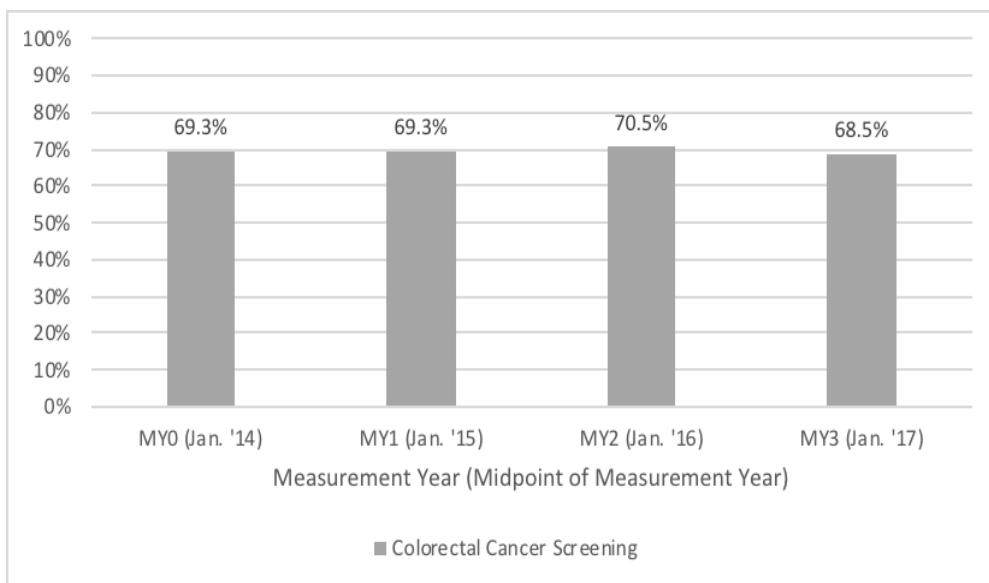
Source: Authors' analysis of the population health data available in the DSRIIP Dataset.

Notes: Cigarette smoking is measured as the percentage of people aged 18 or older who report currently smoking cigarettes. Premature death is measured as the percentage of deaths that occurred among individuals aged 64 years and younger. The coverage is the NYS general population and not limited to Medicaid members.

¹¹⁶ This was calculated by the NYS DOH Public Health Information Group using CDC Wonder queries for the total count of deaths among individuals aged 0-64 (<https://wonder.cdc.gov/controller/saved/D76/D49F996>) and the total counts of deaths among all age groups (<https://wonder.cdc.gov/controller/saved/D76/D49F997>).

¹¹⁷ Centers for Disease Control and Prevention. (n.d.). Quick facts. Colorectal cancer screening in U.S. Behavioral Risk Factor Surveillance System – 2016. Retrieved from <https://www.cdc.gov/cancer/colorectal/pdf/QuickFacts-BRFSS-2016-CRC-Screening-508.pdf>

Exhibit 4.27. Statewide annual trends in colorectal cancer screening from MY0 to MY3



Source: Authors' analysis of the population health data available in the DSRIP Dataset.

Notes: Colorectal cancer screening is measured as the percentage of adults aged 50-75 years who received a colorectal cancer screening based on the most recent guidelines. The coverage is the NYS general population and not limited to Medicaid members.

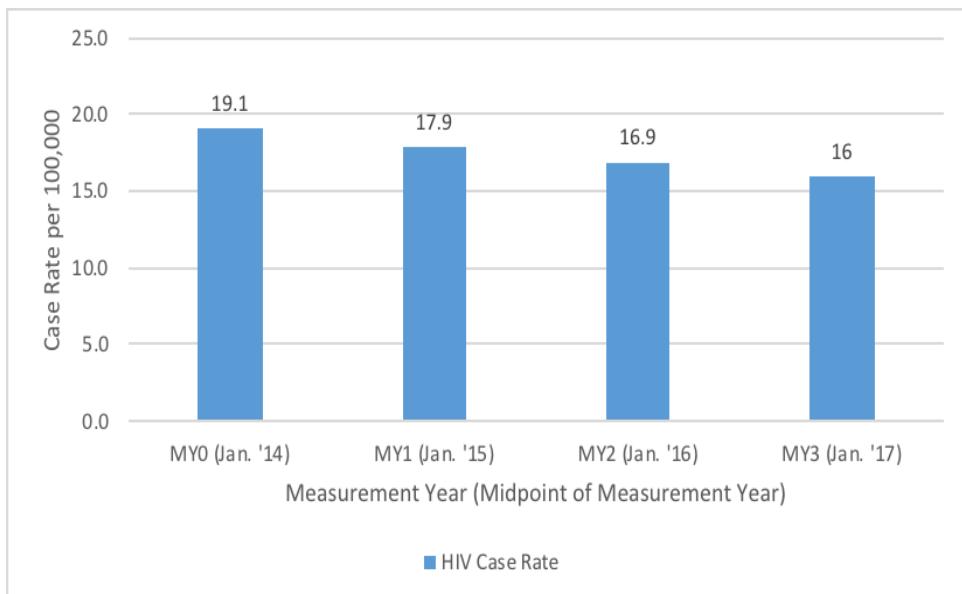
4.4.3. Statewide Trends in HIV Population Health Outcomes

Exhibit 4.28 displays annual trends in the rate of newly diagnosed HIV cases per 100,000. The diagnosis rate declined steadily throughout the period, from 19.1 per 100,000 in MY0 to 16.0 per 100,000 in MY3. This meets the statewide Prevention Agenda target of 16.1 new diagnoses per 100,000.¹¹⁸ Despite New York's improvements in diagnosis rates, its rate is still above the national average.¹¹⁹ Some caution is warranted in comparing rates across states; as an infectious disease, rates are higher in large urban areas such as New York City compared to rural regions and New York was an early epicenter.

¹¹⁸ The Prevention Agenda target was updated as a result of a change in the indicator baseline and trend; the value here reflects the updated target.

¹¹⁹ Centers for Disease Control and Prevention. (2017). HIV surveillance report, 2017; vol. 29, Table 26. Retrieved from <https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2017-vol-29.pdf>

Exhibit 4.28. Statewide annual trends in HIV population health outcomes from MY0 to MY3



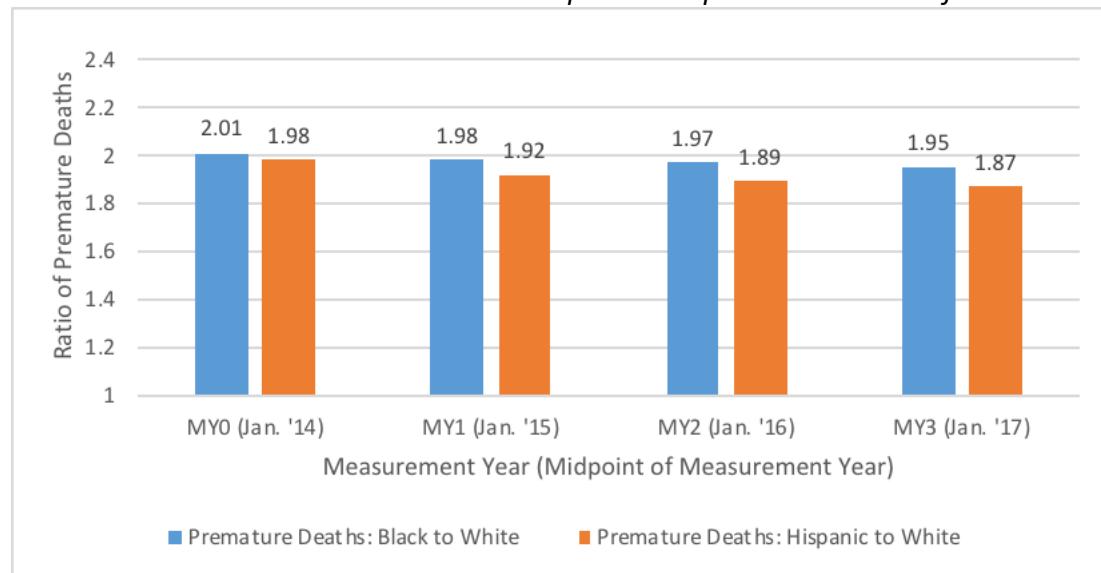
Source: Authors' analysis of the population health data available in the DSRIIP Dataset.

Notes: The HIV case rate is measured as new diagnoses per 100,000. The coverage is the NYS general population and not limited to Medicaid members.

4.4.4. Statewide Trends in Population Health Disparities

Exhibit 4.29 displays annual trends in disparities in premature deaths, measured as the ratio of the percentage of deaths among individuals aged 64 years and younger between black non-Hispanic versus white non-Hispanic persons (blue line), and the ratio between Hispanic versus white non-Hispanic persons (orange line). A ratio of one would indicate no disparities. Both disparities declined during the period, although the decline was more notable for Hispanics. The ratio for black non-Hispanics declined from 2.01 in MY0 to 1.95 in MY3, which did not yet meet the Prevention Agenda target of 1.87. The ratio for Hispanics declined from 1.98 in MY0 to 1.87 in MY3, which approached but did not yet exceed the Prevention Agenda target of 1.86.

Exhibit 4.29. Statewide annual trends in disparities in premature deaths from MY0 to MY3



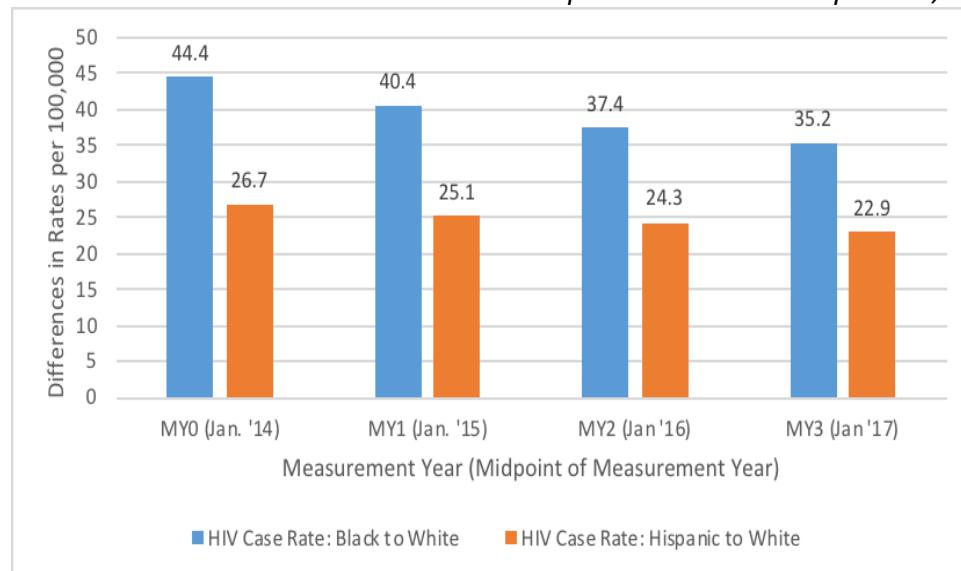
Source: Authors' analysis of the population health data available in the DSRIP Dataset.

Notes: Premature death is measured as the percentage of deaths that occurred among individuals aged 64 years and younger. Disparities are measured as the ratio of premature deaths between groups, with 1.0 representing no differences by race/ethnicity. The coverage is the NYS general population and not limited to Medicaid members.

Exhibit 4.30 displays annual trends in disparities in the rate of HIV cases per 100,000 between black non-Hispanic versus white non-Hispanic persons (blue line), and between Hispanic versus white non-Hispanic persons (orange line). The values represent the absolute differences in the case rates between populations, with a value of zero indicating no disparities. Both disparities declined during the period. The decline was more notable for black non-Hispanics, although the magnitude of that disparity started at a higher level so there was more room for improvement. The rate difference for black non-Hispanics declined from 44.4 per 100,000 in MY0 to 35.2 per 100,000 in MY3, which surpasses the statewide Prevention Agenda target of 46.8 per 100,000. The rate difference for Hispanics declined from 26.7 per 100,000 to 22.9 per 100,000, which surpasses the statewide Prevention Agenda target of 26.6 per 100,000.¹²⁰

¹²⁰ The Prevention Agenda target was updated as a result of a change in the indicator baseline and trend; the values here reflect the updated targets.

Exhibit 4.30. Statewide annual trends in disparities in HIV cases per 100,000 from MY0 to MY3



Source: Authors' analysis of the population health data available in the DSRIP Dataset.

Notes: The HIV case rate is measured as new diagnoses per 100,000. Disparities are measured by subtracting each group's absolute value of case rates per 100,000, with 0.0 representing no differences by race/ethnicity. The coverage is the NYS general population and not limited to Medicaid members.

4.5. Assessment of Changes in Behavioral Health Care Utilization

This section addresses RQ-D:

Did utilization of behavioral health care services increase as a result of the DSRIP program? (CMS RQ4)

Summary At-A-Glance

The Interim Report focused on two substance use treatment measures and two mental health treatment measures: (1) initiation of alcohol and other drug dependence treatment among persons aged 13 and older, (2) engagement in alcohol and other drug dependence treatment among persons aged 13 and older, (3) adherence to antipsychotics among adults aged 19 to 64 with schizophrenia, and (4) follow-up within 30 days of hospitalization for mental illness. The analysis included all PPS, as each was required to select a behavioral health project. Preliminary results revealed an initial worsening of these measures following the initiation of the DSRIP program, but thereafter their trends were higher than those in the pre-DSRIP period allowing their levels to return towards their pre-DSRIP levels. The initial declines for most measures were less pronounced in PPS located in the rest of state (ROS) compared to those in NYC, although the differences between ROS and NYC PPS lessened in the post-DSRIP initiation period. For the initiation of treatment for alcohol and other drug dependence, a similar pattern emerged by size, with large PPS having a more pronounced initial worsening compared to post-DSRIP

initiation changes among small PPS. However, the differences between large and small PPS attenuated in the following years.

At the statewide level, at baseline 49.9% and 21.4% of persons with new episodes of alcohol or other drug dependence initiated and engaged in treatment, respectively. Immediately following DSRIP initiation, there was a slight but only marginally significant decline in the level of initiation in treatment and a statistically significant 1.2 percentage-point decline in the level of engagement in treatment. The post-DSRIP initiation trend in initiation of drug treatment was similar to the pre-DSRIP trend, but for engagement in care there was a small and only marginally significant improvement in the post-DSRIP initiation trend compared to the pre-DSRIP period. However, it is important to note that New York is experiencing an opioid epidemic and many PPS had increases in the number of individuals presenting to treatment.

For the two mental health measures examined, at baseline, 61.1% of patients with schizophrenia were adherent to their medication therapy and 59.4% of discharges of mental illness hospitalization had a follow-up visit within 30 days. Immediately following DSRIP implementation, the level of antipsychotic adherence declined by 3.3 percentage points, although thereafter the post-DSRIP initiation trend was higher than the pre-DSRIP trend with medication adherence reverting to its pre-DSRIP baseline level. The 30-day follow-up measure improved throughout the period to 66.8% by the end of MY3, with the largest improvement gains during the end of the study time period.

In the comparative analysis, two of the PPS characteristics examined in the Interim Report were associated with different levels of these measures and different post-DSRIP initiation performance changes. The two substance use measures and the antipsychotic adherence measure differed by geography, which is consistent with NYS DOH practice to separate population-level findings by rest of state (ROS) versus NYC. In addition, the two measures for initiation of alcohol and other drug treatment measure, and 30-day follow-up after mental illness hospitalization, differed by PPS size. The 30-day follow-up measure also differed among PPS that selected the eleventh project (patient activation).

When comparing PPS located in different regions, there were performance improvements in the two substance use measures and the antipsychotic adherence measure following the DSRIP program's initiation in NYC, but among the PPS located in ROS the results varied depending on the measure. For both the initiation of and engagement in alcohol and other drug treatment measures, the PPS located in NYC had worsening pre-DSRIP trends. Immediately following the DSRIP program's initiation, they experienced an initial performance drop but thereafter their post-DSRIP initiation trends improved. For those two measures, the PPS located in ROS had steady levels of performance pre-DSRIP but their trends worsened post-DSRIP initiation. For the adherence to antipsychotics measure, the PPS in NYC and ROS both experienced improvements in the post-DSRIP initiation period, with the NYC PPS having a larger improvement.

PPS size was associated with post-DSRIP initiation performance changes in the initiation of alcohol and other drug treatment. Large PPS had an initial drop in performance on this measure after the DSRIP program's initiation, but thereafter their post-DSRIP initiation trends were

similar to their pre-DSRIP trends. Small PPS exhibited a slight decline immediately following DSRIP initiation and thereafter a steeper rate of decline (worsening trend) following DSRIP initiation.

Eligibility for and selection of the eleventh project (patient activation) was associated with different post-DSRIP initiation trends for the mental illness hospitalization 30-day follow-up measure. The PPS that did not select the eleventh project had larger post-DSRIP initiation performance gains, compared to the PPS that did select this project.

There are several important cautions for interpreting these findings, which will be explored in more detail for the final summative report. First, the Interim Report only considered four PPS characteristics. Additional factors and functional forms for the variables representing PPS characteristics and time trends will be considered in the final summative report. For example, it is not uncommon to see initial drops in performance when implementing a new program followed by improvements. There is a limited study time period, so the Interim Report only examines early changes; these trends will evolve over time and thus findings in the final summative report may differ. While it is interesting that the initial post-DSRIP initiation performances differed according to size and geography, there is high volatility in the measures that needs to be explored in more detail in the final summative report. Finally, findings need to be interpreted within the larger context of New York's opioid epidemic and a concerted opioid overdose prevention response from multiple state agencies which includes: programs to improve linkage to and retention care; the provision of harm reduction services for persons who use drugs; a comprehensive set of naloxone training and distribution programs for law enforcement officers and other first responders, community laypersons, and people who use drugs. These changes influence the number of individuals presenting to care with an index case (denominator change) and the number of available drug treatment slots, and the initiation of and engagement in alcohol and other drug treatment measures used in this Interim Report do not allow for a more refined understanding of improvements over time. These considerations will be explored in more detail in the final summative report.

4.5.1. Statewide Trends in Behavioral Health Care Utilization

Exhibits 4.31, 4.32, 4.33, and 4.34 illustrate the monthly statewide trends in the *Initiation of Alcohol and Other Drug Dependence Treatment (1 Visit within 14 Days)*, *Engagement of Alcohol and Other Drug Dependence Treatment (Initiation and 2 Visits within 44 Days)*, *Adherence to Antipsychotic Medications for People with Schizophrenia*, and *Follow Up within 30 days after Hospitalization for Mental Illness*. Each measure is expressed in percentages at the statewide level. The Y-axis scales of these graphs do not cover the entire range of 0% to 100%, to make it easier to visualize patterns and the changes being assessed with the regression analyses.

The first two measures (initiation of and engagement in treatment for alcohol and other drugs) relate to substance use, and their denominator is the number of persons aged 13 and older presenting to care with a new episode of alcohol or other drug dependence. Initiation is

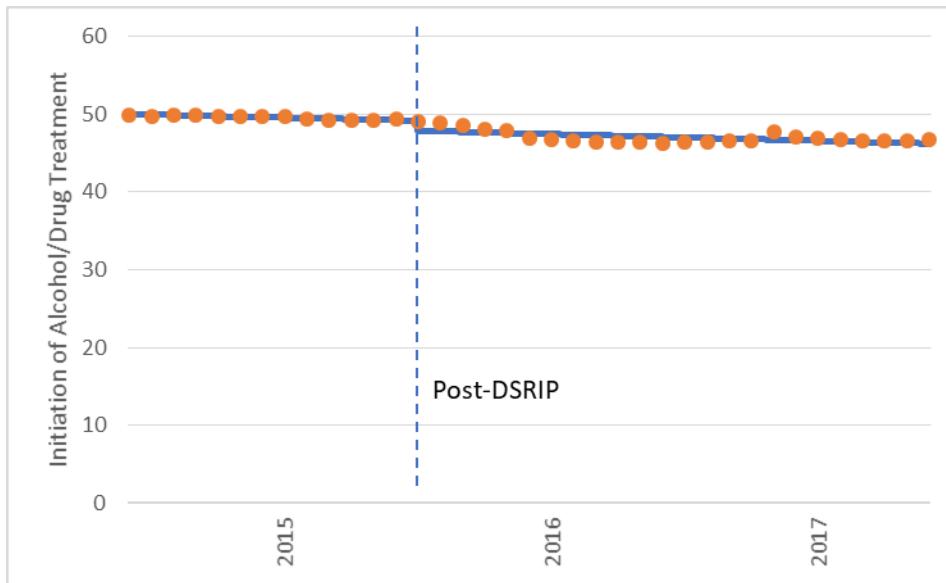
defined as having an inpatient admission, intensive outpatient encounter, or partial hospitalization related to alcohol or other drug dependence within 14 days of the index episode. Engagement is defined as both initiating treatment and having two or more additional services within 30 days of the initial visit. Comparing the two substance use measures, it is expected that the values for initiation of alcohol and other drug treatment dependence will be higher than the values for engagement, as the latter measure requires both initiation and attending multiple follow-up visits.

The third and fourth measures are related to mental health. For the schizophrenia measure, the denominator is the number of persons aged 19 to 64 years with a schizophrenia diagnosis who were provided with antipsychotic medications at least twice during the measurement year. Adherence to medications is defined as remaining on an antipsychotic medication for at least 80% of the treatment period. For the mental illness hospitalization measure, the denominator is the number of discharge events among persons aged 6 and older who were hospitalized for treatment of selected mental health disorders, and the numerator is the number of those discharge events where the patient was seen on an ambulatory basis or in intermediate treatment with a mental health provider within 30 days of discharge. For all four behavioral health measures, a higher value is desirable.

These plots have fitted linear trend lines to illustrate changes in performance at the statewide level during the study period, from the end of MY0 through the end of MY3. The interrupted time series model, described in more detail below, tests whether there is a level and/or slope change in the post-DSRIP initiation period. That corresponds to the study hypotheses and research questions regarding whether these measures improved following the DSRIP program's implementation. To be consistent with the regression specification, these plots have a disjuncture at the start of the post-DSRIP initiation period to illustrate early differences after the initiation of the DSRIP program. The pre- and post-DSRIP initiation periods have separate fitted lines to show whether there are slope changes after the DSRIP program's implementation. The immediate drop following the implementation corresponds with the level change.

Both measures of alcohol and drug dependence treatment show a very small decline in the pre-DSRIP period, although these changes are small in magnitude and not numerically meaningful (see Exhibits 4.31 and 4.32). From the end of MY0 to the end of MY1, these values changed from 49.9% to 49.3% for initiation and from 21.4% to 20.9% for engagement. The higher values for initiation reflect the more stringent requirements to be classified as engaged in care, which comprises both initiating treatment within 14 days of the index episode as well as at least two additional follow-up visits within the subsequent month. Both measures had a small initial drop (level change) immediately following the DSRIP program's initiation. For the initiation measure, after the initial drop the post-DSRIP initiation slope was similar to that of the pre-DSRIP period. For the engagement measure, there was a more perceptible slope change in the post-DSRIP initiation period, with the trend changing from a slight downward trajectory in the pre-DSRIP period to a positive trend in the post-DSRIP initiation period.

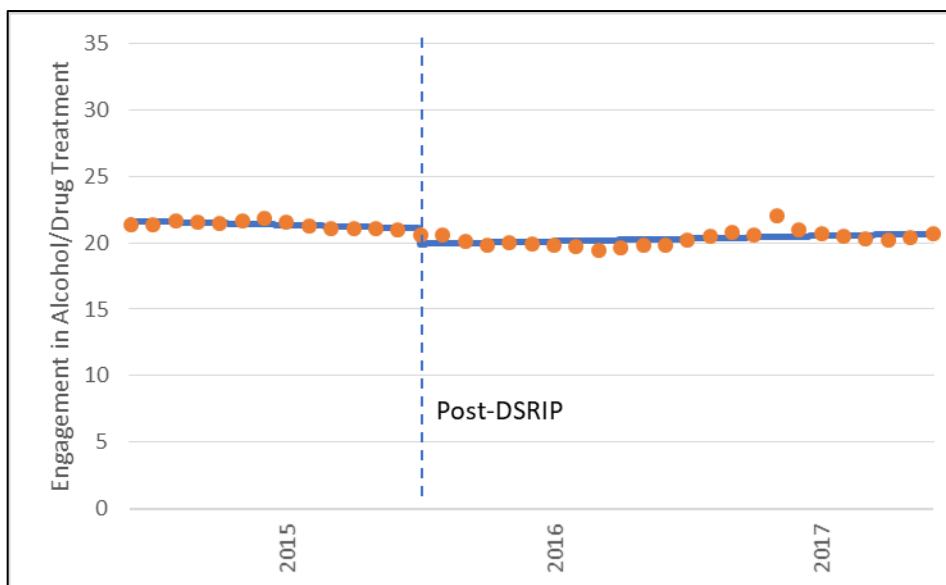
Exhibit 4.31. Monthly changes in the initiation of alcohol and other drug dependence treatment



Source: Authors' analysis of the DSRIP Dataset.

Notes: Initiation is measured as a percentage of persons aged 13 and older with one visit within 14 days of presenting to care with a new episode of alcohol or other drug dependence. June 2014 through June 2015 (MY0 and MY1) are pre-DSRIP, and July 2015 through July 2017 (MY2 and MY3) are post-DSRIP initiation.

Exhibit 4.32. Monthly changes in engagement in alcohol and other drug dependence treatment

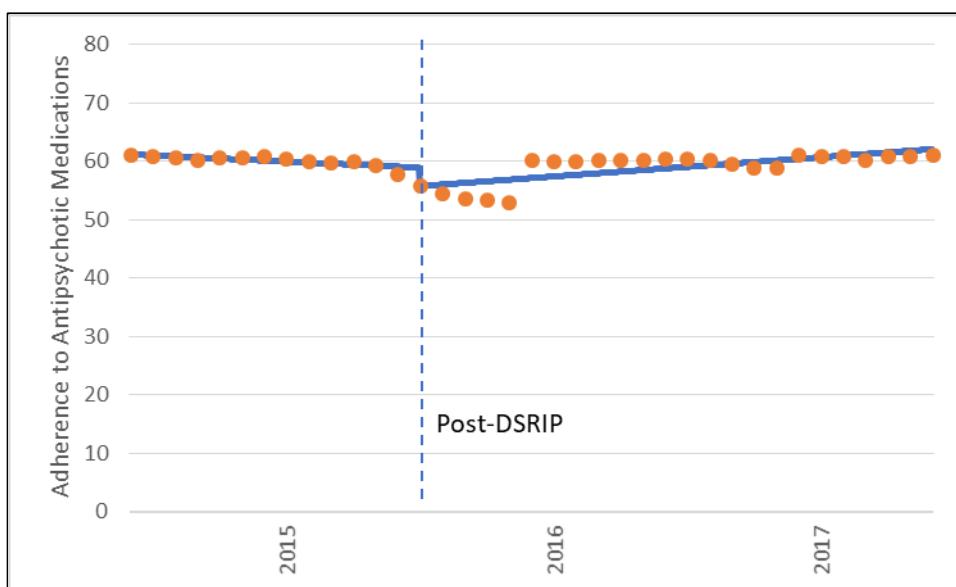


Source: Authors' analysis of the DSRIP Dataset.

Notes: Engagement is measured as a percentage of persons aged 13 and older with a new episode of alcohol or other drug dependence that have an initial treatment visit within 14 days and two additional treatment visits within 30 days of the initial visit. June 2014 through June 2015 (MY0 and MY1) are pre-DSRIP, and July 2015 through July 2017 (MY2 and MY3) are post-DSRIP initiation.

Changes in trends in the pre- and post-DSRIP initiation periods were more striking for the two mental illness indicators (see Exhibits 4.33 and 4.34). For the antipsychotic medications adherence measure, there was a small decline in the pre-DSRIP period. From the end of MY0 to the end of MY1, this value declined from 61.1% to 57.8%. The monthly values showed a steeper rate of decline in the first part of the post-DSRIP initiation period indicating a level change, but thereafter it increased and the post-DSRIP initiation slope was overall positive. For the mental illness 30-day hospitalization follow-up measure, there was a slight improvement in the pre-DSRIP period. From the end of MY0 to the end of MY1, this value increased from 59.4% to 61.2%. The rate of improvement increased in the post-DSRIP initiation period, rising to 66.8% by the end of MY3.

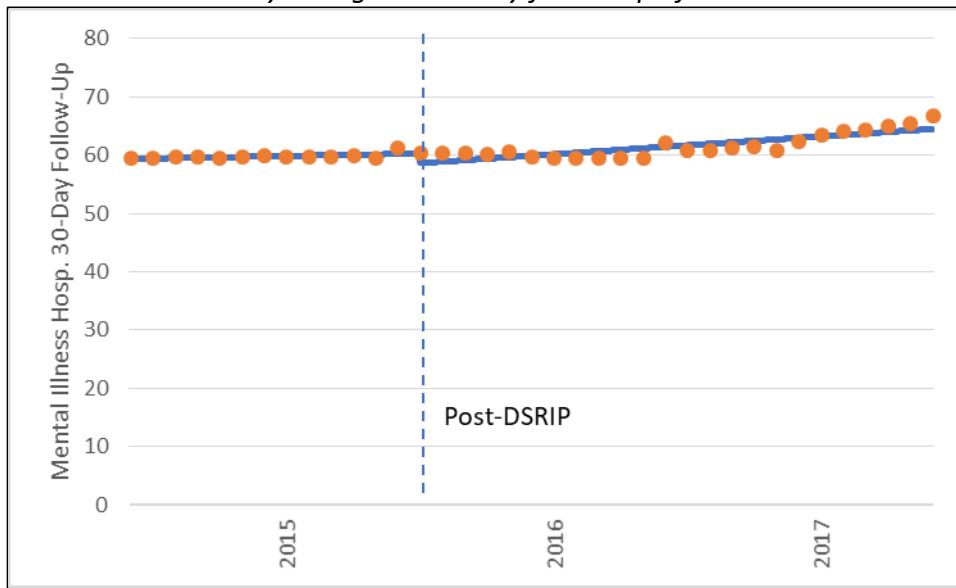
Exhibit 4.33. Monthly changes in adherence to antipsychotic medications for people with schizophrenia



Source: Authors' analysis of the DSRIP Dataset.

Notes: Adherence is defined as the proportion of persons who remained on an antipsychotic medication for at least 80% of their treatment period, among persons aged 19 to 64 years with diagnosed schizophrenia who were dispensed at least two antipsychotic medications during the measurement year. June 2014 through June 2015 (MY0 and MY1) are pre-DSRIP, and July 2015 through July 2017 (MY2 and MY3) are post-DSRIP initiation.

Exhibit 4.34. Monthly changes in 30-day follow-up after mental health hospitalizations



Source: Authors' analysis of the DSRIP Dataset.

Notes: Follow-up is defined as the proportion of discharges of persons aged 6 and older who were seen on an ambulatory basis or who were in intermediate treatment with a mental health provider within 30 days of their discharge for hospitalization related to selected mental health disorders. June 2014 through June 2015 (MY0 and MY1) are pre-DSRIP, and July 2015 through June 2017 (MY2 and MY3) are post-DSRIP initiation.

The statewide interrupted time series (see Exhibit 4.35) quantified the magnitude and statistical significance of post-DSRIP initiation changes in alcohol and drug treatment initiation and engagement, and adherence to antipsychotic medications across the 37-month study period. There are four sets of coefficients because a separate regression model was developed for each outcome measure. For each outcome, the interrupted time series has three main coefficients: (1) a *Trend* that captures the slope in the pre-DSRIP period, (2) a *DSRIP* dummy variable that is coded as 1 in the post-DSRIP initiation period and 0 in the pre-DSRIP period to estimate the level change in the post-DSRIP initiation period, and (3) a *Trend*DSRIP* coefficient that assesses whether the slope changed in the post-DSRIP initiation period. The *Constant* term refers to the baseline level at the start of the study period (last month of MY0). For the coefficients, a p-value of $p<0.01$ is considered strong evidence, $p<0.05$ is considered moderate evidence, and $p<0.1$ is not statistically significant but provides suggestive evidence.

Exhibit 4.35. State-level time series regression model

Variable	Initiation of Drug Treatment <i>b (SE)</i>	Engagement in Drug Treatment <i>b (SE)</i>	Adherence to Antipsychotic Medications <i>b (SE)</i>	Mental Illness Hospitalization 30-Day Follow-up <i>b (SE)</i>
Trend	-0.063 (0.042)	-0.045 (0.033)	-0.174 (0.118)	0.068 (0.075)
DSRIP	-1.183**	-2.254***	-9.413***	-4.241***

	(0.551)	(0.432)	(1.553)	(0.993)
Trend*DSRIP	-0.009 (0.045)	0.0783** (0.035)	0.448*** (0.127)	0.187** (0.081)
Constant	50.059*** (0.332)	21.684*** (0.261)	61.357*** (0.936)	59.287*** (0.598)
Observations	37	37	37	37
Adjusted R ²	0.8423	0.6098	0.5146	0.7268

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01

For the initiation of drug treatment measure, the regression model results indicate that the levels and trends were similar in the pre- and post-initiation periods, and that this performance measure remained steady throughout the study time period. The *Trend* coefficient ($b = -0.063$) was negative but not statistically significant. That is consistent with the visual plot (see Exhibit 4.31), which indicated a very small but not numerically meaningful decline in the pre-DSRIP period. The *DSRIP* coefficient ($b = -1.183$) was negative and statistically significant at the level of $p < 0.05$, although the *Trend*DSRIP* interaction term coefficient ($b = -0.009$) was not statistically significant. This indicates a slight level change following DSRIP initiation but no slope change that would lead to worsening trends.

For the engagement in drug treatment measure, the regression model findings indicate a statistically significant reduction (level change) in the post-DSRIP initiation period and a significant increase in the post-DSRIP initiation trend (slope change) compared to the baseline pre-DSRIP trend. This can be interpreted as suggestive evidence that although there was an initial drop-off in this measure immediately following the DSRIP program's initiation, engagement may be improving in the post-DSRIP initiation period. The *Trend* coefficient ($b = -0.045$) was negative but not statistically significant. That is consistent with the visual plot (see Exhibit 4.32), which indicated a small but not numerically meaningful decline in the pre-DSRIP period. After the initiation of the DSRIP program, there was a level change and the percentage of cases that were engaged declined by 1.2 percentage points.¹²¹ The *Trend*DSRIP* interaction term ($b = 0.0783$), which quantifies the slope change in the post-DSRIP initiation period, was positive and statistically significant at the $p < 0.05$ level. This can be interpreted as evidence for a potentially small improvement in the post-DSRIP initiation trend.

An appropriate interpretation of the trends in the initiation of and engagement in alcohol and drug treatment requires understanding the broader context of trends in substance abuse in New York. The limited improvement in the two substance abuse measures examined here likely reflect an increase in the denominator of people presenting to care, rather than reduced or stable performance in meeting care needs. Similar to other states, New York is experiencing an epidemic in opioid addiction and overdose. From 2012 to 2014, the number of emergency department visits involving any drug overdose increased from 20,676 per 100,000 to 22,317 per

¹²¹ The immediate post-DSRIP initiation change is calculated using the predicted values from the equation using $t=13$ and $DSRIP=0$ for the last month of MY1, and $t=14$ and $DSRIP=1$ for the first month of MY2.

100,000.¹²² Diverse state agencies have implemented various programs to improve outreach to individuals with addictions and link them to care, including but not limited to naloxone trainings and distribution, drug user health hubs, mandatory education for health care providers on appropriate prescribing of controlled substances, comprehensive prevention programming in schools, promoting public awareness, enacting the 911 Good Samaritan Law to allow the public to call 911 without fear of arrest if they experience or witness a drug or alcohol overdose, pilot programs for new points of access for buprenorphine prescribing, streamlining processes to enroll clients in state-run drug treatment centers, and changing insurance regulations to improve access to drug treatment. The opioid epidemic and its coordinated statewide response has thus led to an increase in the number of index cases presenting to alcohol and drug treatment.

For the adherence to antipsychotic medications measure, the regression model findings indicate a statistically significant reduction (level change) in the post-DSRIP initiation period and a statistically significant increase in the post-DSRIP initiation trend (slope change) compared to the baseline pre-DSRIP trend. This provides early evidence that although there was an initial drop-off in this measure immediately following the DSRIP program's initiation, this outcome subsequently improved in the post-DSRIP initiation period. The *Trend* coefficient ($b = -0.174$) was negative but not statistically significant, indicating a small but insignificant decline in the pre-DSRIP period. After the initiation of the DSRIP program, there was a level change and the level of adherence declined by 3.3 percentage points.¹²³ The *Trend*DSRIP* interaction term ($b = 0.448$), which quantifies the slope change in the post-DSRIP initiation period, was positive and statistically significant at the $p < 0.01$ level. This provides evidence that the post-DSRIP initiation trend improved, which is consistent with Exhibit 4.33 which showed different slopes in the pre- and post-DSRIP initiation periods.

For the 30-day follow up after mental illness hospitalization measure, the regression findings indicate a statistically significant reduction (level change) in the post-DSRIP initiation period and a statistically significant increase ($p < 0.05$ level) signaling in the post-DSRIP trend. These regression findings suggest that post-DSRIP initiation improvements may be modest. However, when looking at the original monthly values (Exhibit 4.34), there is some fluctuation during the first 12 months following DSRIP initiation and thereafter in MY3 there is visually a notable uptick and positive trajectory. This improvement will be explored in more detail in the final summative report, when more data are available for detailed analysis including using additional functional forms for the time trend.

¹²² New York State Department of Health. (November 2017). Outpatient emergency department visits involving any drug overdose, rate per 100,000 population. Retrieved from <https://www.health.ny.gov/statistics/opioid/data/e1.htm>

¹²³ The immediate post-DSRIP initiation change is calculated using the predicted values from the equation using $t=13$ and $DSRIP=0$ for the last month of MY1, and $t=14$ and $DSRIP=1$ for the first month of MY2.

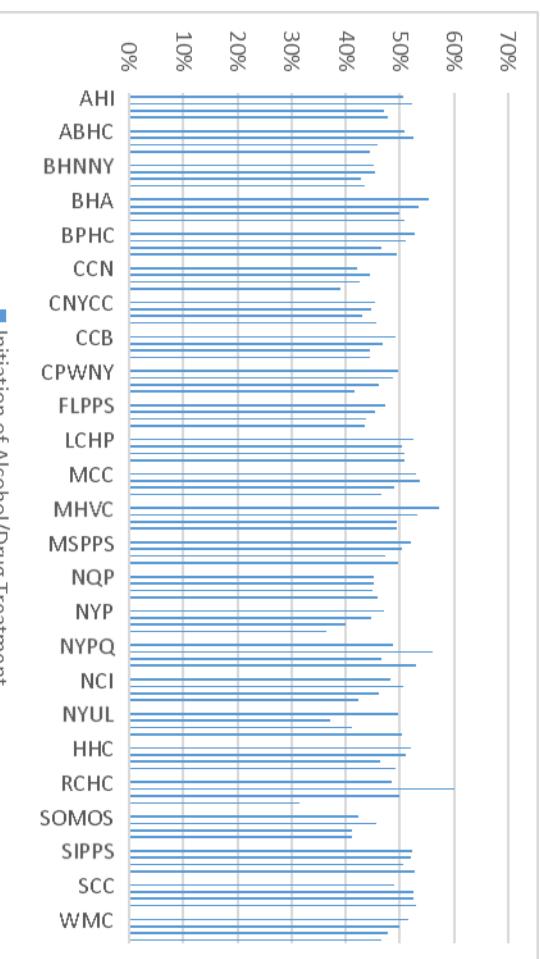
4.5.2. Comparative Analysis of Behavioral Health Care Utilization among Performing Provider Systems

The following exhibits display the three measures in MY0, MY1, MY2, and MY3, by PPS. Each PPS has one bar per MY. Although monthly data are available, these graphs only present the last observation in each MY for ease of interpretation. The performance outcomes in the DSRIP Dataset are 12-month rolling averages, so the last value of the MY captures the prior year's average performance.

Across PPS, there was variability in the initiation of alcohol and other drug dependence treatment measure (MY0: from 42.1% to 57.3%, MY1: from 37.1% to 60.1%, MY2: from 40.0% to 52.5% in MY2, MY3: from 31.5% to 52.9%). (see Exhibit 4.36) There were also variations in trends over time; for example, Central New York Care Collaborative (CNYCC) and Staten Island PPS (SIPPS) had steady levels across years, Adirondack Health Institute (AHI) and New York-Presbyterian Queens (NYPQ) had sudden drops in MY2, with New York-Presbyterian Queens (NYPQ) showing notable improvement from 48.82% in MY0 to 52.94% in MY3 despite the drop in MY2. Refuah Community Health Collaborative (RCHC) and New York-Presbyterian PPS (NYP) showed declining performance on the measure from MY0 to MY3 (-16.9 and -10.5 percentage point declines, respectively).

There was also variability in the engagement in drug treatment measure (MY0: from 14.5% to 30.5%, MY1: from 12.7% to 30.7%, MY2: from 13.1% to 29.8%, MY3: from 13.3% to 30.0%). (see Exhibit 4.37) Compared to the initiation of alcohol and other drug dependence treatment measure, the overall values are lower and the differences in values across PPS were narrower for the engagement in drug treatment measure. Similar to the initiation measure, Central New York Care Collaborative (CNYCC) had steady levels across years. Several PPS, including Bronx Health Access (BHA) and North Country Initiative (NCI), showed decreases in performance on the engagement in drug treatment measure from MY0 to MY2. Staten Island PPS (SIPPS) and Suffolk Care Collaborative (SCC) exhibited increases in their performances on the engagement in drug treatment measure from MY0 to MY3.

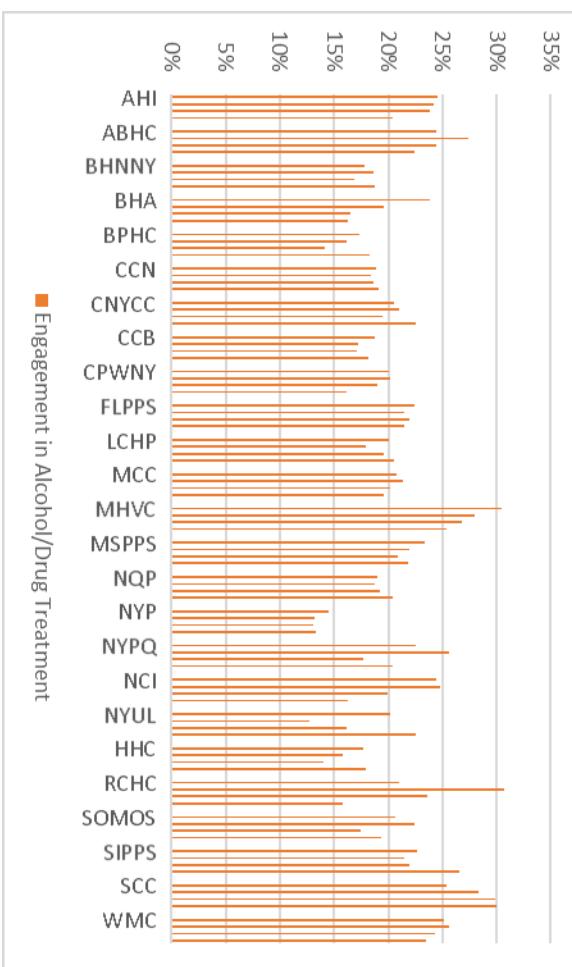
Exhibit 4.36. Annual changes in the initiation of alcohol and other drug dependence treatment from MY0 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset.

Notes: Initiation is measured as a percentage of persons aged 13 and older with one visit within 14 days of presenting to care with a new episode of alcohol or other drug dependence. Each PPS has four bars, one per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position, followed to the right by MY1, MY2, and MY3.

Exhibit 4.37. Annual changes in engagement in alcohol and other drug dependence treatment from MY0 to MY3, by PPS

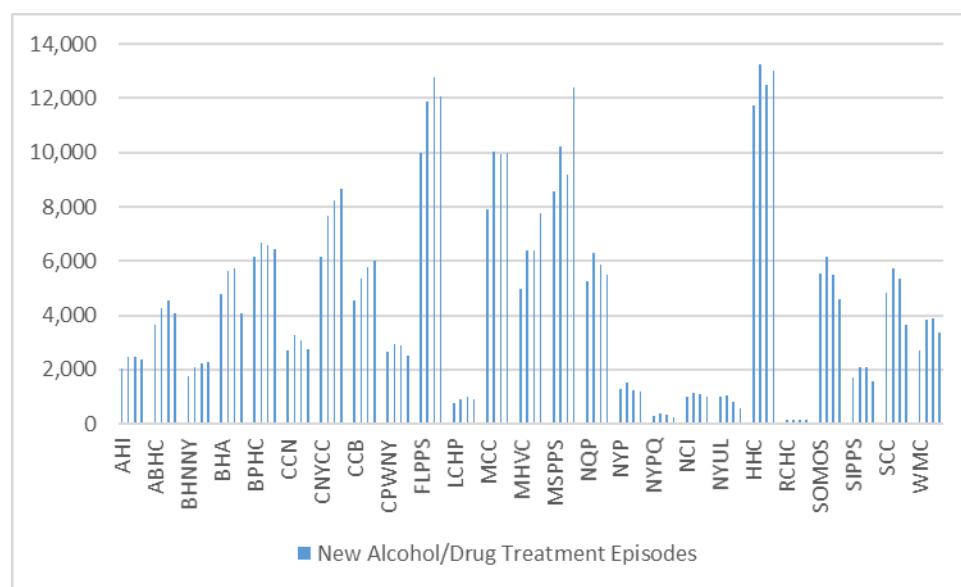


Source: Authors' analysis of the DSRIP Dataset.

Notes: Engagement is measured as a percentage of persons aged 13 and older with a new episode of alcohol or other drug dependence that have an initiation of treatment within 14 days and two visits within 30 days of the initiation visit. Each PPS has four bars, one per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position followed to the right by MY1, MY2, and MY3.

Consistent with the previously described underlying context of rising opioid dependency and state programs to increase initiation of treatment, several PPS had notable increases in the number of index cases (see Exhibit 4.38). For example, Central New York Care Collaborative (CNYCC), Community Care of Brooklyn (CCB), and Mount Sinai PPS (MSPPS) had notable increases in the number of episode cases over time. At the same time, their performance on the initiation in alcohol and other drug treatment measure declined slightly during the study time period. Their performance declines are likely attributable to the increase in the number of individuals presenting to care for alcohol and other drug dependencies.

Exhibit 4.38. Annual changes in the number of new episodes of alcohol or other drug dependence from MY0 to MY3, by PPS



Source: Authors' analysis of the DSRI Dataset.

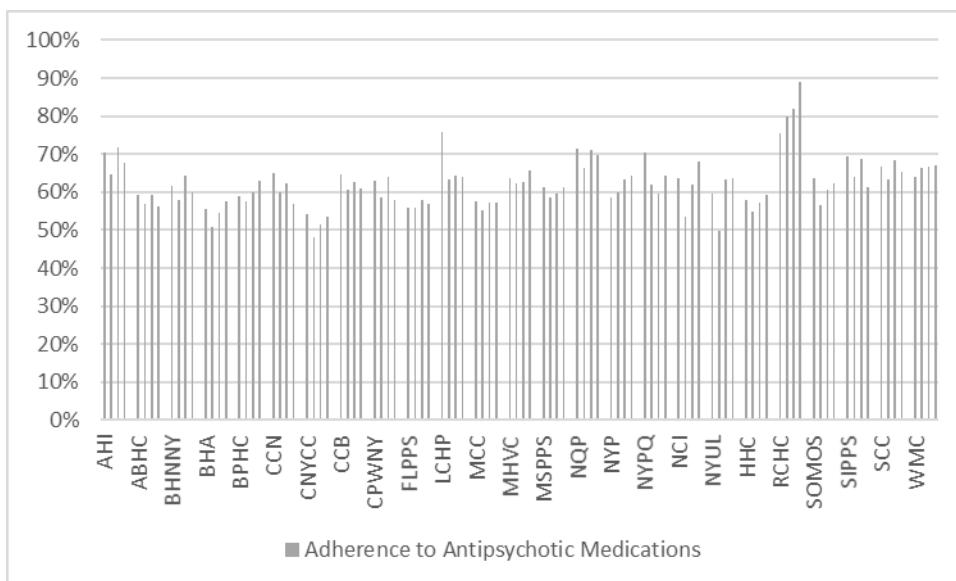
Notes: This chart reflects the changes in the volume of the denominator for the initiation of and engagement in care measures. Each PPS has one bar per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 is the left-most bar position followed to the right by MY1, MY2 and MY3 in the right-most position.

There was substantial variability in adherence to antipsychotic medications for people with schizophrenia measure across PPS (MY0: from 54.3% to 75.8%, MY1: from 48.2% to 79.8%, MY2: from 51.6% to 82.1%, MY3: from 53.6% to 88.9%). (See Exhibit 4.39.) There were also variations in trends over time; for example, Central New York Care Collaborative (CNYCC) and Millennium Collaborative Care (MCC) had steady levels across years, New York-Presbyterian Queens (NYPQ) and Leatherstocking Collaborative Health Partners (LCHP) exhibited sudden declines between MY0 and MY1. Several PPS experienced stable gains from MY0 to MY3, including Refuah Community Health Collaborative (RCHC) (from 75.42% in MY0 to 88.89% in MY3), Bronx Partners for Health Communities (BPHC), and WMCH (WMC).

Similar to the other behavioral health measures, there was variability in 30-day follow-up for mental health hospitalization across PPS (MY0: from 46.6% to 72.7%, MY1: from 47.3% to 76.1%, MY2: from 51.7% to 76.0%, MY3: from 50.7% to 75.4%). Most PPS (N=22) had

improvements from MY0 to MY3. (see Exhibit 4.40.) Among the PPS that improved, the average improvement was 8.2 percentage points, with improvements ranging from 1.8 percentage points (Finger Lakes PPS (FLPPS)) to 17.5 percentage points (Refuah Community Health Collaborative (RCHC)). Seven PPS had overall improvements from MY0 to MY3 that exceeded 10 percentage points: Bronx Health Access (BHA), Community Care of Brooklyn (CCB), Millennium Collaborative Care (MCC), NewYork-Presbyterian PPS (NYP), NewYork-Presbyterian Queens PPS (NYPQ), Refuah Community Health Collaborative (RCHC), and Suffolk Care Collaborative (SCC). Among the three PPS that did not improve, Alliance for Better Health (ABHC) and Better Health for Northeastern New York (BHNYY) had an initial gain but subsequently declined in the post-DSRIP implementation period, and Care Compass Network (CCN) had an initial decline but improvements in the post-DSRIP implementation period.

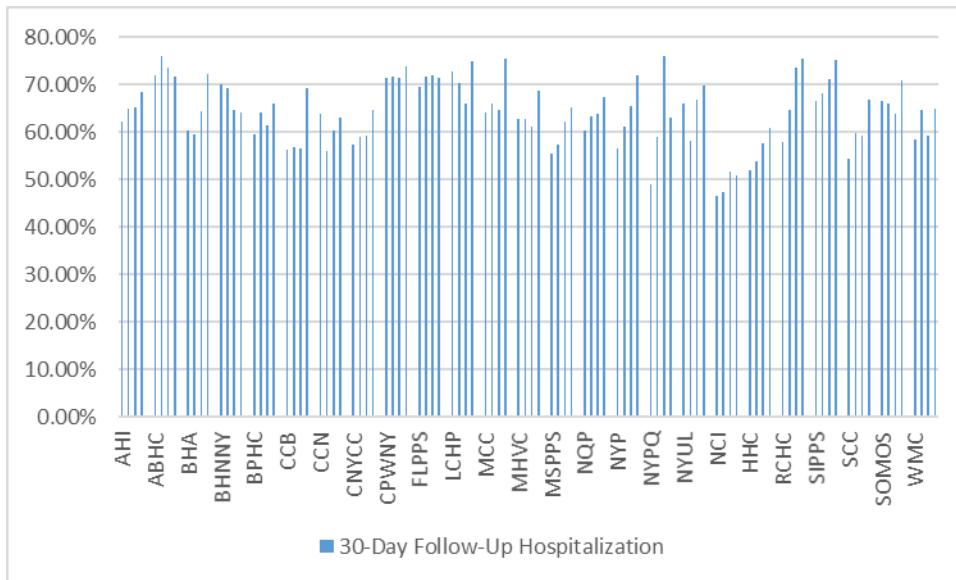
Exhibit 4.39. Annual changes in adherence to antipsychotic medications for people with schizophrenia from MY0 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset.

Notes: Adherence is defined as the proportion of persons who remained on an antipsychotic medication for at least 80% of their treatment period, among persons aged 19 to 64 years with diagnosed schizophrenia who were dispensed at least two antipsychotic medications during the measurement year. Each PPS has four bars, one per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position followed to the right by MY1, MY2, and MY3.

Exhibit 4.40. Annual changes in 30-day follow-up after mental health hospitalization from MY0 to MY3, by PPS.



Source: Authors' analysis of the DSRIP Dataset.

Notes: Follow-up is defined as the proportion of discharges for persons aged 6 and older who were seen on an ambulatory basis or who were in intermediate treatment with a mental health provider within 30 days of their discharge for hospitalization related to selected mental health disorders. Each PPS has four bars, one per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position followed to the right by MY1, MY2, and MY3.

The comparative regression models quantified the magnitude and statistical significance of post-DSRIP initiation changes in alcohol and drug treatment initiation and engagement, and adherence to antipsychotic medications across the 37-month period. Unlike the statewide interrupted time series, these comparative models are at the PPS-level and allow for an assessment of how various PPS characteristics are associated with values of the performance indicators. The four characteristics considered in the Interim Report are: having an attributed member population that is higher or lower than the median PPS value (*Large Size*), having a percentage of attributed members in the behavioral health swim lane that is higher or lower than the median PPS value (*High BH*), geographic location in the rest of state compared to New York City (*ROS*), and being eligible for and selecting the eleventh project (*11th*). Each measure is a dichotomous indicator.

Each outcome has five regression models. Each model contains the same *Trend*, *DSRIP*, *Trend*DSRIP*, and *Constant* coefficients as described in the statewide interrupted time series. The first model, denoted by the (1) heading, contains coefficients for *Large Size*, *High BH*, *ROS*, and *11th* to assess whether PPS with these characteristics had higher or lower levels of the outcome compared to PPS that did not have these features. Model (2) adds triple-interaction terms (*Trend*Large Size*, *DSRIP*Large Size*, and *Trend*DSRIP*Large Size*) to assess whether large PPS had different level and slope changes in the post-DSRIP initiation period, compared to the level and slope changes among small PPS. This tests the hypothesis that PPS with a

particular characteristic had differential improvements in performance. Models (3), (4), and (5) introduce other triple-interaction terms to test for differential level and slope changes in the post-DSRIP initiation periods for PPS with a higher percentage of members in the behavioral health swim lane (*High BH*), location in ROS compared to NYC (*ROS*), and eligibility for and selection of the eleventh project (*11th*), respectively.

For the initiation of alcohol or other drug dependence treatment measure (see Exhibit 4.41), none of the four PPS characteristics examined in this Interim Report had observed differences in the level of this outcome on average across the time period, after adjusting for other PPS characteristics. However, post-DSRIP initiation changes differed among PPS with different sizes and between those located in NYC versus ROS.

In model (1), none of the coefficients for *Large Size*, *High BH*, *ROS*, or *11th* were statistically significant which indicates that on average throughout the study period, PPS with these characteristics did not have an observable difference in their levels compared to PPS without these characteristics. However, model (2) has statistically significant two- and three-way interaction terms, signaling different performance changes by PPS size. To illustrate this difference in more detail, Exhibit 4.42 presents stratified, or “split sample,” regressions to show how the level and slope changes differed between large versus small PPS. In Exhibit 4.42, model (1) is for the full sample, and similar to model (1) in Exhibit 4.41 except that it does not have the *Large Size* coefficient. The other columns show these regressions when they are limited to sub-populations of large PPS and small PPS (models (2) and (3), respectively). Large PPS had an initial drop in their performance on this measure after the initiation of the DSRIP program, but thereafter their post-DSRIP initiation trends were similar to their pre-DSRIP trends. Small PPS had a slight decline immediately following DSRIP initiation and thereafter a steeper rate of decline (worsening of the trend) following DSRIP initiation.¹²⁴

The other significant PPS characteristic in Exhibit 4.41 is for model (4), which assesses differences in post-DSRIP initiation outcomes for PPS in ROS versus NYC. The interpretation of the *ROS* interaction terms is the same as that of the *Large Size* interaction terms. For ease of interpretation, Exhibit 4.43 presents the stratified models, with model (2) limited to the sub-population of PPS in NYC and model (3) limited to the sub-population of PPS in ROS. The PPS located in NYC had a worsening pre-DSRIP trend. Immediately following DSRIP initiation, their performance dropped but thereafter the post-DSRIP initiation trend reversed and improved. The PPS located in ROS had steady levels pre-DSRIP, but their trends worsened post-DSRIP initiation.

¹²⁴ These trends were calculated using the predicted values from the regression equations. The immediate post-DSRIP initiation change is calculated using t=13 and DSRIP=0 for the last month of MY1, and t=14 and DSRIP=1 for the first month of MY2.

Exhibit 4.41. PPS-level comparative analysis regression for initiation of alcohol and other drug dependence treatment

	Initiation of Drug Treatment				
	Basic Model (1)	Size Interaction Terms (2)	Behavioral Health Interaction Terms (3)	Geography Interaction Terms (4)	Eleventh Project Interaction Terms (5)
Time Trend	-0.035 (0.038)	-0.004 (0.053)	0.003 (0.052)	-0.160*** (0.057)	-0.079 (0.057)
DSRIP	0.166 (0.499)	1.674** (0.691)	0.368 (0.692)	-5.221*** (0.753)	-0.596 (0.752)
Large Size	0.247 (0.705)	0.532 (0.853)	-0.300 (0.717)	-0.145 (0.695)	-0.299 (0.720)
High BH	0.369 (0.424)	0.320 (0.423)	2.000*** (0.739)	0.238 (0.406)	0.364 (0.423)
ROS	-0.214 (1.797)	-0.197 (1.797)	-0.281 (1.794)	-1.797 (1.891)	-0.273 (1.801)
11th	-0.153 (1.766)	-0.151 (1.766)	-0.113 (1.763)	-0.123 (1.767)	-1.574 (1.861)
Trend*DSRIP	-0.078* (0.041)	-0.164*** (0.057)	-0.086 (0.056)	0.219*** (0.062)	-0.047 (0.061)
Trend*Large Size		-0.065 (0.077)			
DSRIP*Large Size		-3.141*** (1.005)			
Trend*DSRIP*Large Size		0.179** (0.082)			
Trend*High BH			-0.080 (0.076)		
DSRIP*High BH			-0.411 (1.013)		
Trend*DSRIP*High BH			0.016 (0.082)		
Trend*ROS				0.207*** (0.074)	
DSRIP*ROS				8.980*** (0.977)	
Trend*DSRIP*ROS				-0.494*** (0.080)	
Trend*11th					0.078 (0.077)

DSRIP*11th				1.362 (1.012)
Trend*DSRIP*11th				-0.055 (0.083)
Constant	49.704 *** (1.260)	49.579 *** (1.281)	49.202 *** (1.274)	50.888 *** (1.323)
Observations	925	925	925	925

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01

Exhibit 4.42. PPS-level comparative analysis regression for initiation of alcohol and other drug dependence treatment, comparing large versus small PPS

		Initiation of Drug Treatment		
		Full sample	Large Size	Small Size
		(1)	(2)	(3)
Trend		-0.035 (0.038)	-0.060 * (0.032)	0.003 (0.067)
DSRIP		0.166 (0.499)	-1.313 *** (0.425)	1.803 ** (0.883)
BH		0.369 (0.424)	0.866 ** (0.350)	-0.231 (0.762)
ROS		-0.214 (1.797)	0.777 (2.775)	-1.115 (2.544)
11th		-0.153 (1.766)	-1.721 (2.774)	0.815 (2.449)
Trend*DSRIP		-0.078 * (0.041)	0.005 (0.035)	-0.172 ** (0.072)
Constant		49.704 *** (1.260)	50.313 *** (1.571)	49.981 *** (1.835)
Observations		925	444	481

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. Model (1) is identical to model (1) in Exhibit 4.41 but the *Large Size* coefficient is not displayed here.

Exhibit 4.43. PPS-level comparative analysis regression for initiation of alcohol and other drug dependence treatment, comparing PPS in NYC versus Rest of State

	Initiation of Drug Treatment		
	Full sample	NYC	ROS
	(1)	(2)	(3)
Trend	-0.035 (0.038)	-0.154 *** (0.053)	0.049 (0.049)
DSRIP	0.166 (0.499)	-5.084 *** (0.693)	3.816 *** (0.649)
Large Size	0.247 (0.705)	0.521 (0.944)	-0.450 (0.964)
High BH	0.369 (0.424)	0.914 (0.580)	-0.286 (0.552)
11th	-0.153 (1.766)	3.279 (2.904)	-2.335 (2.065)
Trend*DSRIP	-0.078 * (0.041)	0.212 *** (0.057)	-0.278 *** (0.053)
Constant	49.704 *** (1.260)	49.595 *** (1.492)	51.296 *** (1.926)
Observations	925	370	555

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. Model (1) is identical to model (1) in Exhibit 4.41 but the ROS coefficient is not displayed here.

For the engagement in alcohol or other drug treatment measure (see Exhibit 4.44), the major differences occurred by size and geography, with large PPS and those located in ROS having higher engagement in treatment on average throughout the period. However, after DSRIP initiation, the PPS in ROS had a slight worsening while the PPS in NYC had a notable improvement in their trends.

The interpretation of these models is similar to that of the initiation in treatment models. In Exhibit 4.44, the *Large Size* coefficient ($b= 1.608$, $p<0.01$) is positive and statistically significant in model (1), indicating that PPS with a higher number of members had, on average throughout the study time period, a 1.6 percentage-point higher level compared to those with a smaller number of members. The *ROS* coefficient ($b= 4.405$, $p<0.05$) is positive and statistically significant in model (1), indicating that PPS located in ROS had, on average, a 4.4 percentage-point higher level compared to PPS located in NYC. Model (4) indicates that PPS located in ROS had different pre- and post-DSRIP initiation changes. For ease of interpretation, Exhibit 4.45 shows the stratified models comparing PPS in NYC (model (2)) to PPS in ROS (model (3)). The

PPS in ROS had a steady level of engagement in the pre-DSRIP period but their trends worsened in the post-DSRIP initiation period. In contrast, the PPS in NYC had worsening trends in the pre-DSRIP period. Immediately following DSRIP initiation, they experienced an initial drop in their level of engagement, but thereafter their trends reversed direction and they improved.¹²⁵

Exhibit 4.44. PPS-level comparative analysis regression for engagement in alcohol and other drug dependence treatment

	Engagement in Drug Treatment				
	Basic Model (1)	Size Interaction Terms (2)	Behavioral Health Interaction Terms (3)	Geography Interaction Terms (4)	Eleventh Project Interaction Terms (5)
Time Trend	-0.028 (0.027)	-0.009 (0.038)	-0.005 (0.038)	-0.110*** (0.042)	-0.041 (0.041)
DSRIP	-1.609*** (0.358)	-1.147** (0.495)	-1.978*** (0.497)	-4.935*** (0.545)	-1.521*** (0.543)
Large Size	1.608*** (0.535)	1.471** (0.630)	1.254** (0.545)	1.462*** (0.530)	1.345** (0.549)
High BH	0.159 (0.309)	0.226 (0.308)	1.154** (0.534)	0.133 (0.298)	0.115 (0.309)
ROS	4.405** (1.728)	4.389** (1.734)	4.341** (1.723)	3.613* (1.774)	4.393** (1.719)
11th	-1.329 (1.701)	-1.347 (1.707)	-1.286 (1.696)	-1.318 (1.695)	-1.911 (1.743)
Trend*DSRIP	0.028 (0.029)	-0.020 (0.040)	0.042 (0.040)	0.225*** (0.045)	0.019 (0.044)
Trend*Large Size		-0.040 (0.055)			
DSRIP*Large Size		-0.963 (0.721)			
Trend*DSRIP*Large Size		0.101* (0.059)			
Trend*High BH			-0.049 (0.055)		

¹²⁵ These trends were calculated using the predicted values from the regression equations. The immediate post-DSRIP initiation change is calculated using t=13 and DSRIP=0 for the last month of MY1, and t=14 and DSRIP=1 for the first month of MY2.

DSRIP*High BH		0.777 (0.727)			
Trend*DSRIP*High BH		-0.029 (0.059)			
Trend*ROS			0.137** (0.054)		
DSRIP*ROS				5.545*** (0.708)	
Trend*DSRIP*ROS					-0.327*** (0.058)
Trend*11th					0.023 (0.056)
DSRIP*11th					-0.156 (0.730)
Trend*DSRIP*11th					0.016 (0.060)
Constant	19.301*** (1.180)	19.354*** (1.194)	19.008*** (1.184)	19.852*** (1.214)	19.781*** (1.212)
Observations	925	925	925	925	925

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01

Exhibit 4.45. PPS-level comparative analysis regression for engagement in alcohol and other drug dependence treatment, comparing PPS in NYC versus Rest of State

		Engagement in Drug Treatment		
		Full sample	NYC	ROS
		(1)	(2)	(3)
Trend		-0.028 (0.027)	-0.095** (0.043)	0.035 (0.033)
DSRIP		-1.609*** (0.358)	-4.729*** (0.560)	0.721 (0.438)
Large Size		1.608*** (0.535)	2.900*** (0.788)	0.267 (0.722)
High BH		0.159 (0.309)	0.436 (0.473)	-0.046 (0.382)
11th		-1.329 (1.701)	1.166 (3.050)	-2.770 (2.155)

Trend*DSRIP	0.028 (0.029)	0.208*** (0.046)	-0.112*** (0.036)
Constant	19.301*** (1.180)	18.366*** (1.493)	25.192*** (1.964)
Observations	925	370	555

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. Model (1) is identical to model (1) in Exhibit 4.44 but the *ROS* coefficient is not displayed here.

Similar to the engagement in drug treatment measure, the major changes in adherence to antipsychotics for people with schizophrenia occurred in PPS located in ROS compared to NYC. On average throughout the study period, none of the PPS characteristics were associated with different levels of adherence to antipsychotics after adjusting for other PPS characteristics. When examining differential changes, the PPS in NYC and ROS both experienced improvements in the post-DSRIP initiation period but the PPS in NYC had a larger improvement.

In Exhibit 4.46, none of the PPS characteristics in model (1) are statistically significant, indicating that on average throughout the period, PPS did not differ according to these characteristics. However, model (4) has statistically significant triple-interaction terms, suggesting that PPS located in ROS versus NYC experienced different changes in the post-DSRIP initiation periods. The stratified models are presented in Exhibit 4.47. Both categories of PPS have declining levels of adherence in the pre-DSRIP period with a slightly more rapid decline among NYC PPS (*Trend*; NYC: b= -0.297, p<0.01; ROS: b= -0.144, p<0.05). Both categories of PPS experienced an immediate decline in the post-DSRIP initiation period, but thereafter their trends reversed and their performance improved. While both experienced increases in their levels of adherence to antipsychotic medications in the post-DSRIP initiation period, the performance improvement was higher among NYC PPS (*Trend*DSRIP*; NYC: b= 0.658, p<0.01; ROS: b= 0.370, p<0.01).

Exhibit 4.46. PPS-level comparative analysis regression for adherence to antipsychotic medications for people with schizophrenia

		Adherence to Antipsychotic Medications				
		Basic Model (1)	Size Interaction Terms (2)	Behavioral Health Interaction Terms (3)	Geography Interaction Terms (4)	Eleventh Project Interaction Terms (5)
Time Trend		-0.189*** (0.044)	-0.200*** (0.062)	-0.188*** (0.062)	-0.278*** (0.070)	-0.158** (0.066)
DSRIP		-9.424*** (0.585)	-9.369*** (0.818)	-9.695*** (0.816)	-11.090*** (0.916)	-10.648*** (0.875)
Large Size		0.189 (0.880)	0.271 (1.043)	-0.230 (0.902)	0.506 (0.896)	0.807 (0.897)
High BH		-0.617 (0.505)	-0.680 (0.509)	0.358 (0.878)	-0.383 (0.501)	-0.393 (0.500)
ROS		4.667 (2.983)	4.685 (2.971)	4.610 (2.980)	4.684 (3.121)	4.652 (3.055)
11th		-2.571 (2.938)	-2.560 (2.926)	-2.533 (2.934)	-2.591 (2.991)	-1.269 (3.083)
Trend*DSRIP		0.468*** (0.048)	0.484*** (0.067)	0.503*** (0.066)	0.639*** (0.075)	0.527*** (0.071)
Trend*Large Size			0.025 (0.091)			
DSRIP*Large Size			-0.115 (1.189)			
Trend*DSRIP*Large Size			-0.034 (0.097)			
Trend*High BH				-0.002 (0.090)		
DSRIP*High BH				0.573 (1.195)		
Trend*DSRIP*High BH				-0.073 (0.097)		
Trend*ROS					0.149* (0.091)	
DSRIP*ROS					2.774** (1.190)	

Trend*DSRIP*ROS			-0.285*** (0.097)		
Trend*11th				-0.054 (0.090)	
DSRIP*11th				2.182* (1.178)	
Trend*DSRIP*11th				-0.105 (0.096)	
Constant	62.175*** (2.029)	62.150*** (2.039)	61.923*** (2.040)	61.912*** (2.128)	61.052*** (2.129)
Observations	925	925	925	925	925

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01

Exhibit 4.47. PPS-level comparative analysis regression for adherence to antipsychotic medications for people with schizophrenia, comparing PPS in NYC versus Rest of State

		Adherence to Antipsychotic Medications		
		Full sample	NYC	ROS
		(1)	(2)	(3)
Trend		-0.189*** (0.044)	-0.297*** (0.069)	-0.144** (0.058)
DSRIP		-9.424*** (0.585)	-11.295*** (0.899)	-8.476*** (0.760)
Large Size		0.189 (0.880)	-1.138 (1.145)	2.485* (1.292)
High BH		-0.617 (0.505)	-0.333 (0.741)	-0.507 (0.668)
11th		-2.571 (2.938)	2.205 (2.697)	-6.116 (4.714)
Trend*DSRIP		0.468*** (0.048)	0.658*** (0.074)	0.370*** (0.062)
Constant		62.175*** (2.029)	61.970*** (1.511)	68.736*** (4.267)
Observations		925	370	555

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. Model (1) is identical to model (1) in Exhibit 4.46 but the ROS coefficient is not displayed here.

Consistent with the other behavioral health measures, the major difference in performance on 30-day follow-up after mental illness hospitalization occurred by size. On average throughout the period, large PPS had lower 30-day follow-up. After DSRIP initiation, the PPS that did not select the eleventh project (patient activation) had a faster rate of improvement in the post-DSRIP initiation period compared to the PPS that did select the project.

The interpretation of the models is similar to the other behavioral health measures. In Exhibit 4.48, the *Large Size* coefficient ($b = -2.200$, $p < 0.01$) is negative and statistically significant in model (1), indicating that PPS with a higher number of members had, on average throughout the study time period, a 2.2 percentage-point lower level compared to those with a smaller number of members. The interaction terms in Model (5) indicate that PPS that selected the eleventh project had different post-DSRIP initiation trends. Exhibit 4.49 shows the stratified models comparing PPS that selected the eleventh project (model (2)) to PPS that did not do the eleventh project (model (3)). Comparing the *Trend*DSRIP* interactions between the two groups of PPS, the PPS that did not select the eleventh project had a faster rate of improvement in the post-DSRIP initiation period.

Exhibit 4.48. PPS-level comparative analysis regression for 30-day follow-up after mental health hospitalization

	Mental Illness Hospitalization 30-Day Follow-Up				
	Basic Model (1)	Size Interaction Terms (2)	Behavioral Health Interaction Terms (3)	Geography Interaction Terms (4)	Eleventh Project Interaction Terms (5)
Trend	0.054 (0.042)	0.006 (0.059)	0.061 (0.058)	0.030 (0.064)	0.030 (0.063)
DSRIP	-4.647*** (0.554)	-4.980*** (0.773)	-6.019*** (0.763)	-5.454*** (0.846)	-6.611*** (0.825)
Large Size	-2.200*** (0.830)	-2.483** (0.984)	-2.629*** (0.841)	-1.278 (0.826)	-1.839** (0.841)
High BH	0.473 (0.478)	0.399 (0.480)	1.570* (0.821)	0.847* (0.463)	0.721 (0.471)
ROS	2.597 (2.750)	2.623 (2.748)	2.492 (2.734)	4.216 (2.858)	2.545 (2.761)
11th	-1.733 (2.707)	-1.731 (2.706)	-1.655 (2.692)	-1.801 (2.738)	-1.186 (2.791)

Trend*DSRIP	0.214*** (0.045)	0.275*** (0.063)	0.287*** (0.062)	0.333*** (0.069)	0.337*** (0.067)
DSRIP*Large Size		0.694 (1.124)			
Trend*Large Size		0.100 (0.086)			
Trend*DSRIP*Large Size		-0.127 (0.092)			
DSRIP*High BH			2.876** (1.118)		
Trend*High BH			-0.015 (0.084)		
Trend*DSRIP*High BH			-0.154* (0.091)		
DSRIP*ROS				1.343 (1.098)	
Trend*ROS				0.040 (0.084)	
Trend*DSRIP*ROS				-0.199** (0.090)	
DSRIP*11th					3.506*** (1.111)
Trend*11th					0.043 (0.084)
Trend*DSRIP*11th					-0.221** (0.091)
Constant	61.568*** (1.874)	61.723*** (1.890)	61.267*** (1.875)	60.013*** (1.950)	61.001*** (1.933)
Observations	925	925	925	925	925

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01

Exhibit 4.49. PPS-level comparative analysis regression for 30-day follow-up after mental health hospitalization, comparing PPS that did and did not select the eleventh project

	Mental Illness Hospitalization 30-Day Follow-Up		
	Full Sample	11th Project	No 11th Project
	(1)	(2)	(3)
Trend	0.054 (0.042)	0.082 (0.053)	0.037 (0.068)
DSRIP	-4.647*** (0.554)	-3.022*** (0.690)	-6.588*** (0.894)
Large Size	-2.200*** (0.830)	-2.999*** (1.145)	-1.128 (1.097)
High BH	0.473 (0.478)	0.482 (0.508)	1.198 (0.954)
ROS	2.597 (2.750)	0.971 (5.290)	3.796* (1.975)
Trend*DSRIP	0.214*** (0.045)	0.108* (0.056)	0.333*** (0.073)
Constant	61.568*** (1.874)	61.777*** (4.934)	60.085*** (1.330)
Observations	925	518	407

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. Model (1) is identical to model (1) in Exhibit 4.48 but the ROS coefficient is not displayed here.

4.6. Assessment of Changes in Hospital Utilization

This section addresses RQ-E:

Was avoidable hospital utilization reduced as a result of the DSRIP program? (CMS RQ5)

Summary At-A-Glance

The Interim Report focused on early changes in potentially preventable readmissions (PPR) and two measures of potentially preventable emergency room visits: (1) among the full attributed population (PPV) and (2) among the population diagnosed with a behavioral health condition (PPVBH). Overall, rates of PPR and PPVBH exhibited a significantly steady decline in the pre-DSRIP initiation periods and a significant drop immediately following DSRIP initiation. The pre-DSRIP trend in PPR did not significantly change post-DSRIP initiation, but the post-DSRIP trend for PPVBH reversed and the rate increased. The rate of PPV did not change significantly in either the pre- or post-DSRIP initiation periods. There was substantial variability in performances across PPS for all three hospital utilization measures. The PPS with large size, higher percentages of members with behavioral health needs, and located in NYC had higher rates of PPR for both pre- and post-DSRIP initiation periods. Large PPS had lower rates of PPV and PPVBH for both pre- and post-DSRIP initiation periods. The PPS that were eligible for and selected the eleventh project had higher rates of PPV and PPVBH during the pre- and post-DSRIP period.

At the statewide level, the rate of PPR declined by 3.6% in the pre-DSRIP period from a baseline level of 678.7 readmissions per 100,000 members to 654.0 readmissions per 100,000 at the end of MY1. Following the initiation of the DSRIP program, this level dropped by 39.5 readmissions per 100,000 members and thereafter the post-DSRIP initiation slope was similar to the pre-DSRIP slope. The rate of PPV and PPVBH declined by 0.5% and 2.7% in the pre-DSRIP period from a baseline level of 37.8 and 109.7 visits per 100 members to 37.6 and 106.7 visits per 100 members at the end of MY1, respectively. Following the initiation of the DSRIP program, the rate of PPV remained steady in the post-DSRIP initiation period. However, for PPVBH there was a significant level drop of 1.4 visits per 100 members but thereafter the rate increased to the pre-DSRIP level.

In the comparative analysis, there were substantial differences in the rates of PPR across PPS. Three of the PPS characteristics examined in the Interim Report were associated with different levels of PPR. In the multivariate models, large PPS had on average 44.1 more readmissions per 100,000 members, PPS with a high percentage of members in the behavioral health swim lane had 29.7 more readmissions per 100,000 members, and PPS located in ROS had 350.3 fewer readmissions per 100,000 members compared to PPS in NYC. Size was also associated with differences in post-DSRIP initiation performance changes: following initiation, large PPS had a reduction in their number of readmissions while small PPS had a small increase in their readmissions rate. Thereafter, the large PPS had a post-

DSRIP initiation trend that was similar to the pre-DSRIP trend while small PPS had a steeper decline in potentially preventable readmissions resulting in a convergence back to the pre-DSRIP differences between these categories of PPS.

The comparative analysis also showed substantial differences in the rates of PPV and PPVBH. Two of the PPS characteristics examined were associated with different levels of these measures. In the multivariate models, large PPS had on average 2.1 and 5.6 fewer potentially preventable emergency room visits per 100 members in the full attributed population and the behavioral health population, respectively. The PPS that were eligible for and selected the eleventh project had 12.1 and 28.9 more visits per 100 members in the full attributed and behavioral health population, respectively.

All four PPS characteristics examined in the Interim Report were significantly associated with post-DSRIP initiation trends in PPV rates that differed from pre-DSRIP initiation trends. Compared to their pre-DSRIP initiation trends, post-DSRIP initiation trends significantly decreased for large PPS, and significantly increased for PPS with a high percentage of members in the behavioral health swim lane, PPS located in the ROS, and PPS that selected the 11th project.

Geographic location was associated with differences in post-DSRIP initiation PPVBH performance changes (level change): following DSRIP initiation, PPS in ROS had a greater reduction in their PPVBH rates. Thereafter, the PPS in ROS had a post-initiation trend that significantly increased.

There are several important cautions for interpreting these findings, which will be explored in more detail in the final summative report. First, for the PPV and PPVBH measures, not all monthly data points were available for MY3 at the time of the analysis, resulting in more weight being placed on MY2 and the first half of MY3 for the post-DSRIP initiation period. Additionally, there was a change in the health plan encounter intake system (EIS) that occurred in October 2015 (between MY1 and MY2). This change led to differences in how emergency room encounters were reported. The level drop in PPV rates from MY1 to MY2 may be in part due to this change. The Interim Report only considered four PPS characteristics using simple measures. Additional factors and functional forms will be considered in the final summative report. There is a limited time period, so the Interim Report only examines early changes; these trends will evolve over time and thus findings in the final summative report may differ. The final summative report will also consider alternative specifications of the post-DSRIP initiation trend beyond the linear trends presented in the Interim Report. Finally, these measures had a particularly high amount of variability across PPS, which will continue to be explored in the final summative report.

4.6.1. Statewide Trends in Hospital Utilization

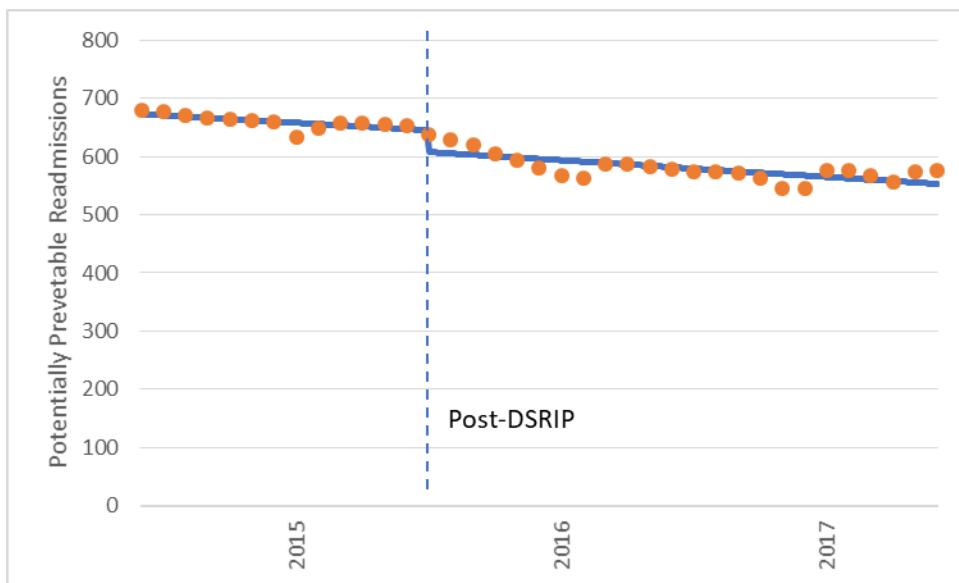
Exhibit 4.50 illustrates the monthly statewide trend in *PPR rates* among attributed members. This measure is expressed as the number of readmissions per 100,000 members, and is calculated using the proprietary “preventables” software algorithm developed by 3M.¹²⁶ The 3M algorithm is a widely-used, prevalidated measure.

These plots have fitted linear trend lines to illustrate changes in performance at the statewide level during the study period, from the end of MY0 through the end of MY3. The interrupted time series model, described in more detail below, tests whether there is a level and/or slope change in the post-DSRIP initiation period. That corresponds to the study hypotheses and research questions regarding whether these measures improved following the DSRIP program’s initiation. To be consistent with the regression specification, these plots have a disjunction at the start of the post-DSRIP initiation period to illustrate early differences after the implementation of the DSRIP program. The pre- and post-DSRIP initiation periods have separate fitted lines to show whether there are slope changes after the DSRIP program’s initiation. The immediate drop following the implementation corresponds with the level change.

The PPR rate follows a decline in the pre-DSRIP period, from a baseline level of 678.7 readmissions per 100,000 members at the end of MY0 to 654.0 readmissions per 100,000 members by the end of MY1 (3.6% reduction). There is an initial level change after the implementation of the DSRIP program, with a rapid drop in the rate of readmissions. Thereafter, the post-DSRIP initiation trend appears to have a similar slope to the pre-DSRIP trend.

¹²⁶ 3M. (nd). 3M solutions for potentially preventable readmissions. Retrieved from https://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-Solutions-for-Potentially-Preventable-Events/?N=5002385+3290603246&rt=rud

Exhibit 4.50. Monthly changes in potentially preventable readmissions



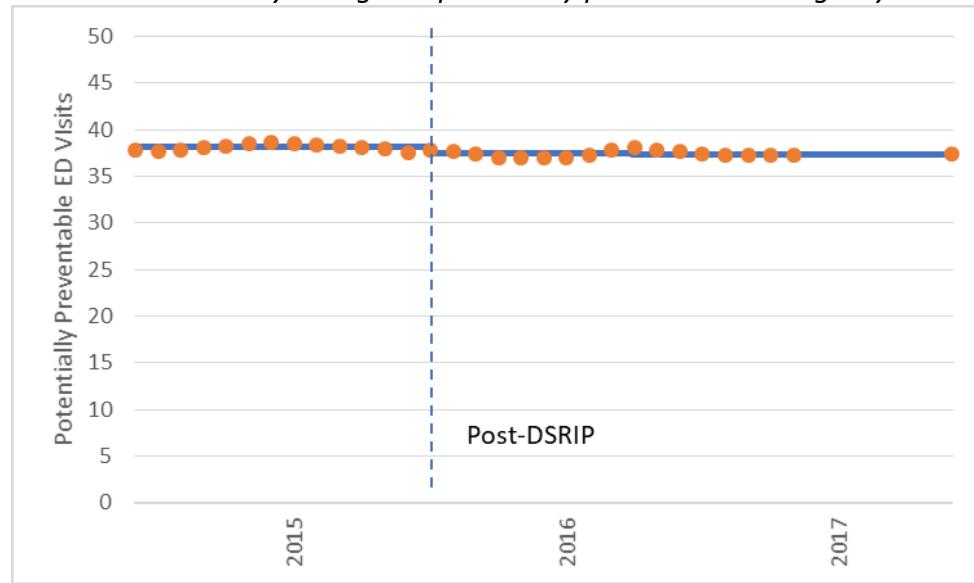
Source: Authors' analysis of the DSRIP Dataset.

Notes: Potentially preventable readmissions is measured per 100,000 members. June 2014 through June 2015 (MY0 and MY1) are pre-DSRIP, and July 2015 through July 2017 (MY2 and MY3) are post-DSRIP initiation.

Exhibits 4.51 and 4.52 illustrate the monthly statewide trend in PPV and PPVBH rates. Similar to the PPR measure, these were calculated using the 3M algorithm.

In the full population of all attributed members (see Exhibit 4.51), the PPV rate remained at a somewhat similar level throughout the period with some oscillations. There was a small decline in the pre-DSRIP period, from a baseline level of 37.8 visits per 100 members at the end of MY0 to 37.6 visits per 100 members by the end of MY1 (0.5% reduction), although in the pre-DSRIP period there was an initial small increase followed by a decline. In the post-DSRIP implementation period, this rate increased to 37.7 per 100 members from the end of MY1 to MY2 (0.2% increase) and then leveled off with 37.3 per 100 members in the end of MY3.

Exhibit 4.51. Monthly changes in potentially preventable emergency room visits, full population



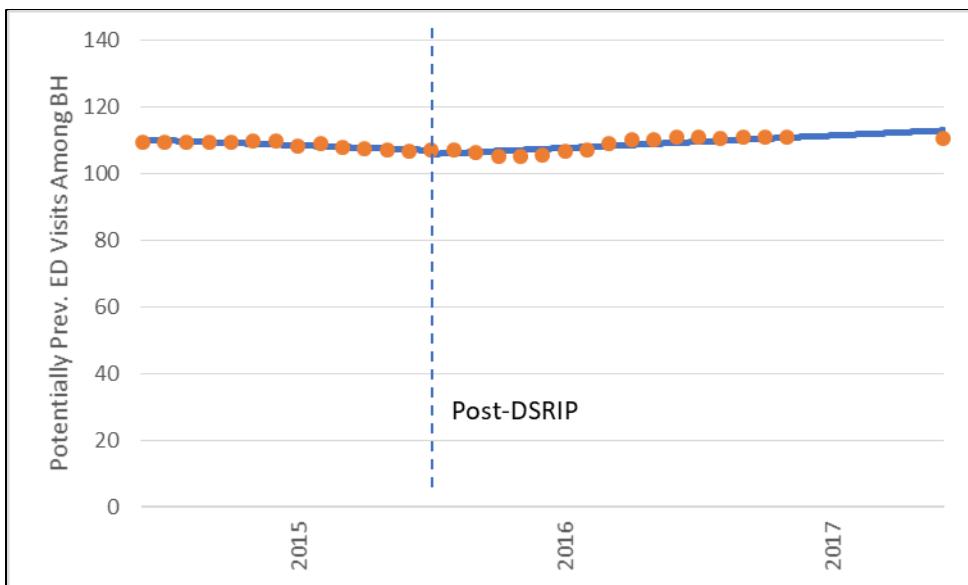
Source: Authors' analysis of the DSRIP Dataset.

Abbreviations: Emergency Department/Room (ED)

Notes: Potentially preventable emergency room visits is measured per 100 members. The pre-DSRIP period includes the last month of MY0 (June 2014) and MY1 (July 2014 through June 2015). The post-DSRIP period includes MY2 (July 2015 through June 2016) and part of MY3, due to data availability for this measure at the time of the analysis. Specifically, MY3 includes the first five months and last month of MY3, corresponding with July 2016 through November 2016 and June 2017.

The PPVBH rate decreased in the pre-DSRIP period, from a baseline level of 109.7 visits per 100 members at the end of MY0 to 106.7 visits per 100 members by the end of MY1 (2.7% decrease) (see Exhibit 4.52). In the post-DSRIP implementation period, this rate increased to 111.0 visits per 100 members from the end of MY1 to MY2 (4.0% increase) and approximately leveled off with 110.6 visit per 100 members at the end of MY3.

Exhibit 4.52. Monthly changes in potentially preventable emergency room visits, behavioral health population



Source: Authors' analysis of the DSRIP Dataset.

Abbreviations: Emergency Department/Room (ED), Behavioral Health (BH)

Notes: Potentially preventable emergency room visits is measured per 100 members. The pre-DSRIP period includes the last month of MY0 (June 2014) and MY1 (July 2014 through June 2015). The post-DSRIP period includes MY2 (July 2015 through June 2016) and part of MY3, due to data availability for this measure at the time of the analysis. Specifically, MY3 includes the first five months and last month of MY3, corresponding with July 2016 through November 2016 and June 2017.

The statewide interrupted time series (see Exhibit 4.53) quantified the magnitude and statistical significance of post-DSRIP initiation changes in rates of PPR, PPV, and PPVBH across the 37-month study period duration.¹²⁷ There is one column per outcome variable. The interrupted time series has three main coefficients: (1) a *Trend* that captures the slope in the pre-DSRIP period, (2) a *DSRIP* dummy variable that is coded as 1 in the post-DSRIP initiation period and 0 in the pre-DSRIP period to estimate the level change in the post-DSRIP initiation period, and (3) a *Trend*DSRIP* coefficient that assesses whether the slope changed in the post-DSRIP initiation period. The *Constant* term refers to the baseline level at the start of the study period (last month of MY0). For the coefficients, a p-value of p<0.01 is considered strong evidence, p<0.05 is considered moderate evidence, and p<0.1 is not statistically significant but provides suggestive evidence.

¹²⁷ For the PPV and PPVBH two potentially preventable emergency room visit measures, there are 31 time points as data for months 6-11 of MY3 were not available at the time of analysis.

Exhibit 4.53. State-level time series regression model for potentially preventable readmissions and emergency room visits

Variable	Potentially Preventable Readmissions b (SE)	Potentially Preventable Emergency Room Visits, Full Population b (SE)	Potentially Preventable Emergency Room Visits, Behavioral Health Population b (SE)
Trend	-2.167** (1.054)	0.004 (0.026)	-0.249*** (0.084)
DSRIP	-34.408** (13.884)	-0.649 (0.390)	-8.931*** (1.261)
Trend*DSRIP	-0.211 (1.134)	-0.006 (0.029)	0.557*** (0.095)
Constant	675.341*** (8.367)	38.075*** (0.206)	110.546*** (0.666)
Observations	37	31	31
Adjusted R2	0.855	0.490	0.635

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. The number of observations for preventable emergency room visits is lower because MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

For the PPR measure, the model indicates that throughout the period there was a steady trend of declining rates of readmissions; post-DSRIP initiation, there was a level change signaling an immediate decline in readmissions rates but there was no evidence that the post-DSRIP initiation trend differed from the pre-DSRIP trend. In the pre-DSRIP period, the rate of readmissions declined by 2.2 readmissions per 100,000 members each month (*Trend*, b= -2.167, p<0.05). After the initiation of the DSRIP program, there was a level change and the rate of readmissions dropped by 39.5 per 100,000 members (p<0.05).¹²⁸ However, in the post-DSRIP initiation period there was no evidence that the trend in readmissions differed from the pre-DSRIP slope (*Trend*DSRIP*, not significant).

For the PPV measure, the model provides no evidence for substantial changes during the period. In the pre-DSRIP initiation period, there was no statistically significant increase or decrease (*Trend*, not significant), and in the post-DSRIP initiation period there was neither an initial level change (*DSRIP*, not significant) nor evidence for a statistically significant slope change (*Trend*DSRIP*, not significant).

For the PPVBH measure, the model indicates that in the pre-DSRIP initiation period potentially preventable emergency room visits were significantly declining by 0.249 visits per 100 members each month (*Trend*, b= -0.249, p<0.01). After the initiation of the DSRIP program, there was a

¹²⁸ The immediate post-DSRIP initiation level changes for the PPR, PPV, and PPVBH measures are calculated using the predicted values from the equation using t=13 and DSRIP=0 for the last month of MY1, and t=14 and DSRIP=1 for the first month of MY2.

significant level change, and the rate of potentially preventable emergency room visits declined by 1.4 visits per 100 members per month. The *Trend*DSRIP* interaction term ($b= 0.557$), which quantifies the slope change in the post-DSRIP initiation period, was positive and statistically significant at the $p<0.01$ level. This suggests there was an initial improvement but then a subsequent increase back to the pre-DSRIP level.

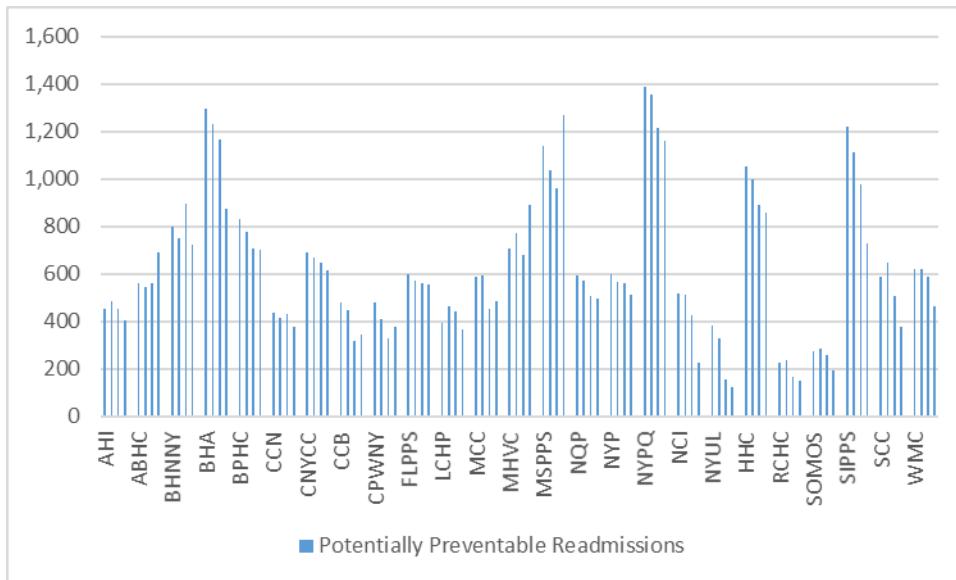
The findings for the PPV and PPVBH visits measures should be interpreted cautiously, as not all monthly data points were available at the time of analysis. The missing data in the second half of MY3 places more weight on MY2 and the first half of MY3. There was a change in the health plan encounter intake system (EIS) that occurred in October 2015 (between MY1 and MY2). This change led to differences in how emergency department encounters were reported. The level drop in potentially preventable emergency room visits from MY1 to MY2 may be in part due to this change. Health plans were specifically directed to change the way they reported emergency department encounter claim lines. The final summative report will contain a more robust analysis when all DSRIP performance data are available.

4.6.2. Comparative Analysis of Hospital Utilization among Performing Provider Systems

Exhibit 4.54 displays the PPR rate in MY0, MY1, M2, and MY3, by PPS. Each PPS has one bar per MY. Although monthly data are available, this graph only presents the last observation in each MY for ease of interpretation. The performance outcomes in the DSRIP Dataset are 12-month rolling averages, so the last value of the MY captures the prior year's average performance.

Across PPS, there was variability in the PPR rate (MY0: from 225.8 to 1,388.9, MY1: from 233.1 to 1353.0, MY2: from 152.9 to 1,217.0, MY3: from 122.8 to 1269.5). There were also variations in trends over time, with Finger Lakes PPS (FLPPS) and Refuah Community Health Collaborative (RCHC) showing stable improvements from MY0 to MY3. The majority of PPS showed substantial decreases in PPR rates, including Bronx Health Access (BHA), Bronx Partners for Healthy Communities (BPHC), Staten Island PPS (SIPPS), WMCHealth (WMC), Central New York Care Collaborative (CNYCC), NYU Langone-Brooklyn (NYUL), and OneCity Health (HHC). Only three PPS experienced increases in the readmission measure from MY0 to MY3: Alliance for Better Health (ABHC), Montefiore Hudson Valley Collaborative (MHVC), and Mount Sinai PPS (MSPPS).

Exhibit 4.54. Annual changes in the rate of potentially preventable readmissions from MY0 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset.

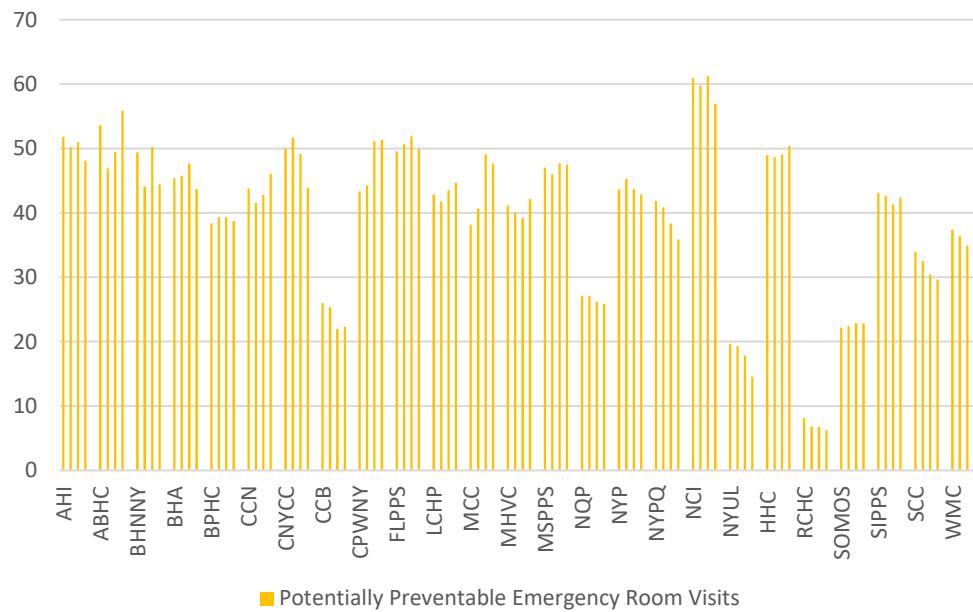
Notes: Potentially preventable readmissions is measured per 100,000 members. Each PPS has four bars, one per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position followed to the right by MY1, MY2, and MY3.

Exhibits 4.55 and 4.56 display the PPV and PPVBH rates in MY0, MY1, MY2, and MY3, by PPS.

Across PPS, there was variability in the PPV rate per 100 members (MY0: 8.1 to 60.9, MY1: 6.8 to 59.8, MY2: 6.8 to 61.3, MY3: 6.2 to 56.9). There were also variations in trends over time, with about one-quarter of PPS showing stable decreases in PPV rates from MY1 to MY3 and about one-quarter of PPS showing increases. Many of the PPS exhibited variations in their trends over time. For example, Better Health for Northeast New York (BHNNY) had higher PPV rates in MY0 and MY2 (49.4 and 50.2) than MY 1 and MY3 (44.1 and 44.4). This variability in performance trends warrants further analysis in the final summative report.

There was also variability in the PPVBH rate per 100 members, across PPS (MY0: 49.5 to 132.7, MY1: 32.6 to 133.0, MY2: 36.7 to 140.0, MY3: 34.4 to 150.2). Compared to PPV rates, the overall values of PPVBH rates are higher. Similar to the PPV rates, there were also variations in trends over time; for example, Bronx Partners for Healthy Communities (BPHC) had steady levels across all years except for a 2.9% decrease in MY1, Bronx Health Access (BHA) had decreasing levels in all years, with a more noticeable drop in MY3. Several PPS, including Alliance for Better Health Care (ABHC) and OneCity (HHC), showed a decrease in rates in MY1, but increases in MY2 and MY3, with rates at the end of MY3 higher than the rates in MY0.

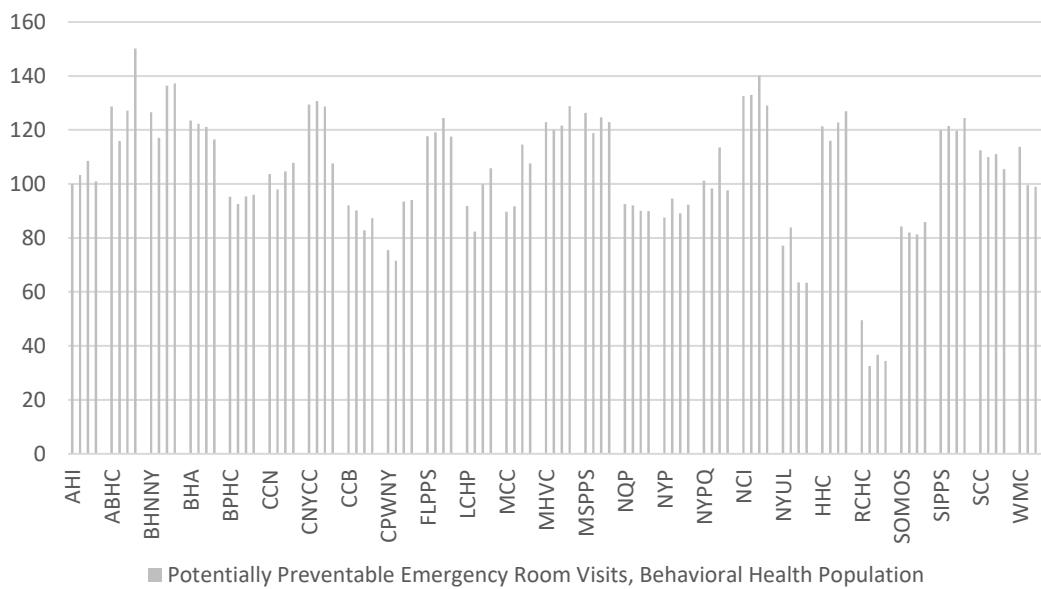
Exhibit 4.55. Annual changes in the rate of potentially preventable emergency room visits, full population, from MY0 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset.

Notes: Potentially preventable emergency room visits is measured per 100 members. Each PPS has four bars, one per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position followed to the right by MY1, MY2, and MY3. Data for MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

Exhibit 4.56. Annual changes in the rate of potentially preventable emergency room visits, behavioral health population, from MY0 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset.

Notes: Potentially preventable emergency room visits among the behavioral health population is measured per 100 members. Each PPS has four bars, one per MY, with values based on the last month in the MY. Within each PPS cluster, MY0 has the left bar position followed to the right by MY1, MY2, and MY3. Data for MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

The comparative regression models quantified the magnitude and statistical significance of post-DSRIP initiation changes in PPR, PPV, and PPVBH rates across the 37-month period.¹²⁹ Unlike the statewide interrupted time series, the comparative models are at the PPS-level and allow for an assessment of how various PPS characteristics are associated with values of the performance indicator. The four characteristics considered in the Interim Report are: having an attributed member population that is higher or lower than the median PPS value (*Large Size*), having a percentage of attributed members in the behavioral health swim lane that is higher or lower than the median PPS value (*High BH*), geographic location in the rest of state compared to New York City (*ROS*), and being eligible for and selecting the eleventh project (*11th*). Each measure is a dichotomous indicator.

Each outcome has five regression models (see Exhibit 4.57, Exhibit 4.59, and Exhibit 4.64) and each model contains the same *Trend*, *DSRIP*, *Trend*DSRIP*, and *Constant* coefficients as described in the statewide interrupted time series. The first model, denoted by the (1) heading,

¹²⁹ As noted earlier, for the two potentially preventable emergency room visit measures, there are 31 time points as data for months 6-11 of MY3 were not available at the time of analysis.

contains coefficients for *Large Size*, *High BH*, *ROS*, and *11th* to assess whether PPS with these characteristics had higher or lower levels of the outcome compared to PPS that did not have these features. Models (2) through (5) test the hypotheses that PPS with a particular characteristic had differential improvements in performance. Model (2) adds triple-interaction terms (*Trend*Large Size*, *DSRIP*Large Size*, and *Trend*DSRIP*Large Size*) to assess whether large PPS had different level and slope changes in the post-DSRIP initiation period, compared to the level and slope changes among small PPS. Models (3), (4), and (5) introduce other triple-interaction terms to test for differential level and slope changes in the post-DSRIP initiation periods for PPS with a higher percentage of members in the behavioral health swim lane (*High BH*), location in ROS compared to NYC (*ROS*), and eligibility for and selection of the eleventh project (*11th*), respectively.

For the PPR measure (see Exhibit 4.57), there were notable differences in the levels of PPR rates: PPS with large sizes, a high percentage of members in the behavioral health swim lane, and NYC location all had higher PPR rates. Each of these coefficients in Model (1) was statistically significant and had a large magnitude, indicating that differences were numerically meaningful, and these findings were consistent across the other models in Exhibit 4.57. After adjusting for the time trend and the other characteristics, large PPS had on average 44.1 more potentially preventable readmissions per 100,000 members (*Large Size*, $b= 44.115$, $p<0.01$) throughout the study period compared to small PPS, PPS with a high percentage of members in the behavioral health swim lane had 29.7 more readmissions per 100,000 (*High BH*, $b= 29.700$, $p<0.01$) than PPS with a low percentage of behavioral health swim lane, and PPS located in ROS had 350.3 fewer readmissions per 100,000 members compared to PPS in NYC (*ROS*, $b= -350.261$, $p<0.05$).

Size was also associated with differences in post-DSRIP initiation performance changes: large PPS had a larger post-DSRIP initiation decrease in their levels, but thereafter large and small PPS had different post-DSRIP initiation trends and the two categories of PPS converged back towards their differences in the pre-DSRIP initiation period. In model (2), the statistically significant *DSRIP*Large Size* and *DSRIP*Trend*Large Size* interaction terms indicate that large PPS had differences in their post-DSRIP implementation levels and trends after adjusting for the other PPS characteristics. The large PPS had larger declines in their PPR rate immediately following DSRIP initiation (decline of 48.4 per 100,000), compared to post-DSRIP initiation changes among small PPS (increase of 21.8 per 100,000).¹³⁰ The positive *Trend*DSRIP*Large Size* triple-interaction term ($b= 4.498$, $p<0.05$) signals that large and small PPS had different post-DSRIP initiation trends resulting in the two types of PPS reverting back towards their pre-DSRIP differences by the end of MY3. For ease of interpretation, Exhibit 4.58 presents the stratified models, with model (2) limited to the sub-population of large PPS and model (3) limited to the sub-population of small PPS. After the DSRIP program's initiation, large PPS had 48.8 fewer readmissions per 100,000 members while small PPS had 21.3 more readmissions per

¹³⁰ The immediate post-DSRIP initiation change is calculated using the predicted values from the equation for model (2), using $t=13$ and $DSRIP=0$ for the last month of MY1, $t=14$ and $DSRIP=1$ for the first month of MY2, and *Large Size*=1 or 0.

100,000 members.¹³¹ Following initiation, there was no evidence that large PPS had a different post-DSRIP initiation trend (*Trend*DSRIP*, non-significant) but small PPS had a steeper negative post-DSRIP initiation trend which suggests convergence back to its pre-DSRIP values.

Compared to the other measures examined, there was high variability in the PPR rate across PPS and over time. However, most PPS experienced a downward trend in those rates regardless of their starting point. Caution is warranted in interpreting these findings. The current models provide suggestive evidence of early changes, but the final summative report will explore additional model specifications when more years of data are available to develop a more robust understanding of changes in potentially preventable readmissions.

Exhibit 4.57. PPS-level comparative analysis regression for potentially preventable readmissions

		Potentially Preventable Readmissions				
		Basic Model (1)	Size Interaction Terms (2)	Behavioral Health Interaction Terms (3)	Geography Interaction Terms (4)	Eleventh Project Interaction Terms (5)
Trend		-1.824** (0.833)	-1.757 (1.135)	-2.188* (1.145)	-4.457*** (1.257)	-2.754** (1.270)
DSRIP		13.002 (10.966)	76.865*** (14.921)	25.047* (15.121)	8.862 (16.508)	5.796 (16.716)
Large Size		44.115** (17.472)	53.580*** (19.688)	58.537*** (17.735)	10.558 (17.089)	37.134** (18.089)
High BH		29.700*** (9.606)	23.768** (9.414)	-2.560 (16.377)	21.979** (9.145)	29.606*** (9.664)
ROS		-350.261** (128.610)	-348.375** (128.957)	-347.977** (129.476)	-425.215*** (129.523)	-350.999** (128.484)
11th		170.394 (126.872)	170.901 (127.218)	168.880 (127.729)	173.018 (127.133)	153.118 (127.392)
Trend*DSRIP		-1.649* (0.896)	-3.809*** (1.220)	-2.541** (1.232)	-1.150 (1.351)	-0.902 (1.366)
Trend*Large Size			-0.140 (1.655)			
DSRIP*Large Size			-132.986*** (21.714)			

¹³¹ The immediate post-DSRIP initiation change is calculated using the predicted values from the equation using t=13 and DSRIP=0 for the last month of MY1, and t=14 and DSRIP=1 for the first month of MY2.

Trend*DSRIP*Large Size		4.498** (1.776)			
Trend*High BH		0.759 (1.671)			
DSRIP*High BH		-25.398 (22.167)			
Trend*DSRIP*High BH		1.874 (1.800)			
Trend*ROS			4.389*** (1.637)		
DSRIP*ROS			6.964 (21.450)		
Trend*DSRIP*ROS			-0.834 (1.756)		
Trend*11th				1.662 (1.712)	
DSRIP*11th				12.869 (22.517)	
Trend*DSRIP*11th				-1.334 (1.841)	
Constant	746.946*** (84.871)	743.835*** (85.197)	754.986*** (85.511)	810.263*** (85.528)	760.460*** (85.327)
Observations	925	925	925	925	925

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01

Exhibit 4.58. PPS-level comparative analysis regression for potentially preventable readmissions, comparing large versus small PPS

		Potentially Preventable Readmissions		
		Full sample	Large Size	Small Size
		(1)	(2)	(3)
Trend		-1.824 ** (0.833)	-1.440 (0.956)	-1.346 (1.316)
DSRIP		13.002 (10.966)	-50.496 *** (12.545)	81.871 *** (17.267)
BH		29.700 *** (9.606)	30.410 *** (10.438)	18.572 (15.646)
ROS		-350.261 ** (128.610)	-202.933 (202.425)	-510.792 ** (183.086)
11th		170.394 (126.872)	37.263 (202.413)	223.249 (177.192)
Trend*DSRIP		-1.649 * (0.896)	0.222 (1.026)	-4.231 *** (1.412)
Constant		746.946 *** (84.871)	796.022 *** (112.953)	839.213 *** (127.139)
Observations		925	444	481

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. Model (1) is identical to model (1) in Exhibit 4.57 but the *Large Size* coefficient is not displayed here.

Comparative regression analyses also showed there were notable differences in the levels of PPV rates: PPS with large sizes had lower rates, and PPS that were eligible for and selected the eleventh project had higher rates (see Exhibit 4.59). After adjusting for the time trend and other PPS characteristics, large PPS had on average 2.1 fewer potentially preventable emergency room visits per 100 members throughout the study period in the full attributed population (*Large Size*, b= -2.108, p<0.01). The PPS that were eligible for and selected the eleventh project had 12.1 higher visits per 100 members in the full attributed population, (full population: *11th*, b= 12.130, p<0.05).

Exhibit 4.59. PPS-level comparative analysis regression for potentially preventable emergency room visits, full population

	Potentially Preventable Emergency Room Visits, Full Population				
	Basic Model (1)	Size Interaction Terms (2)	Behavioral Health Interaction Terms (3)	Geography Interaction Terms (4)	Eleventh Project Interaction Terms (5)
Trend	-0.045* (0.027)	-0.123*** (0.038)	-0.018 (0.036)	0.00005 (0.042)	-0.006 (0.041)
DSRIP	-1.269*** (0.410)	-1.903*** (0.569)	0.051 (0.547)	1.293** (0.634)	0.530 (0.619)
Large Size	-2.108*** (0.587)	-2.930*** (0.673)	-1.744*** (0.578)	-2.115*** (0.591)	-1.847*** (0.603)
High BH	0.605 (0.370)	0.533 (0.372)	-0.094 (0.553)	0.336 (0.366)	0.443 (0.369)
ROS	-3.252 (5.594)	-3.214 (5.612)	-3.251 (5.630)	-2.935 (5.659)	-3.159 (5.628)
11th	12.130** (5.518)	12.106** (5.537)	12.129** (5.554)	12.118** (5.567)	12.748** (5.567)
Trend*DSRIP	0.066** (0.031)	0.154*** (0.043)	-0.046 (0.041)	-0.092* (0.048)	-0.033 (0.047)
Trend*Large Size		0.163*** (0.055)			
DSRIP*Large Size		1.322 (0.826)			
Trend*DSRIP*Large Size		-0.183*** (0.063)			
Trend*High BH			-0.057 (0.053)		
DSRIP*High BH			-2.750*** (0.799)		
Trend*DSRIP*High BH			0.233*** (0.060)		
Trend*ROS				-0.075	

					(0.055)
DSRIP*ROS				-4.269***	
				(0.822)	
Trend*DSRIP*ROS				0.263 ***	
				(0.063)	
Trend*11th					-0.069
					(0.056)
DSRIP*11th				-3.211***	
				(0.833)	
Trend*DSRIP*11th				0.176***	
				(0.063)	
Constant	36.546***	36.967***	36.707***	36.496***	36.097***
	(3.679)	(3.695)	(3.703)	(3.725)	(3.714)
Observations	775	775	775	775	775

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, *p<0.05, ***p<0.01. The number of observations for preventable emergency room visits is lower because MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

All four PPS characteristics were associated with differences in post-DSRIP initiation performance in PPV rates. In model (2) in Exhibit 4.59 the statistically significant *Trend*DSRIP*Large Size* interaction term indicates that large and small PPS had different post-DSRIP initiation trends after adjusting for the other PPS characteristics. The negative *Trend*DSRIP*Large Size* triple interaction term ($b = -0.183$, $p < 0.01$) indicates that the difference between large and small PPS increased during the post-DSRIP initiation period (as shown in Model (1) large PPS had lower PPV rates). For ease of interpretation, Exhibit 4.60 presents the stratified models, with model (2) limited to the sub-population of large PPS and model (3) limited to the sub-population of small PPS. Large PPS had steady PPV rates in the pre-DSRIP period. In contrast, small PPS had a significantly decreasing trend. Immediately following DSRIP initiation, small PPS experienced a statistically significant initial decrease in their PPV rate, but thereafter their trends reversed direction and significantly increased.

Exhibit 4.60. PPS-level comparative analysis regression for potentially preventable emergency room visits, full population, comparing large versus small PPS

Potentially Preventable Emergency Room Visits, Full Population			
	Full Sample	Large Size	Small Size
	(1)	(2)	(3)
Trend	-0.045* (0.027)	0.039 (0.040)	-0.123*** (0.038)
DSRIP	-1.269*** (0.410)	-0.607 (0.598)	-1.928*** (0.572)
Large Size	-2.108*** (0.587)		
High BH	0.605 (0.370)	0.301 (0.465)	0.962 (0.625)
ROS	-3.252 (5.594)	-2.787 (7.970)	-4.607 (8.288)
11th	12.130** (5.518)	6.680 (7.969)	14.890* (8.021)
Trend*DSRIP	0.066** (0.031)	-0.028 (0.045)	0.154*** (0.043)
Constant	36.546*** (3.679)	36.740*** (4.449)	36.414*** (5.744)
Observations	775	372	403

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. The number of observations for preventable emergency room visits is lower because MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

Model (3) of Exhibit 4.59 shows that the percent of attributed members in the behavioral health swim lane was also associated with differences in post-DSRIP initiation performance changes in PPV rates: PPS with a high percentage of attributed members in the behavioral health swim lane had a larger post-DSRIP initiation decrease in their levels, but thereafter PPV rates increased for PPS with a high percentage of attributed members in the behavioral health swim lane. In model (3), the statistically significant *DSRIP*High BH* and *Trend*DSRIP*High BH* interaction terms indicate that PPS with a high percentage of attributed members in the behavioral health swim lane had differences in their post-DSRIP initiation levels and trends after adjusting for other PPS characteristics. The PPS with a high percentage of attributed members

in the behavioral health swim lane had larger declines in their levels immediately following DSRIP initiation compared to post-DSRIP level changes among PPS with a low percentage of behavioral health swim lane members ($b = -2.750$, $p < 0.01$). The positive $Trend^*DSRIP*High\ BH$ interaction term ($b = 0.233$, $p < 0.01$) indicates that PPS with high and low percentages of attributed members in the behavioral health swim lane had different post-DSRIP initiation trends resulting in the PPS with a high percentage of attributed members in the behavioral health swim lane reverting back towards its pre-DSRIP trend.

For ease of interpretation, Exhibit 4.61 presents the stratified models, with model (2) limited to the sub-population of PPS with a high percentage of attributed members in the behavioral health swim lane and model (3) limited to the sub-population of PPS with a low percentage. Both PPS with a high and low percentage of behavioral health swim lane members had steady PPV rates in the pre-DSRIP period ($Trend$ coefficient not significant for either type of PPS). Immediately following DSRIP initiation, PPS with a high percentage of DSRIP members attributed in the behavioral health swim lane had a significant initial decrease in the level of potentially preventable emergency room visits ($DSRIP$, $b = -2.879$, $p < 0.01$), but thereafter the trend reversed direction and the rates increased ($Trend^*DSRIP$, $b = 0.199$, $p < 0.01$). In contrast, PPS with a low percentage of members attributed in the behavioral health swim lane showed no statistically significant level change after DSRIP-initiation and the post-DSRIP trend coefficient was only marginally significant, suggesting there was only modest change in the post-DSRIP initiation trend.

Exhibit 4.61. PPS-level comparative analysis regression for potentially preventable emergency room visits, full population, comparing high versus low percentage of members attributed in the behavioral health swim lane

Potentially Preventable Emergency Room Visits, Full Population			
	Full Sample	High BH	Low BH
	(1)	(2)	(3)
Trend	-0.045*	-0.081	-0.016
	(0.027)	(0.050)	(0.022)
DSRIP	-1.269***	-2.879***	-0.007
	(0.410)	(0.760)	(0.327)
Large Size	-2.108***	-2.048**	-1.494***
	(0.587)	(1.024)	(0.490)
High BH	0.605		
	(0.370)		
ROS	-3.252	-2.285	-7.298
	(5.594)	(4.045)	(6.261)

11th	12.130** (5.518)	4.521 (3.776)	13.384* (6.260)
Trend*DSRIP	0.066** (0.031)	0.199*** (0.057)	-0.046* (0.025)
Constant	36.546*** (3.679)	46.885*** (3.222)	33.334*** (4.144)
Observations	775	372	403

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. The number of observations for preventable emergency room visits is lower because MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

The other significant PPS characteristics in Exhibit 4.59 were geographic location and eligibility for and selection of the eleventh project. In model (4) in Exhibit 4.59, the statistically significant *DSRIP*ROS* and *Trend*DSRIP*ROS* interaction terms indicate that PPS in ROS had differences in their post-DSRIP initiation levels and trends on the PPV measure after adjusting for other PPS characteristics. The PPS located in ROS had larger declines in their levels immediately following DSRIP initiation compared to post-DSRIP level changes among PPS in New York City ($b = -4.269$, $p<0.01$). The positive *Trend*DSRIP*ROS* interaction term ($b= 0.263$, $p<0.01$) indicates that PPS in ROS and those in New York City had different post-DSRIP initiation trends resulting in the PPS in ROS reverting back towards its pre-DSRIP trend. For ease of interpretation, Exhibit 4.62 presents the stratified models, with model (2) limited to the sub-population of PPS located in New York City and model (3) limited to the sub-population of PPS located in ROS. The PPS located in ROS and New York City had stable rates of preventable emergency visits in the pre-DSRIP period, the *Trend* coefficient was not significant for PPS in New York City and only marginally significant at $p<0.1$ for PPS in ROS. Immediately following DSRIP initiation, PPS in ROS and New York City had a statistically significant decrease in their level of potentially preventable emergency room visits, but the decrease was greater for PPS in ROS (*DSRIP* coefficient for ROS, $b= -2.980$, $p<0.01$; *DSRIP* coefficient for New York City, $b= 1.280$, $p<0.01$). Thereafter, the post-DSRIP trends for ROS reversed direction and preventable emergency room visit rates significantly increased (*Trend*DSRIP*, $b= 0.171$, $p<0.01$) whereas rates in New York City significantly decreased (*Trend*DSRIP*, $b= -0.091$, $p<0.01$).

Exhibit 4.62. PPS-level comparative analysis regression for potentially preventable emergency room visits, full population, comparing rest of state to New York City

		Potentially Preventable Emergency Room Visits, Full Population		
		Full Sample	NYC	ROS
		(1)	(2)	(3)
Trend		-0.045*	-0.001	-0.075*
		(0.027)	(0.025)	(0.042)
DSRIP		-1.269***	1.280***	-2.980***
		(0.410)	(0.368)	(0.624)
Large Size		-2.108***	-2.213***	-2.074**
		(0.587)	(0.487)	(0.996)
High BH		0.605	0.216	0.460
		(0.370)	(0.299)	(0.624)
ROS		-3.252		
		(5.594)		
11th		12.130**	10.173	13.406*
		(5.518)	(8.689)	(7.480)
Trend*DSRIP		0.066**	-0.091***	0.171***
		(0.031)	(0.028)	(0.047)
Constant		36.546***	36.981***	32.439***
		(3.679)	(3.904)	(6.712)
Observations		775	310	465

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. The number of observations for preventable emergency room visits is lower because MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

The final significant characteristic in Exhibit 4.59 is for model (5) which assesses differences in post-DSRIP initiation PPV outcomes for PPS that were eligible for and selected the eleventh project versus those that did not. The interpretation of the *11th project* interaction terms is the same as that of the *ROS* interaction terms and the other PPS characteristics. For ease of interpretation, Exhibit 4.63 presents the stratified models, with model (2) limited to PPS that were eligible for and selected the eleventh project and model (3) limited to PPS that did not select the eleventh project. Immediately following DSRIP initiation, PPS that selected the eleventh project experienced a level decrease in the PPV rate, but thereafter the post-DSRIP initiation trend reversed and the PPV rate increased (*DSRIP*, b= -2.685, p<0.01; *Trend*DSRIP*, b=0.143, p<0.01). There was no level change immediately following DSRIP initiation for PPS that

did not select the 11th project and no change in trend during the post-DSRIP initiation period (the *DSRIP* and *Trend*DSRIP* coefficients were not statistically significant).

Exhibit 4.63. PPS-level comparative analysis regression for potentially preventable emergency room visits, full population, comparing the PPS that selected the 11th project to those that did not

Potentially Preventable Emergency Room Visits, Full Population			
	Full Sample	11th Project	No 11th Project
	(1)	(2)	(3)
Trend	-0.045* (0.027)	-0.075* (0.040)	-0.007 (0.037)
DSRIP	-1.269*** (0.410)	-2.685*** (0.597)	0.474 (0.555)
Large Size	-2.108*** (0.587)	-1.924** (0.913)	-1.878** (0.758)
High BH	0.605 (0.370)	0.341 (0.458)	0.861 (0.675)
ROS	-3.252 (5.594)	-1.341 (6.510)	-4.721 (9.581)
11th	12.130** (5.518)		
Trend*DSRIP	0.066** (0.031)	0.143*** (0.045)	-0.030 (0.042)
Constant	36.546*** (3.679)	47.377*** (6.045)	36.391*** (5.033)
Observations	775	434	341

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01

Exhibit 4.64 presents the comparative regression analysis regression results for the PPVBH measure. There were notable differences in the levels of PPVBH: PPS with large sizes had significantly lower PPVBH rates, and PPS that were eligible for and selected the eleventh project had significantly higher rates. After adjusting for the time trend and other PPS characteristics, large PPS had on average 5.6 fewer potentially preventable emergency room visits per 100 members through the study period (*Large Size*, b= -5.603, p<0.01). The PPS that were eligible for and selected the eleventh project had on average 28.9 higher visits per 100 members

throughout the study period (*11th*, $b = 28.947$, $p < 0.01$). These findings are similar to those for the PPV measure (see Exhibit 4.59).

Exhibit 4.64. PPS-level comparative analysis regression for potentially preventable emergency room visits, behavioral health population

		Potentially Preventable Emergency Room Visits, Behavioral Health Population			
	Basic Model (1)	Size Interaction Terms (2)	Behavioral Health Interaction Terms (3)	Geography Interaction Terms (4)	Eleventh Project Interaction Terms (5)
Trend	-0.250*** (0.086)	-0.289** (0.119)	-0.288** (0.116)	-0.098 (0.133)	-0.279** (0.130)
DSRIP	-8.860*** (1.290)	-10.308*** (1.783)	-7.039*** (1.751)	-1.856 (1.989)	-6.240*** (1.948)
Large Size	-5.603*** (1.817)	-5.026** (2.090)	-4.049** (1.818)	-6.081*** (1.824)	-6.339*** (1.866)
High BH	0.540 (1.160)	0.029 (1.161)	-3.264* (1.764)	-0.620 (1.143)	0.280 (1.158)
ROS	-14.569 (10.101)	-14.393 (10.215)	-14.499 (10.073)	-14.146 (10.425)	-14.551 (10.204)
11th	28.947*** (9.957)	28.984*** (10.070)	28.924*** (9.931)	28.929*** (10.190)	27.565** (10.142)
Trend*DSRIP	0.577*** (0.098)	0.725*** (0.135)	0.421*** (0.132)	0.087 (0.151)	0.438*** (0.147)
Trend*Large Size		0.080 (0.174)			
DSRIP*Large Size		3.018 (2.590)			
Trend*DSRIP*Large Size		-0.308 (0.197)			
Trend*High BH			0.079 (0.170)		

DSRIP*High BH		-3.793			
		(2.559)			
Trend*DSRIP*High BH		0.327*			
		(0.193)			
Trend*ROS		-0.253			
		(0.173)			
DSRIP*ROS		-11.672***			
		(2.579)			
Trend*DSRIP*ROS		0.818***			
		(0.196)			
DSRIP*11th		-4.677*			
		(2.622)			
Trend*11th		0.052			
		(0.175)			
Trend*DSRIP*11th		0.249			
		(0.199)			
Constant	99.894*** (6.704)	99.736*** (6.795)	100.945*** (6.694)	100.436*** (6.928)	101.135*** (6.838)
Observations	775	775	775	775	775

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. The number of observations for preventable emergency room visits is lower because MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

Exhibit 4.64 shows that geographic location was associated with differences in post-DSRIP performance changes in PPVH rates. The PPS located in ROS had larger declines in their levels immediately following DSRIP initiation compared to post-DSRIP level changes among PPS in New York City ($DSRIP*ROS$, $b = -11.672$, $p<0.01$). The positive $Trend*DSRIP*ROS$ interaction term ($b= 0.818$, $p<0.01$) indicates that PPS in ROS and those in New York City had different post-DSRIP initiation trends resulting in the PPS in ROS reverting back towards their pre-DSRIP trend. For ease of interpretation, Exhibit 4.65 presents the stratified models, with model (2) limited to the sub-population of PPS located in New York City and model (3) limited to the sub-population of PPS located in ROS. The PPS located in ROS had a significantly decreasing trend in the PPVH rate in the pre-DSRIP period ($Trend$, $b= -0.312$, $p<0.01$) whereas rates were stable for NYC PPS ($Trend$ not significant). Immediately following DSRIP initiation, PPS in ROS had a statistically significant decrease in their level of PPVH rates ($DSRIP$, $b= -13.101$, $p<0.01$); there was no level

change in NYC PPS. Thereafter, the post-DSRIP trends for ROS PPS reversed direction and PPV рates significantly increased (*Trend*DSRIP*, b= 0.865, p<0.01); there was no statistically significant post-DSRIP trend change for NYC PPS.

Exhibit 4.65. PPS-level comparative analysis regression for potentially preventable emergency room visits, behavioral health population, comparing the PPS in ROS to those in NYC

Potentially Preventable Emergency Room Visits, Behavioral Health Population			
	Full Sample	NYC	ROS
	(1)	(2)	(3)
Trend	-0.250*** (0.086)	-0.040 (0.122)	-0.312 *** (0.115)
DSRIP	-8.860*** (1.290)	-1.210 (1.808)	-13.101*** (1.713)
Large Size	-5.603*** (1.817)	-0.994 (2.349)	-11.140*** (2.704)
High BH	0.540 (1.160)	-0.465 (1.462)	-0.490 (1.706)
ROS	-14.569 (10.101)		
11th	28.947*** (9.957)	23.112 (13.447)	33.662** (15.201)
Trend*DSRIP	0.577*** (0.098)	0.029 (0.138)	0.865 *** (0.130)
Constant	99.894*** (6.704)	98.366*** (6.276)	84.357*** (13.675)
Observations	775	310	465

Source: Authors' analysis of the DSRIP Dataset.

Notes: *p<0.1, **p<0.05, ***p<0.01. The number of observations for preventable emergency room visits is lower because MY3 only includes 6 time points (months 1, 2, 3, 4, 5, and 12). Data for the other time points in the second half of MY3 were not available at the time of analysis.

The findings for the PPV and PPV р rates should be interpreted cautiously, as not all monthly data points were available at the time of analysis. The missing data in the second half

of MY3 places more weight on MY2 and the first half of MY3 and also results in lower statistical power. Additionally, there was a change in the health plan encounter intake system (EIS) that occurred in October 2015 (between MY1 and MY2). This change led to differences in how emergency department encounters were reported. The level drop in PPV rates from MY1 to MY2 may be in part due to this change. The final summative report will contain a more robust analysis when all DSRIP performance data are available.

4.7. Assessment of Changes in Health Care System Transformation

This section addresses RQ-F:

To what extend did PPS achieve health care system transformation, including increasing the availability of behavioral health care? (CMS RQ1)

Summary At-A-Glance

The Interim Report focused on system transformation measures in three areas: (1) health care service delivery integration; (2) health care coordination; (3) utilization among the uninsured, non-utilizing, and low-utilizing populations (with a focus on non-use of preventive care services among the Medicaid members, and emergency department (ED) services among the uninsured population. The findings in the third area were limited to the 14 PPS that selected the eleventh “patient activation” project. These are relevant to projects in Domains 2A, 2B, and 2D, respectively. Integration and coordination are foundational to improved health care quality, which may in turn prevent avoidable hospitalizations and ED visits thereby saving costs. The third area is also relevant to cost-savings, as increasing preventive care, especially among non-utilizing and low-utilizing Medicaid members should reduce downstream tertiary care. Efforts to connect the uninsured to community resources, thereby diverting the uninsured from the ED, could also reduce costs through increased primary care and reduced use of expensive ED services.

At the statewide level, the percentage of providers meeting Meaningful Use criteria who conduct bidirectional exchange improved from 57.5% in MY2 to 70.4% in MY3. Approximately 94% of patients had positive experiences with their health care transition plans after hospital discharges, and approximately 84% of patients had positive experiences with up-to-date coordination in clinical settings. These positive experiences were consistent throughout the period. There was an 8.3 percentage-point increase in the percent of patients reporting a provider as their usual source of care, from 78.6% in MY1 to 86.9% in MY3. Between MY0 (2014) and MY1 (2015), there was a small increase in the percentage of attributed Medicaid members with non-use of preventive services (from 10.4% to 11.6%), although thereafter it remained at a relatively constant level of 11.0% and 11.3% in MY2 and MY3, respectively. The percentage of ED visits that were from self-pay patients, presumed to be uninsured, decreased overall from 15.2% in MY0 to 11.2% in MY3.

Across PPS, the highest variability occurred in health information technology capabilities. In MY2, the percentage of providers in PPS that conducted bidirectional exchange or had participating agreements varied from 18.3% to 87.9%, and from 38.3% to 98.7%, respectively. These ranges narrowed in MY3 to 39.9% to 90.5% in bidirectional exchange, and 45.3% to 99.5% in participating agreements. These differences are consistent with early findings from the implementation and process study, with some PPS having larger start-up challenges due to their level of HIT infrastructure.

Among the 14 PPS that selected the eleventh project, there was high variability across PPS with respect to the measure of non-use of preventive services among attributed Medicaid members, and also the measure of ED visits comprised of self-pay patients (presumed to be the uninsured). Differences across PPS were particularly striking for the ED visit measure, and these differences persisted across the study time period, ranging from 7.9% to 29.6% in MY0, and from 2.3% to 24.1% in MY3. This measure should be interpreted cautiously, as it reflects a combination of differential utilization between insured and uninsured populations within PPS, and differences across PPS in the underlying level of insurance coverage among their patient populations. Although the DSRIP program aims to influence ED utilization among both Medicaid members and uninsured populations, expansion of health insurance is not within its scope. Furthermore, the public hospitals and safety net providers that qualified for the eleventh project may have limited ability to influence these measures in a short time frame because their patient populations are particularly vulnerable.

There are several cautions in interpreting these interim findings. First, because there are only two or three observations for the first two sets of measures and four observations for the third set of measures, it is difficult to isolate changes that occurred due to the DSRIP program. Without additional information on these measures over a longer time period, it is not possible to quantify the degree to which their trajectories changed following the DSRIP program's implementation. Second, PPS had annual opportunities to add partners. Variability in the first two measures may reflect differences in partners, although they are nonetheless useful indicators of the state of PPS over time. Third, changes in self-pay ED utilization (presumably the uninsured population) could reflect changes in utilization of uninsured versus insured patients, declines in the percentage of uninsured individuals due to implementation of the Affordable Care Act's Medicaid expansion and health insurance marketplace, or a combination. Finally, an important achievement has been progression to the statewide milestone for primary care medical home (PCMH) certification. That was not included in the Interim Report because this analysis focuses on data through the end of MY3, which preceded the 2018 statewide milestone.

These findings provide context for the current state of HIT infrastructure, progress towards integration of primary care services, health care coordination and patient experiences, and utilization among individuals who are uninsured or less connected to the health care system. The final summative report will examine changes across the full DSRIP program period; compare characteristics of PPS with different outcomes and project selections; examine changes in PCMH certification to encompass the full period including the 2018 statewide

milestone; and explore alternative measures of health care utilization among the uninsured, non-utilizing, and low-utilizing populations.

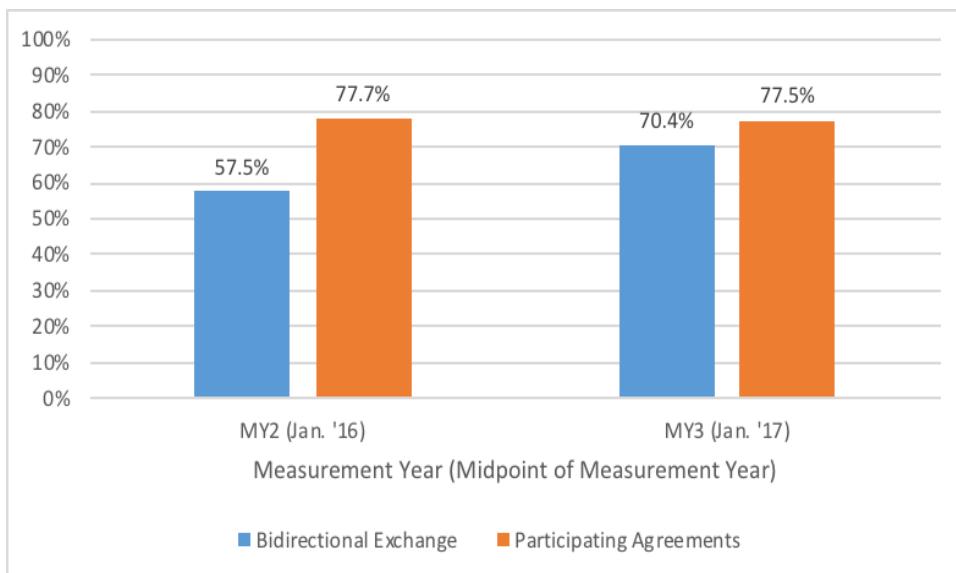
4.7.1. Statewide Trends and Comparative Analysis of Health Care Service Delivery Integration

Exhibit 4.55 displays annual measures for two HIT outcomes: the percentage of providers meeting Meaningful Use criteria who conduct bidirectional exchange (blue bars) or have participating agreements (orange bars) with Qualified Entities. These are relevant to successful implementation of DSRIP projects, and system transformation more generally. In the DSRIP program, PPS receive data on their attributed members to create “chase lists” of individuals who are flagged as out of care, identify areas for quality improvement, and other uses. More broadly, despite claims period lags, New York has invested considerable resources to promote health information exchange and interoperability across clinics to improve care coordination, improve patient safety, and other outcomes.¹³²

Most providers meeting Meaningful Use criteria engage in bidirectional exchange with Qualified Entities, and this increased from 57.5% (MY2) to 70.4% (MY3). Slightly over three-quarters of these providers had participating agreements with Qualified Entities in both measurement years. The increase in bidirectional exchange is consistent with the DSRIP program’s large emphasis on HIT, and is applicable to many DSRIP projects.

¹³² Vest, J.R. & Martin, E.G. (2016). Creating a 21st century health information technology infrastructure: New York’s Health Care Efficiency and Affordability Law for New Yorkers capital grant program. In: Dixon, B.E. (ed.) *Health Information Exchange: Navigating and Managing a Network of Health Information Systems*. San Diego, CA: Elsevier Inc., pp. 295-312.

Exhibit 4.55. Annual measures of health information technology among eligible providers meeting Meaningful Use criteria from MY2 to MY3



Source: Authors' analysis of the DSRIP Dataset. "Bidirectional Exchange" and "Participating Agreements" is the percent of providers meeting Meaningful Use criteria who conduct bidirectional exchange or have participating agreements with Qualified Entities.

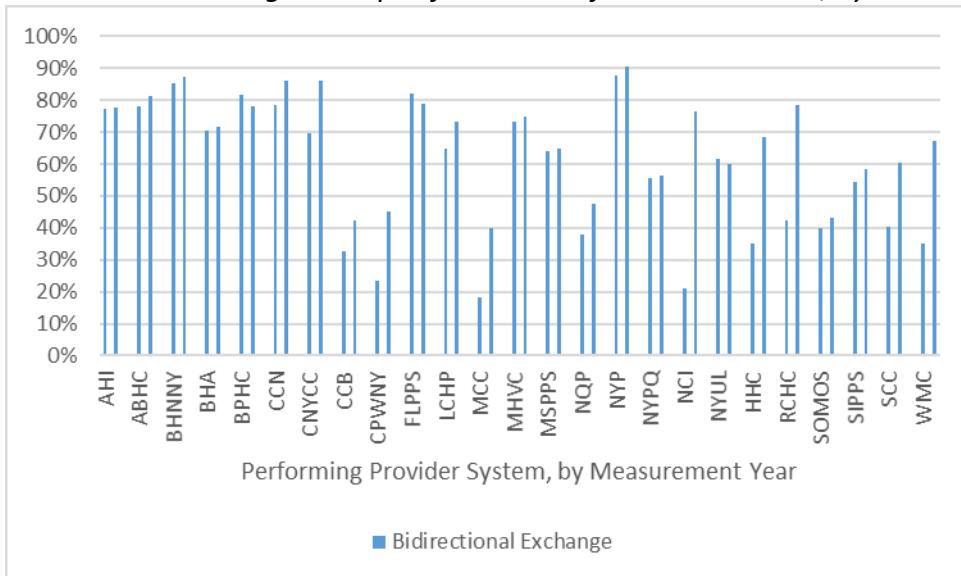
The following two exhibits display the HIT measures in MY2 and MY3, by PPS. Each PPS has one bar per MY. Consistent with Exhibit 4.55, the blue bars in Exhibit 4.56 represent bidirectional exchange and the orange bars in Exhibit 4.57 represent participating agreements.

Many PPS demonstrated improvements in conducting bidirectional exchange. There was considerable variability across PPS. This ranged from 18.3% to 87.9% in MY2, and from 39.9% to 90.5% in MY3. Several PPS with high initial starting values (such as Adirondack Health Institute (AHI) and NewYork-Presbyterian PPS (NYP)) had little change because their starting values were much higher than that of other PPS, and thus there was less room for improvement. In contrast, there were notable improvements among PPS that had low starting values; for example, Millennium Collaborative Care (MCC) improved from 18.3% to 39.9% and Refuah Community Health Care Collaborative (RCHC) improved from 42.4% to 78.7%.

Many PPS also had increased numbers of providers with participating agreements, but these changes were not as striking as the bidirectional exchange measure. Across the PPS, the percentage of eligible providers with participating agreements ranged from 38.3% to 98.7% in MY2, and from 45.3% to 99.5% in MY3. Several PPS had nearly all providers meeting this benchmark; for example, Central New York Care Collaborative (CNYCC) and Finger Lakes PPS (FLPPS) had starting values of 98.3% and 98.7% in MY2, respectively. Consequently, they had little room for improvement. The most notable improvement occurred in North County Initiative (NCI), which increased by 23.5 percentage-points from 73.7% in MY2 to 97.2% in MY3. Some PPS declined, with the largest decrease occurring in OneCity Health (HHC) from 77.5% in

MY2 to 70.5% in MY3. This might reflect a recent change in the Qualified Entities serving the NYC area.

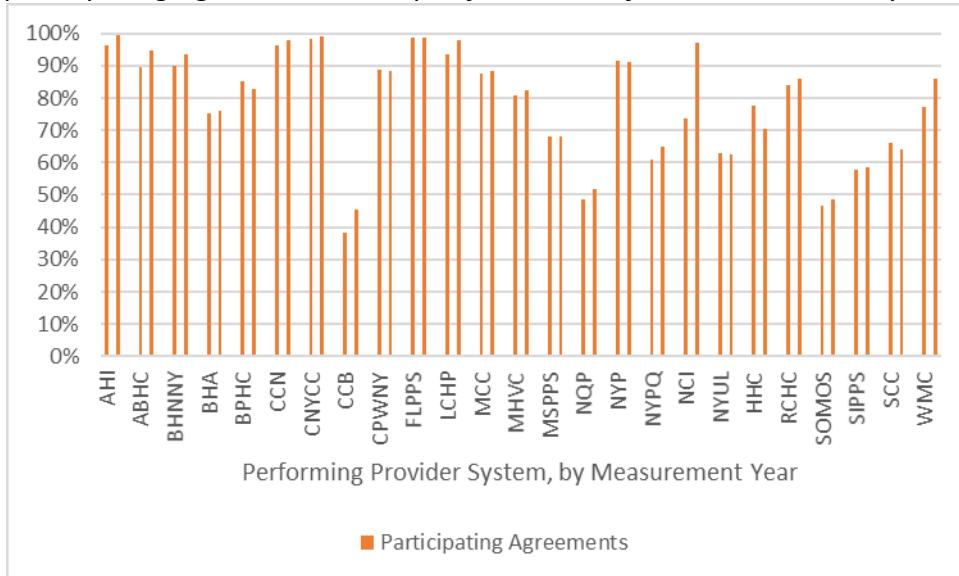
Exhibit 4.56. Percent of eligible providers meeting Meaningful Use criteria who conduct bidirectional exchange with qualified entities from MY2 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset. "Bidirectional Exchange" is the percent of providers meeting Meaningful Use criteria who conduct bidirectional exchange with Qualified Entities.

Notes: Each PPS has one bar per DSRIP measurement year (MY). The midpoint of the corresponding calendar years are January 2016 (MY2) and January 2017 (MY3). Within each PPS cluster, MY2 is the left bar and MY3 the right bar.

Exhibit 4.57. Percent of eligible providers meeting Meaningful Use criteria who have participating agreements with qualified entities from MY2 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset. "Participating Agreements" is the percent of providers meeting Meaningful Use criteria who have participating agreements with Qualified Entities.

Notes: Each PPS has one bar per DSRIP measurement year (MY). The midpoint of the corresponding calendar years are January 2016 (MY2) and January 2017 (MY3). Within each PPS cluster, MY2 is the left bar and MY3 the right bar.

4.7.2. Statewide Trends and Comparative Analysis of Health Care Coordination

Exhibit 4.58 displays annual measures for three health care coordination measures derived from the Consumer Assessment of Health Care Providers and Systems (CAHPS) family of patient experience surveys: care transition (blue bars), usual source of care (orange bars), and up-to-date coordination (gray bars). The CAHPS surveys are pre-validated, standardized instruments used across health care settings. They focus on patient reports and ratings of experiences rather than satisfaction, which could be confounded by attitudes towards caregivers. Patient experiences align with patient-centered care, and positive patient experiences can help achieve trust and strengthened provider-patient relationships, improved continuity of care and adherence to treatment plans, and improved health care outcomes.¹³³

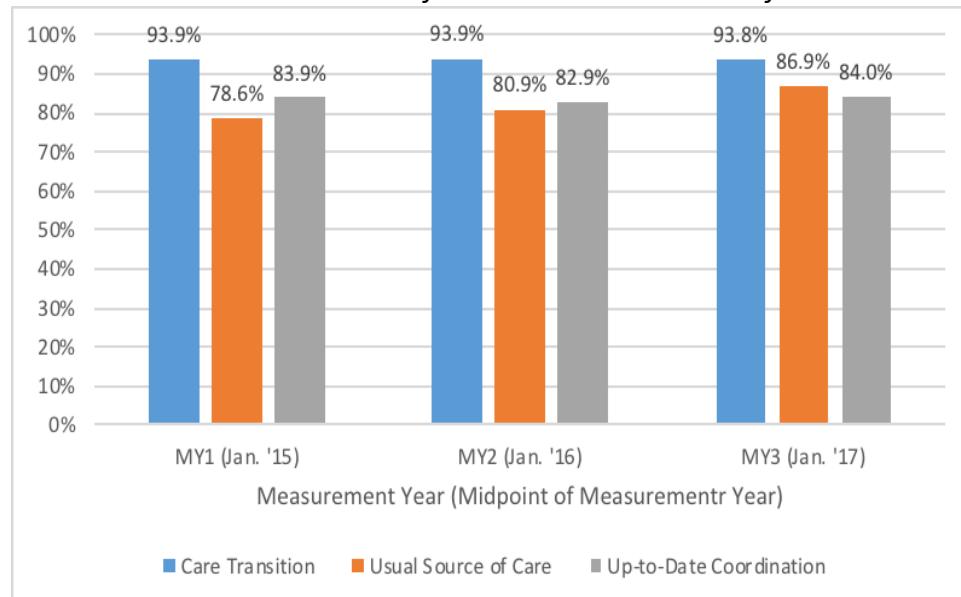
A vendor (DataStat) surveyed Medicaid members within each PPS for the Clinician & Group CAHPS (CG-CAHPS).¹³⁴ The Adult Hospital CAHPS (HCAHPS) are submitted by hospitals, and the

¹³³ Cleary, P.D. & Elliott, M.N. (2015, October 5). Sorting fact from fiction: the value of patient experience measurement. Retrieved from <https://www.ahrq.gov/cahps/news-and-events/events/ahrq-conference-2015/sorting-fact-fiction-slides.html>

¹³⁴ The PPS that were eligible for and selected the eleventh project also fielded their own CG-CAHPS for the uninsured non-Medicaid population. These are not reported here because they are neither centrally administered by a vendor nor case-mix adjusted.

values in the DSRIP Dataset are based on information accessed from the CMS website. The PPS results are case-mix adjusted, which limits the ability to trend PPS performance across years.

Exhibit 4.58. Annual measures of health care coordination from MY1 to MY3



Source: Authors' analysis of the DSRIP Dataset. "Care Transition" is the average of results for "strongly agree" and "agree" responses for three HCAHPS survey questions related to understanding their hospital discharge instructions. "Usual Source of Care" is a dichotomous measure from the CG-CAHPS survey on whether respondents considered the provider they were rating to be their usual source of care. "Up-to-Date Coordination" is the average of results from "usually" and "always" responses of three CG-CAHPS survey questions related to whether providers were up-to-date about care received from other providers.

The care transition measure (blue bars) is a composite of questions 23, 24, and 25 from the Hospital CAHPS (HCAHPS), reproduced below. Each question contains a four-point Likert scale, from "strongly disagree" to "strongly agree." The DSRIP measure is on a 0 to 100 percentage-point scale, and takes an average of the percentage of surveys from hospitals within each PPS with "strongly agree" and "agree" responses. The composite score is an average of the three measures.

- "During this hospital stay, staff took my preferences and those of my family/caregiver into account in deciding what my health care needs would be when I left."
- "When I left the hospital, I had a good understanding of the things I was responsible for in managing my health."
- "When I left the hospital, I clearly understood the purpose of taking each of my medications."

The usual source of care measure (orange bars) is from the Clinician & Group CAHPS (CG-CAHPS) Survey. The first question asks patients to identify the provider they visited in the last six months. The second question (used in the DSRIP usual source of care measure) asks patients to indicate whether they received care from, "the provider you usually see if you need a check-up, want advice about a health problem, or get sick or hurt." The DSRIP measure is on a 0 to

100 percentage-point scale, with 100% indicating that all patients reported that provider as their usual source of care.

The up-to-date coordination measure (gray bars) is a composite of questions 13, 17, and 20 from the CG-CAHPS, reproduced below. Each question contains a four-point Likert scale, from “never” to “always.” The DSRIP measure is on a 0 to 100 percentage-point scale, and takes an average of the percentage of surveys within each PPS with “usually” and “always” responses. The composite score is an average of the three measures.

- “In the last 6 months, how often did this provider seem to know the important information about your medical history?”
- “In the last 6 months, when this provider ordered a blood test, x-ray, or other test for you, how often did someone from this provider’s office follow up to give you those results?”
- “In the last 6 months, how often did you and someone from this provider’s office talk about all the prescription medicines you were taking?”

Most patients agreed they had a good understanding of their hospital discharge plans and that their preferences were taken into account, and this level of agreement was consistent across the three years (MY1: 93.9%, MY2: 93.9%, MY3: 93.8%). Across the three years, there was an increase in the percentage of patients identifying their provider as a usual source of care, from 78.6% in MY1 to 86.9% in MY3. Agreement about whether their providers had up-to-date was consistent across the three years (MY1: 83.9%, MY2: 82.9%, MY3: 84.0%).

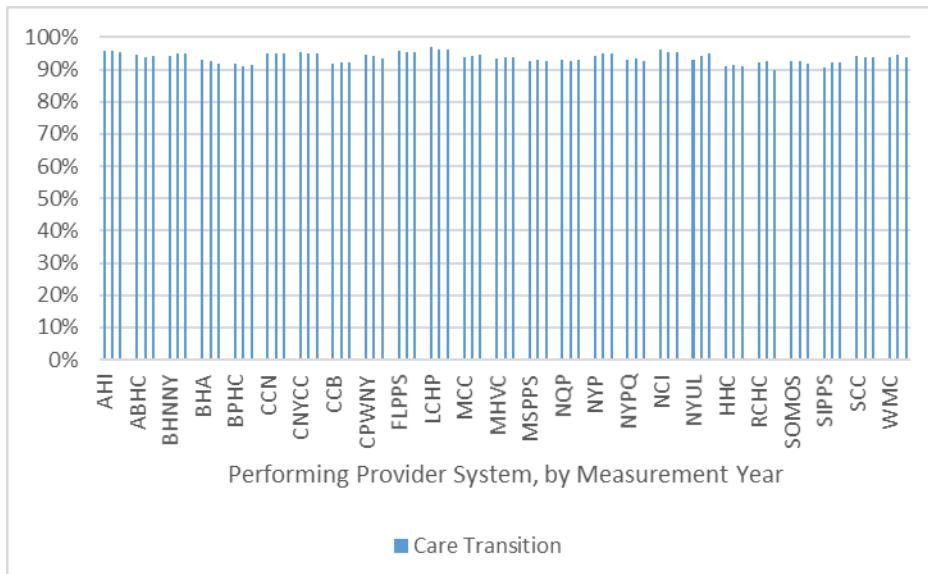
The following three exhibits display these measures in MY1, MY2, and MY3, by PPS. Each PPS has one bar per MY. Consistent with Exhibit 4.58, the blue bars in Exhibit 4.59 represent the health care transition measures, the orange bars in Exhibit 4.60 represent identifying the provider as a usual source of care, and the gray bars in Exhibit 4.61 represent up-to-date care coordination.

Similar to what is seen on the statewide plots (see Exhibit 4.58), within PPS there was limited variation in care transition experiences over time, and many PPS had similar values (Exhibit 4.59). They ranged from 90.7% to 96.8% in MY1, from 91.0% to 96.3% in MY2, and from 90.0% to 96.1% in MY3. This reflects how the PPS had high values at the start of the time period, leaving less room for improvement compared to other measures.

For the usual source of care, the variability between PPS lessened over time (Exhibit 4.60). At the PPS level, the percentage of patients indicating the provider was their usual source of care ranged from 53.6% to 90.6% in MY1, from 72.2% to 90.7% in MY2, and from 79.5% to 92.7% in MY3. All PPS had increases in this measure between MY1 to M3, with some having particularly notable improvements. For example, Refuah Community Health Collaborative (RCHC) and the Adirondack Health Institute (AHI) had 31.3 and 13.6 percentage point improvements, respectively.

Compared to the care transition experiences, there was more variation between PPS in patients' experiences with up-to-date care coordination (Exhibit 4.61). However, unlike the usual source of care measure, within PPS these values remained relatively constant across the three years. The up-to-date care coordination experiences ranged from 77.8% to 89.9% in MY1, from 78.8% to 87.1% in MY2, and from 78.9% to 87.6% in MY3.

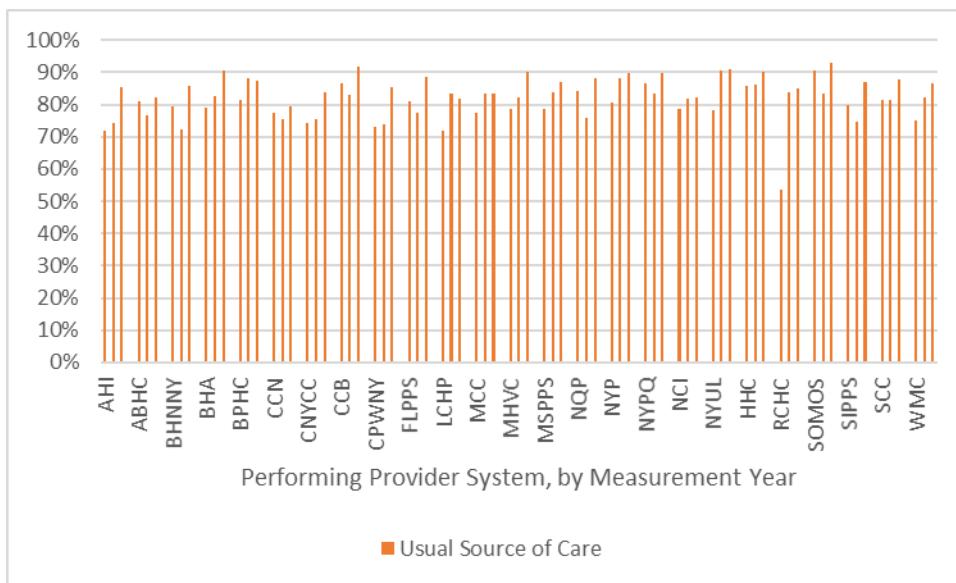
Exhibit 4.59. Health care transition measure from MY1 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset. "Care Transition" is the average of results for "strongly agree" and "agree" responses for three HCAHPS survey questions related to understanding their hospital discharge instructions.

Notes: Each PPS has three bars, one per DSRIP measurement year (MY). The midpoints of the corresponding calendar years are January 2015 (MY1), January 2016 (MY2), and January 2017 (MY3). Within each PPS cluster, MY1 in the left position, followed to the right by MY2 and MY3.

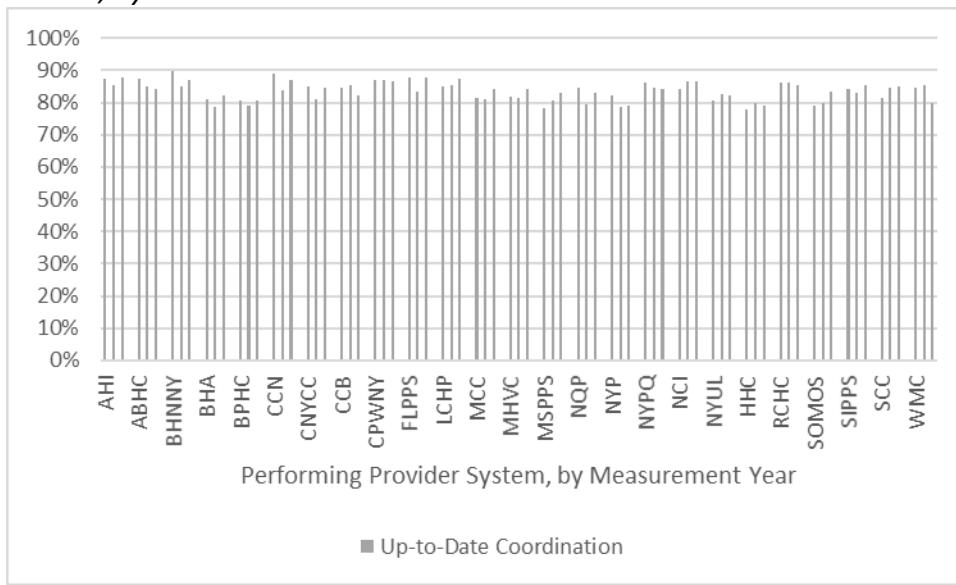
Exhibit 4.60. Whether health care provider is a usual source of care from MY1 to MY3, by PPS



Source: Authors' analysis of the DSRIP Dataset. "Usual Source of Care" is a dichotomous measure from the CG-CAHPS survey on whether respondents considered the provider they were rating to be their usual source of care.

Notes: Each PPS has three bars, one per DSRIP measurement year (MY). The midpoints of the corresponding calendar years are January 2015 (MY1), January 2016 (MY2), and January 2017 (MY3). Within each PPS cluster, MY1 is in the left position, followed to the right by MY2 and MY3.

Exhibit 4.61. Whether provider is up-to-date about care received from other providers from MY1 to MY3, by PPS



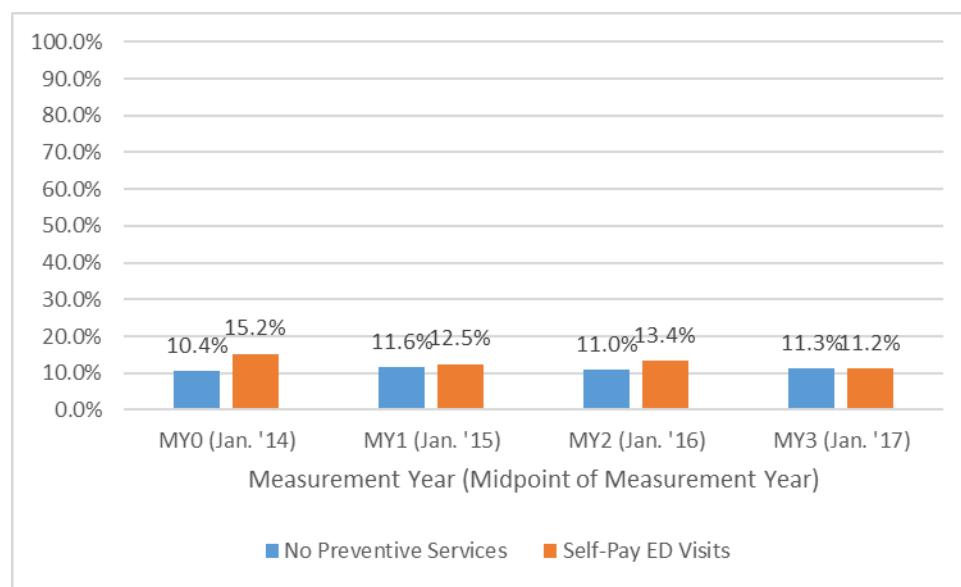
Source: Authors' analysis of the DSRIP Dataset. "Up-to-Date Coordination" is the average of results from "strongly agree" and "agree" responses of three CG-CAHPS survey questions related to whether providers were up-to-date about care received from other providers.

Notes: Each PPS has three bars, one per DSRIP measurement year (MY). The midpoints of the corresponding calendar years are January 2015 (MY1), January 2016 (MY2), and January 2017 (MY3). Within each PPS cluster, MY1 is in the left position, followed to the right by MY2 and MY3.

4.7.3. Statewide Trends and Comparative Analysis of Utilization among the Uninsured, Non-Utilizing, and Low-Utilizing Populations

Exhibit 4.62 displays annual measures for two outcomes related to utilization among the uninsured, non-utilizing, and low-utilizing populations. These findings are limited to the 14 PPS that selected the eleventh project (patient activation). The blue bars represent the percent of attributed members who did not have at least one claim with a preventative services code during the year. If the DSRIP program shifts costs upstream and increases the use of preventive services, this measure of “non-use” should decline. The orange bars represent the percentage of all emergency department (ED) visits to hospitals in the PPS network during the year that had a payer typology of “self-pay.” A value of zero would indicate that all individuals presenting to care at the ED had public or private insurance. Positive values would reflect a high volume of ED use among the uninsured compared to the insured population, a high percentage of the population that is uninsured, or a combination of these factors.

Exhibit 4.62. Annual measures of utilization among the uninsured, non-utilizing, and low-utilizing populations from MY0 to MY3 for those PPS that chose Project 2.d.i



Source: Authors’ analysis of the DSRIP Dataset. “No Preventive Services” is the percent of attributed Medicaid members who did not have at least one claim with a preventative services code during the year. “Self-Pay ED Visits” is the percent of all emergency department visits to hospitals in the PPS network during the year that had a payer typology of self-pay. Results are limited to the 14 PPS that selected the eleventh project (patient activation).

Throughout the period, the percent of attributed members with non-use of preventive services remained relatively steady around 11%. There was a slight increase in the pre-DSRIP period, between MY0 (10.4%) to MY1 (11.6%), although thereafter it remained at a constant level of 11.0% and 11.3% in MY2 and MY3, respectively. During this period, there was a decline in self-

pay ED visits. During the pre-DSRIP period, there was a 2.8 percentage-point decline from 15.2% in MY0 to 12.5% in MY1, followed by a slight increase to 13.4% in MY2 and subsequent decline to 11.2% in MY3. One possible explanation for the decrease in self-pay ED visits between MY0 and MY1 is the coincidence with the implementation of the Medicaid expansion under the Affordable Care Act and the launch of NY State of Health, New York's health insurance exchange. A decline in the number of uninsured individuals would result in a smaller percentage of self-pay ED visits, even if the ratio of the volume of visits between the uninsured and insured populations remained the same.

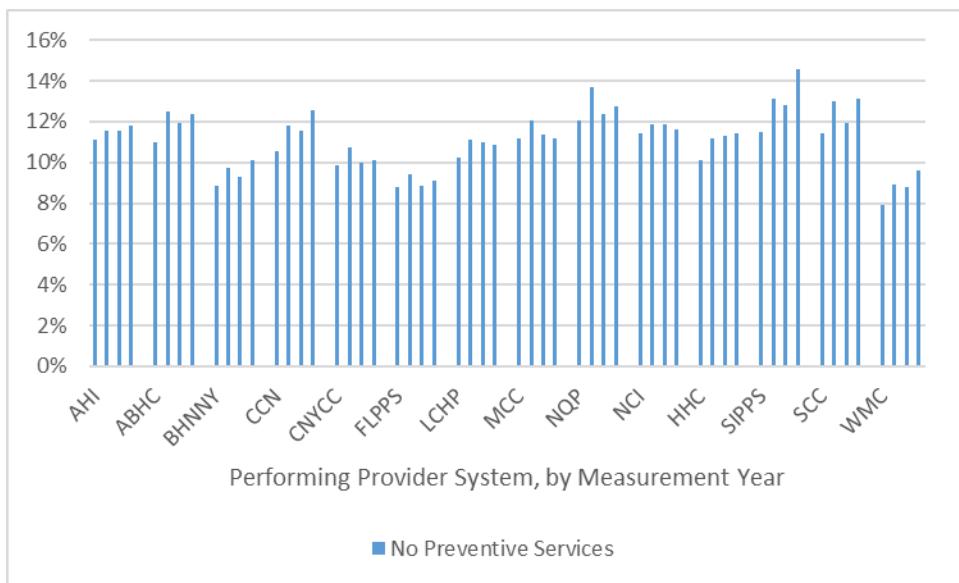
The final summative report will use the hospital discharge data to explore in more detail the utilization of ED and inpatient services among low-utilizing, non-utilizing, and uninsured populations. It will also consider additional specifications such as the volume of visits rather than a dichotomous measure of the delivery of any preventive services.

The following two exhibits display these measures in MY0, MY1, MY2, and MY3, by PPS. This is also limited to the 14 PPS that selected the eleventh project (patient activation). Each PPS has one bar per MY. Consistent with Exhibit 4.62, the blue bars in Exhibit 4.63 represent non-use of preventive services and the orange bars in Exhibit 4.64 represent the percentage ED visits comprised of self-pay patients.

There was notable variability in the percentage of non-use of preventive services. Across PPS, this measure ranged from 7.9% to 12.1% in MY0, from 8.9% to 13.7% in MY1, from 8.8% to 12.8% in MY2, and from 9.1% to 14.6% in MY3. Most of the PPS selecting the eleventh project experienced increased percentages of non-use or else constant levels across years.

Although the percentage of ED visits comprised of self-pay patients varied considerably across PPS, most of the PPS selecting the eleventh project had similar trends of declining percentages over time. Across PPS, this measure ranged from 7.9% to 29.6% in MY0, 5.3% to 26.0% in MY1, from 4.2% to 31.8% in MY2, and from 2.3% to 24.1% in MY3. A challenge of comparing PPS performance on this measure is that its value reflects several factors including the prevalence of insurance, the rate of ED utilization among the uninsured, and the rate of ED utilization among each PPS's attributed populations which differ across PPS (see Section 4.1 for details on inter-PPS variation in attributed members). For example, OneCity Health (HHC) has values that are substantially higher than other PPS, but its lead entity (New York City Health and Hospital Corporation) is the state's largest public hospital system and likely receives a disproportionate share of uninsured patients. Differences across PPS and over time should be interpreted cautiously.

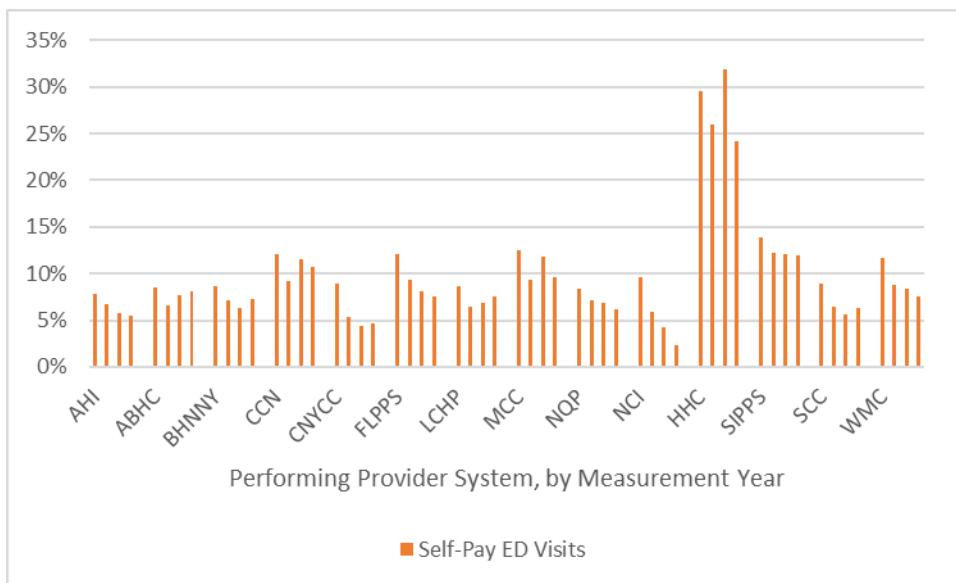
Exhibit 4.63. Percent of attributed Medicaid members with no use of preventive care services from MY0 to MY3 for those PPS that chose Project 2di.



Source: Authors' analysis of the DSRIP Dataset. "No Preventive Services" is the percent of attributed Medicaid members who did not have at least one claim with a preventative services code during the year.

Notes: Each PPS has four bars, one per DSRIP measurement year (MY). Within each PPS cluster, MY0 has the left position, followed by M1, MY, and MY3. The midpoints of the corresponding calendar years are January 2014 (MY0), January 2015 (MY1), January 2016 (MY2), and January 2017 (MY3). Results are limited to the 14 PPS that selected the eleventh project (patient activation).

Exhibit 4.64. Percent of emergency department visits comprised of self-pay patients, from MY0 to MY3, by PPS participating in Project 2di



Source: Authors' analysis of the DSRIP Dataset. "Self-Pay ED Visits" is the percent of all emergency department visits to hospitals in the PPS network during the year that had a payer typology of self-pay.

Notes: Each PPS has four bars, one per DSRIP measurement year (MY). Within each PPS cluster, MY0 has the left position, followed by MY1, MY2, and MY3. The midpoints of the corresponding calendar years are January 2014 (MY0), January 2015 (MY1), January 2016 (MY2), and January 2017 (MY3). Results are limited to the 14 PPS that selected the eleventh project (patient activation).

4.8. Assessment of Changes in Health Care Costs

This section addresses RQ-G:

Did the DSRIP program reduce health care costs? (Sub-question: Was the DSRIP program cost effective in terms of New York and federal governments receiving adequate value for their investments?)

A detailed cost assessment of the demonstration was not possible in time for the Interim Report and would likely be limited in its findings due to the initial time period where PPS efforts were focused on start-up activities and initiating implementation. For the Interim Report, the Independent Evaluator examined where there might be other information regarding Medicaid costs that would help inform the reader as to the state's performance on cost trends. The state reported on the Statewide Accountability Milestones (SWAM) for DY3 in its DSRIP, Year 3 Quarter 4 report to CMS.¹³⁵ The SWAM measure 3 is the Medicaid spending milestone and New York reports passing the DY3 milestone measure where costs for inpatient and emergency

¹³⁵ New York State Department of Health, Office of Health Insurance Programs (2018, May). New York DSRIP 115 Quarterly Report. January 1, 2018-March 31, 2018. Year 3, fourth quarter. Retrieved from: https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/quarterly_rpts/year3/q4/2018_jan-mar_report.htm

room spending were below the target trend rate. The DY4 SWAM information has not yet been made available. The final summative report will contain more detailed analyses of how costs have shifted over time, and differences across PPS over the entire course of the demonstration period.

5. Policy and Practice Implications

The New York DSRIP program seeks to achieve the triple-aim by fundamentally restructuring New York's health care delivery systems through investments in the Medicaid program and participating providers. This Interim Evaluation examined the DSRIP program's early implementation through part of Demonstration Year 4 and outcomes through Measurement Year 3 using mixed methods.

New York DSRIP program participants provided insights into the early years of the DSRIP program, through key informant interviews, focus groups, and surveys. The early years of the DSRIP program were important for capacity building and laying the foundation for improving clinical and population outcomes. Preliminary outcomes on several performance measures were also examined using administrative data. Because the DSRIP program is still ongoing and the data available on performance measures was limited to a small number of years before and after initiation of the program, it is too early for the Independent Evaluation to draw conclusions about the impact of the DSRIP program on quality, cost, service utilization, and overall system transformation.

Although it is premature to draw major conclusions about the impact of the DSRIP program on health outcomes and cost based on the Interim Evaluation, New York's performance on statewide accountability milestones suggest that New York is starting to make progress on its DSRIP performance goals. As described in Section 2.2, the DSRIP program's STC identifies four milestones for which statewide performance is evaluated annually, beginning in Demonstration Year 3. Failure to meet performance goals on any of the four milestones results in a financial penalty that increases over time. In its first and only year of assessment to date, New York exceeded targets on all four of its statewide milestones.¹³⁶ Notably, performance either improved or was maintained on 12 of the 16 measures used to assess statewide measure performance in DY3 (e.g., potentially preventable readmissions), nearly 60% of project-specific and population-wide measures were met statewide, total statewide inpatient and emergency room spending was below the target rate, and 34.6% of all managed care organization

¹³⁶ The specific performance goals for the four milestones in DY3 were: (1) at least 50% of statewide performance measures must be determined to be improving/maintaining, versus worsening (minimum of 9 of 16 measures in DY3); (2) at least 50% of eligible project-specific and population-wide quality metrics must be meet thereby triggering an award to PPS (minimum of 1,352 out of 2,702 measures in DY3); (3) total statewide hospital inpatient and emergency room spending among attributed members must be below the annual per member per month target (\$206.24 per member per month in DY3); and (4) at least 10% of total managed care organization expenditures must be captured in Level 1 or above value based payment contracts.

expenditures were in Level 1 or above value based payment contracts.¹³⁷ The purpose of evaluating performance on the statewide accountability milestones and the method for determining if performance met milestones agreed to by New York and CMS differ somewhat from the purpose and methods of the Independent Evaluation of the DSRIP program. Nevertheless, New York's achievement on the statewide milestones in their first year of assessment provides some additional evidence that health care outcomes are trending in a positive direction.

Recognizing the importance of patient-centered care to system transformation, all primary care practices in PPS were expected to meet National Committee for Quality Assurance (NCQA) Level 3 patient-centered medical home (PCMH) standards by the end of DY3 (March 31, 2018). Because the interim evaluation addresses performance outcomes up to the end of MY3 (June 30, 2017), it would not adequately capture the DY3 PCMH milestone. Therefore, PCMH measures will be examined in more detail in the summative evaluation and are not included in this interim report. However, internal analyses by the NYS DOH using data up to June 30, 2018 suggest that the DSRIP program has had a positive impact on increasing the number of new PCMH providers and providers who moved up to Level 3, especially compared to providers who are not partnered with a PPS.

Because it is still early to draw conclusions based on the evaluation of performance measures, this section will focus on early observations and implications for practice from the implementation and process component of the evaluation, including both success and challenges. The final summative report will include findings on the overall outcomes of the program, using additional performance measures and data from all DSRIP Demonstration Years and more extensively triangulate implementation and process results with performance measure results. The summative report will also provide more extensive analysis of PPS level performance, including comparing performance on specific DSRIP program projects. The additional analyses included in the summative report will provide a more complete understanding of the New York DSRIP program and will, therefore, present a more detailed synthesis of implications for state and federal policy.

5.1. Successes of the DSRIP Program to Date

5.1.1. Collaboration and Breaking Down “Silos”

The New York DSRIP program takes a comprehensive, multi-stakeholder approach to system transformation. The structure of the program, with coalitions of partners forming PPS to work on a specific set of projects, necessitates collaboration and the breaking down of “silos” between a broad range of provider types, and investments in infrastructure development and capacity building (e.g., governance, technology, human resources). Although this is challenging

¹³⁷ New York State Department of Health, Office of Health Insurance Programs (2018, May). New York DSRIP 115 Quarterly Report. January 1, 2018–March 31, 2018. Year 3, fourth quarter. Retrieved from: https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/quarterly_rpts/year3/q4/2018_jan-mar_report.htm

and takes time for the full results of these efforts to be realized, data collected from PPS key informants and engaged-partners indicate that the DSRIP program has been a catalyst for changing the way many providers and organizations think about and provide care to Medicaid members and to the population as a whole. This was seen early on during the start-up phase when PPS were forming, selecting projects, and setting “speed and scale targets” in Demonstration Year 0, and has continued through implementation and the early years of operations. Many stakeholders reported that the DSRIP program increased collaboration between providers and organizations and allowed stakeholders to work together towards common goals. Notably, new collaborations were established between providers and organizations that had never worked together before, considered themselves competitors, or who were previously mistrustful of each other. In the beginning, this was not always easy and obtaining buy-in and aligning different objectives took time. The general consensus was that involving a broad-based group of partners early on was vital to a well-functioning group and continued engagement. Stakeholders also reported that increased collaboration and shared goals led to new ideas and brought communities closer together. As one PPS key informant noted, “We have made great strides with collaboration between organizations that without DSRIP would have never collaborated. We really pride ourselves on this; that we brought the community together.” This collaboration has become a standard process which many PPS and engaged-partners expect to continue after the DSRIP program has ended.

The DSRIP program has further helped break down silos between providers and organizations through shared accountability. Shared accountability, which many stakeholders view as a major step for the health care system, has encouraged providers and organizations to develop connections that encourage them to work together to maintain responsibilities for their patients. In particular, a majority of PPS key informants interviewed saw their new work with community-based organizations as a vital change to the health care system. Community-based organizations that had not previously considered their organizations to be part of the health care system also began seeing their roles differently. In many cases, community-based organizations and health care providers developed a common vocabulary and were starting to “look at the same picture from almost the same perspective.”

5.1.2. Observed Positive Changes in the Delivery of Care

Overall, PPS key informants, focus group participants, and partner survey respondents observed that the DSRIP program, to date, has contributed to many positive changes in the way care is provided, including movement towards patient-centered, continuous, and coordinated care.

Consistent with increased collaboration and shared accountability, PPS key informants and focus group participants most often cited improved care transitions, the integration of primary care with behavioral health care, and encouragement of innovation as specific positive outcomes of the DSRIP program so far. These are all goals of the DSRIP program, and pre-requisites for a high-performing health care system.

The results of the partner survey provide further evidence that providers have observed positive changes in the way care is being delivered since the initiation of the DSRIP program. The majority of partner survey respondents in 2018 reported that services at their organization have changed for the better since the initiation of the DSRIP program. Findings did vary somewhat by organization type, with respondents working at hospitals most likely to report having observed positive changes and respondents working at community-based organizations among those least likely. Similar to key informants and focus group participants, the most commonly cited benefit from the DSRIP program observed by 2018 partner survey participants was coordinated care. These findings also varied somewhat by provider type.

It is also important to include patient experiences when evaluating the impact of the DSRIP program on changes to the delivery of care. Surveys of Medicaid attributed members showed that overall in New York, members were already at a high level of satisfaction with their health care providers.

5.1.3. Increased Understanding of and Preparation for Value Based Payment

Value based payment is a key component of the DSRIP program and overall Medicaid redesign in New York. In 2015 CMS approved the NYS DOH Value Based Payment Roadmap, a five-year plan for comprehensive Medicaid payment reform.¹³⁸ New York's Medicaid payment reform requires all Medicaid managed care organizations to shift 80-90% of provider payments from fee-for-service to value based payment arrangements by the end of the DSRIP program in 2020.¹³⁹ The overall goal is to ensure that payment systems reward and promote the sustainability of the integrated delivery system that the DSRIP program aims to create.

Changing health systems in an environment where both fee-for-service and value based payment operate simultaneously is challenging, and requires organizational focus and capital. In addition to educational resources provided by the NYS DOH, most PPS have provided significant partner education activities for the shift to value based payment, and many PPS launched surveys and listening tours to learn more about their partner's needs. Most PPS key informants felt that these were important activities and were helpful in educating partners about how to operate in a value based payment environment. Partner survey results suggest that these activities have been fairly successful at educating partners about value based payment, with the majority of partners reporting that they were at least somewhat knowledgeable about value based payment and that their organization had made changes to prepare for value based payment. In addition to education and training, some PPS reported they have invested in infrastructure using DSRIP funds to prepare for value based payment, particularly in the area of health information technology connectivity and data analytics to better prepare their partners to operate in a value based payment environment. Several PPS

¹³⁸ Center for Medicaid and Medicaid Services, State Demonstrations Group (2015). New York VBP Roadmap SFY 2015 [Approval Letter]. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/2015-07-15_cms_vbp_roadmap_approval_letter.htm

¹³⁹ New York State Department of Health, Medicaid Redesign Team (2015). A Path toward Value Based Payment: New York State Roadmap for Medicaid Payment Reform. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/vbp_reform.htm.

key informants also increased engagement of managed care organizations, which they viewed as crucial since they will be negotiating contracts with partners in a value based payment system.

Although there is a better understanding of value based payment and preparations are being made to move in this direction, challenges remain for PPS and partners. These challenges are described in more detail in Section 5.2.

5.2. Challenges of the DSRIP Programs to Date

The New York DSRIP program is an ambitious program to fundamentally transform New York's health system into a "financially viable, high-performing health system."¹⁴⁰ Any large, complex program is likely to encounter challenges when trying to reform a health care system that is equally complex, especially in the context of a five-year demonstration program. Although these challenges need to be recognized, it is also important to note that many DSRIP program participants have been able to overcome early challenges and move forward in their efforts. Identifying program challenges can also provide valuable lessons for CMS and states that are considering DSRIP programs.

5.2.1. PPS Formation and Start-Up

The New York DSRIP program has required considerable time and resources on the part of participants, including investment in relationship-building, governance, staff, technical expertise, education, and technology resources. Most DSRIP program structures had to be created anew, including the formation of PPS, in a very short time frame. Each PPS consists of a lead entity that forms partnerships with community providers, leads strategies and efforts, and is responsible for collective performance. Challenges were sometimes encountered during PPS formation and application development, including alignment on key issues, allocation of resources, and leadership structure. This was particularly the case in regions where many competitors were organized into a small number of PPS. These challenges were often addressed and resolved, allowing the group to develop a better functioning relationship by the final application phase, but this took time and effort. Overall, PPS that already had some existing structures in place, such as those evolving from a unified health system or those that had previously begun DSRIP-like initiatives, were able to quickly pivot to the requirements of PPS formation and related work. Other PPS with no existing infrastructure in place faced additional early challenges with project implementation and partner engagement. It was difficult for them to simultaneously build infrastructure for a new organization, engage partners, and adhere to the breadth and pace of DSRIP program project requirements.

Some PPS encountered other challenges with start-up and the early stages of implementation, including understanding Domain 1 project milestones, difficulty setting appropriate targets based on the information available, and not knowing their PPS's attribution in advance, making

¹⁴⁰ New York State Department of Health. (n.d.). DSRIP Project Toolkit. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/docs/dsrip_project_toolkit.pdf.

it difficult to set speed and scale targets. These particular challenges occurred at the beginning of the DSRIP program when all entities, including the NYS DOH, were working on multiple start-up tasks simultaneously, resulting in what many PPS perceived to be continually changing requirements and a lack of clear and consistent information.

5.2.2. Operations

Operational challenges mainly occurred in the areas of PPS overlap, value based payment preparation, funds flow, and data and information technology.

PPS Overlap: In regions with PPS overlap, some providers worked with multiple PPS on DSRIP program projects. Partners working with multiple PPS were sometimes frustrated by differing interpretations of DSRIP program rules by each PPS, overwhelmed by working with multiple PPS administrations, and struggled to meet DSRIP project reporting requirements. Most PPS key informants noted that they had not originally built their service models to be collaborative with other PPS and therefore found overlap difficult. However, while PPS key informants acknowledged challenges with overlapping PPS at the design and initial implementation phase, some felt they had overcome these challenges by collaborating with other PPS to develop similar reporting requirements and alignment of other procedures.

Value Based Payment: Although many of the efforts by PPS and the NYS DOH to prepare for the shift to value based payment have been well received and resulted in improved understanding and infrastructure investments on the part of PPS and their partners, challenges remain. Several partner focus-group participants felt that educational programs did not provide useful information, or they did not feel that they gained enough information to enter the value based payment landscape confidently. For example, one 2018 hospital regional focus group participant noted that they would have liked to have learned more about “how to develop the organization to support [value based] contracts or poised the organization to be successful in these contracts rather than just how to write or negotiate the contract.”

A number of PPS key informants reported targeting some support specifically towards community-based organizations, since they were often less prepared for the shift to value based payment than medical providers. Despite these efforts, focus group participants from community-based organizations felt that value based payment models were not structured to include them and expressed concern about the sustainability of their work if they did not have the ability to demonstrate their value for value based payment contracts, a concern shared by multiple types of focus group participants.

The results of the partner survey also reflect the concern that some providers and organizations have about the shift to value based payment. The majority of survey respondents said they needed more resources to facilitate the shift to value based payment, including additional funding, one-on-one consulting, improved access to performance data, additional training, or peer training and support. The types of resources needed varied by provider and organization type. Overall, continued efforts and resources may be needed to prepare providers for value based payment, and these should reflect the specific needs of different organization types.

Funds Flow: The PPS Lead is responsible for distributing funds to participating providers based upon the budget and funding distribution plan they developed and submitted in their DSRIP application. The New York DSRIP program's Special Terms and Conditions (STC) specify that 95% of a project's total valuation must go to safety net providers; non-safety net providers are eligible to receive, in aggregate, no more than 5% of a project's total valuation. The amount of time it took for PPS to establish contracts with individual providers and organizations, and ultimately distribute funds, varied. Many PPS were able to move funds to partners quickly and felt that this improved relationships, while others took a more deliberate approach. The time it took to distribute funds was often based on the level of PPS infrastructure that existed before the DSRIP program began. New Corporation PPS ("NewCos") without established infrastructures tended to struggle more often with delays and lapses in the flow of funds.

Several partners and PPS key informants mentioned that the 5% funding limitation to non-safety net providers created challenges by alienating key partners that were fundamental to the DSRIP program's success. Likewise, several partner organizations, particularly non-hospital participants, expressed concerns about the time it took for them to receive funds. Several organizations also reported that the level of funding was not commensurate with the effort they were putting in to the DSRIP projects. Many partners reported a desire to see the NYS DOH monitor whether funds were making their way to non-hospital participants, including community-based organizations and clinical practitioners.

Data Access and Sharing: Data access and sharing was a significant issue throughout DSRIP program implementation and could affect operations. Transformation to a coordinated, patient-centered system of care requires ready access to clinical, administrative, and financial data. Both PPS and partners were often frustrated by difficulties accessing data provided by the NYS DOH, and PPS were not always able to access the data their partners were collecting. Respondents reported substantial challenges with data lag, data access, and data sharing. The PPS did not have access to NYS DOH electronic data during Demonstration Years 0-2, making it difficult to obtain the information they needed to develop projects and track progress. Even when entities were able to access data, reporting lags made it difficult for PPS and partners to know their current performance level and adjust interventions accordingly. The need for real-time data to measure real-time impacts was a common theme across PPS key informants and partners. Many PPS and partners also found it difficult to access certain types of data that would be useful, particularly managed care data. Challenges were also encountered by PPS in their attempt to share data with their partners, due to patient privacy regulations or uncertainty about privacy regulations. Many PPS key informants thought that it would be helpful to have additional guidance from the NYS DOH on data sharing issues in order to maximize the utility of data.

Many PPS developed their own internal data systems to address data lags and barriers to data sharing. In some cases, accessing needed data from their partners was difficult because of the wide variety of electronic health records systems used by partners, and the fact that some partners did not have electronic health records (particularly community-based organizations). This required some PPS to assist their partners with new electronic health systems or to provide

support to enhance the ones they already had. Although these systems were important to guide efforts to close gaps in patient care and meet performance targets, several respondents believed that steps should have been taken early on in the DSRIP program to avoid the need to create so many separate systems statewide.

5.3. Implications for Practice from Early Findings

The New York DSRIP program is a potential model for other states interested in systemwide transformation of their Medicaid program. Although it is still too early to fully assess DSRIP program delivery system changes and their impact on performance outcomes, early findings on DSRIP implementation and processes can provide insights for practice. This section briefly presents some of the practical considerations for states and CMS when planning comprehensive health care system transformation efforts. The final summative report will more fully consider implications for state and federal health policy and the potential for New York's DSRIP program to be replicated in other states.

- **Collaboration:** Improved collaboration between a broad spectrum of providers and organizations necessary to provide the continuum of care for Medicaid members and to address health care holistically is possible, but it takes time and effort to align priorities, build trust, and change culture. Efforts to improve collaboration and break down silos should start early, engage diverse stakeholders, and will require continued effort to maintain productive relationships.
- **Funds Flow:** Transparency of funds flow is important so that providers know what to expect before they agree to participate. If a goal is to increase the utilization of providers outside of hospital systems, state oversight of funds flow may be needed to ensure that it is taking place. If community-based organizations are relied on heavily for patient outreach and to impact the social determinants of health, their budgets may need to be increased or additional access to training or funding may be needed.
- **Geographic Overlap:** Overlapping administrative entities (e.g., PPS in New York) can potentially result in unintended complexities and possible inefficiencies. Minimizing or avoiding overlap in geographic health care referral regions can make it clearer which entities are responsible for what population, which allows for better program design and increased efficiency. It can also simplify reporting requirements for providers affiliated with multiple administrative entities.
- **Data Systems:** Data systems that allow providers and administrative entities to access and securely share up-to-date performance data is central to system transformation. Providers' electronic health records systems should be developed and linked as quickly as possible through health information exchange so other providers and administrative entities can access them to better coordinate projects and patient care. This may require careful thinking regarding how population health management may be done

securely while providing actionable data that meet HIPAA and interoperability requirements among diverse partners.

- **Managed Care Organizations:** Managed care organization decisions will have a large impact on provider payments moving forward, so they should be further engaged in programs intended to reduce hospitalizations, share data, and promote value based payment.

6. Interaction with Other State Initiatives

6.1. Overview

This section includes a discussion of New York's DSRIP program within an overall Medicaid context, interrelations of the DSRIP program with other aspects of the state's Medicaid program, and interactions with other Medicaid waivers and federal awards affecting service delivery, health outcomes and the cost of care under Medicaid.

As described in Section 2.1, New York's DSRIP program is the main mechanism by which the state is implementing its health care transformation Section 1115 Medicaid Redesign Team (MRT) Demonstration Waiver Amendment. The DSRIP program complements, builds on, and, in some cases, accelerates, many of the other MRT initiatives and efforts in New York to align its health care system with the triple-aim by improving care, improving health, and reducing costs.

6.2. Improving Care and Improving Health

Making fully integrated care management available for all Medicaid beneficiaries is a core tenant under the "Improving Care" domain of the triple-aim. The MRT defines care management as provided either by health care providers, or health plans. At the time of the MRT launch the state had a mixture of care management organizations run by both managed care plans, and health care providers including hospitals, and primary care providers. Traditionally, more managed care plans and hospitals provide care management services, than do primary care providers due to the cost, however, the development of public and private accountable care organizations (ACOs) and ACO-like arrangements has resulted in more care management in primary care.^{141,142}

The MRT expects all Medicaid beneficiaries to be enrolled in a care management organization. Each care management organization must incorporate best practices and functions of patient-

¹⁴¹ L&M Policy Research, LLC. (2016, December 2). Pioneer ACO Final Report. Evaluation of CMMI Accountable Care Organization Initiatives (Contract HHSM-500-2011-00019i/HHSM-500-T0002). Retrieved from <https://innovation.cms.gov/files/reports/pioneeraco-finalevalrpt.pdf>

¹⁴² Mathematica Policy Research (2018, May). Evaluation of the Comprehensive Primary Care Initiative. Fourth Annual Report. Retrieved from <https://www.mathematica-mpr.com/our-publications-and-findings/publications/evaluation-of-the-comprehensive-primary-care-initiative-fourth-annual-report>

centered medical homes, health homes, health plans, and special needs health plans where relevant to the population. Care management organizations are expected to evolve and increase in numbers as a result of MRT efforts. New York's DSRIP program has resulted in many projects focused on care management and accelerated the use of care management statewide.¹⁴³

Several PPS have created new organizations focused on care management and other population health management functions such as health data analytics, and workflow transformation consulting. In particular, these new care management organizations focus on activities such as improving care coordination and transitional care, which are central to reducing hospital utilization and associated costs. Clinical data exchange is also critical to coordinating care, enabled by the State Health Information Network of New York (SHIN-NY). Care management activities are designed to improve health outcomes as measured by the Healthcare Effectiveness Data and Information Set (HEDIS) and Consumer Assessment of Healthcare Providers and Systems (CAHPS) measures, common among state Medicaid initiatives.¹⁴⁴

The creation of new care management organizations is consistent with the MRT goal of making integrated care management available to all Medicaid beneficiaries. It is unclear whether there are now (as a result of DSRIP) a sufficient number of care management organizations available for all beneficiaries, and whether the scope of these organizations is sufficient in that they provide for all patient needs including complete health, social needs, behavioral health, and long-term care (where appropriate). New York's DSRIP program has begun to lay the foundation and create the environment for integrated care management options to be more broadly available and, perhaps, for some PPS to sustainably transition, or transform into truly integrated organizations such as clinically integrated networks, ACOs, or evolved managed care organizations.¹⁴⁵

Care management is a key part of re-designing primary care. The MRT sought to ensure universal access to high quality primary care by focusing on patient-centered medical homes (PCMH). Goals under the MRT were to expand access to Level 3 PCMHs to all Medicaid patients. New York identified several steps that needed to be taken (and the state has been working on) to achieve this goal, including the provision of financial incentives and technical assistance to provider practices to support PCMH adoption and recognition; the recruitment and retention of primary care providers; and the expansion of physical infrastructure.¹⁴⁶ Greater emphasize on

¹⁴³ New York State Department of Health. (2011). A plan to transform the Empire State's Medicaid program. Better care, better health, lower costs multi-year action plan. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/mrtfinalreport.htm

¹⁴⁴ Bachrach, D., Bernstein, W., Augenstein, J., Lipson, M., & Ellis, R. (2016, April 21). Implementing New York's DSRIP program: implications for Medicaid payment and delivery system reform. Retrieved from <https://www.commonwealthfund.org/publications/fund-reports/2016/apr/implementing-new-yorks-dsrip-program-implications-medicaid>

¹⁴⁵ Ibid.

¹⁴⁶ New York State Department of Health. (2011). A plan to transform the Empire State's Medicaid program. Better care, better health, lower costs multi-year action plan. Retrieved from https://www.health.ny.gov/health_care/medicaid/redesign/mrtfinalreport.htm

adopting PCMHs was placed on providers by DSRIP program requirements, and by community stakeholders relying on structures for coordinated care.

Health homes, under the Affordable Care Act, are similar to PCMHs, but specifically focus on Medicaid members with chronic medical and behavioral conditions, and emphasize diverse stakeholder integration and care management. The MRT objective was to embrace the federal Health Home program, building on PCMHs and PCMH-like demonstration projects, and substantial statewide health information technology investments, in order to effectively manage the overall health of high need and the most vulnerable populations. Through this focus on a person's overall health, community-based organizations (CBOs) became a key stakeholder both leading and participating in Health Homes supporting a populations' medical and social wellness. New York's DSRIP program has continued the work of Health Homes by seeding and supporting critical community infrastructure led by CBOs. Without these community supports it is challenging to improve health outcomes.

6.3. Reducing Costs

New York is targeting initiatives to make its Medicaid program sustainable. The MRT focused on measures like the global spending cap, capitation, and Accountable Care Organizations (ACOs) and Advanced Health Homes to control Medicaid spending. Many of these measures are in the early stages of provider acceptance. The global spending cap requires that any new program expenditure be analyzed in terms of its ability to optimize value by improving quality and lowering the total cost of care. Medicaid spending in New York has remained within the global cap since the cap's initiation, while Medicaid coverage has expanded.

Another aspect of New York's cost reduction strategy is payment reform and transitioning away from Medicaid fee-for-service (FFS) to value based payment. Medicare ACOs are looked to for a shared savings model for Medicaid providers. Effective coordination between Medicaid, Medicare and other large payers is key to designing a financial risk model that is accepted by providers with the goal of aligning financial incentives and reducing adoption barriers. The existing PCMH and Advanced Primary Care incentive is an important foundational start that should evolve into a greater emphasis on performance data, ultimately supporting increased provider risk, and greater patient empowerment and responsibility. Claims data sharing by Medicaid to PPS (and from PPS to providers), as part of DSRIP, begins to create the financial awareness necessary to manage the total cost of care. Payment that aligns with care management service delivery provides for the time and focus needed to improve health outcomes. Initiatives under New York's DSRIP program are positioning and preparing community health service and medical providers to structurally organize their care teams and optimize health outcomes under accountable and global payment models.

Appendix 1. Projects Selected by Each Performing Provider System

Exhibit A1.1. List of projects by Performing Provider System

PPS and Number of Projects	Projects Selected
Adirondack Health Institute (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management 2. 2.a.ii Increase certification of primary care practitioners with PCMH certification and/or Advanced Primary Care Models 3. 2.a.iv Create a medical village using existing hospital infrastructure 4. 2.b.viii Hospital-Home Care Collaboration Solutions 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.a.iv Development of Withdrawal Management (e.g., ambulatory detoxification, ancillary withdrawal services) and abstinence services 4. 3.g.i Integration of palliative care into the PCMH Model <p><u>Domain 4</u></p> <ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.b.ii Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings
Alliance for Better Health Care (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management 2. 2.b.iii ED care triage for at-risk populations 3. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 4. 2.b.viii Hospital-Home Care Collaboration Solutions 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services

PPS and Number of Projects	Projects Selected
	<p>2. 3.a.iv Development of Withdrawal Management (e.g., ambulatory detoxification, ancillary withdrawal services) and abstinence services</p> <p>3. 3.d.ii Expansion of asthma home-based self-management program</p> <p>4. 3.g.i Integration of palliative care into the PCMH Model</p> <p><u>Domain 4:</u></p> <p>1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems</p> <p>2. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health</p>
Better Health for Northeast New York (11 projects)	<p><u>Domain 2:</u></p> <p>1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management</p> <p>2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes</p> <p>3. 2.a.v. Create a medical village/alternative housing using existing nursing home infrastructure</p> <p>4. 2.b.iii ED care triage for at-risk populations</p> <p>5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations</p> <p><u>Domain 3:</u></p> <p>1. 3.a.i Integration of primary care and behavioral health services</p> <p>2. 3.a.ii Behavioral health community crisis stabilization services</p> <p>3. 3.b.i Evidence-based strategies for disease management in high risk/affected populations</p> <p>4. 3.d.iii Implementation of evidence-based medicine guidelines for asthma management</p> <p><u>Domain 4:</u></p> <p>1. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health</p> <p>2. 4.b.ii Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings</p>
Bronx Health Access (10 projects)	<p><u>Domain 2:</u></p> <p>1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management</p> <p>2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes</p> <p>3. 2.b.i. Ambulatory intensive care units (ICUs)</p>

PPS and Number of Projects	Projects Selected
	<p>4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions</p> <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.c.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.d.ii Expansion of asthma home-based self-management program 4. 3.f.i. Increase support for maternal & child health (including high risk pregnancies) <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.iii. Strengthen mental health and substance abuse infrastructure across systems 2. 4.c.ii Increase early access to, and retention in, HIV care
Bronx Partners for Healthy Communities (10 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management 2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes 3. 2.b.iii ED care triage for at-risk populations 4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.b.i. Evidence-based strategies for disease management in high risk/affected populations (adult only) 3. 3.c.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.d.ii Expansion of asthma home-based self-management program <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.c.ii. Increase early access to, and retention in, HIV care
Care Compass Network (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management 2. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 3. 2.b.vii Implementing the INTERACT project (inpatient transfer avoidance program for SNF)

PPS and Number of Projects	Projects Selected
	<p>4. 2.c.i Development of community-based health navigation services</p> <p>5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations</p> <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.g.i Integration of palliative care into the PCMH Model <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.b.ii. Increase access to high quality chronic disease prevention care and management in both clinical and community settings
Central New York Care Collaborative (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management 2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes 3. 2.b.iii ED care triage for at-risk populations 4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.g.i Integration of palliative care into the PCMH Model <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.d.i Reduce premature births
Community Care of Brooklyn (10 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management

PPS and Number of Projects	Projects Selected
	<p>2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes</p> <p>3. 2.b.iii ED care triage for at-risk populations</p> <p>4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions</p> <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.d.ii Expansion of asthma home-based self-management program 4. 3.g.i Integration of palliative care into the PCMH Model <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.c.ii. Increase early access to, and retention in, HIV care
Community Partners of Western New York (10 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management 2. 2.b.iii ED care triage for at-risk populations 3. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 4. 2.c.ii Expand usage of telemedicine in underserved areas to provide access to otherwise scarce services <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.f.i Increase support programs for maternal & child health (including high risk pregnancies) 4. 3.g.i Integration of palliative care into the PCMH Model <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.i Promote mental, emotional and behavioral (MEB) well-being in communities 2. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health
Finger Lakes PPS (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management 2. 2.b.iii ED care triage for at-risk populations 3. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions

PPS and Number of Projects	Projects Selected
	<p>4. 2.b.vi Transitional supportive housing services 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations</p> <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.a.v Behavioral Interventions Paradigm (BIP) in Nursing Homes 4. 3.f.i Increase support programs for maternal & child health (including high risk pregnancies) <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.b.ii. Increase access to high quality chronic disease prevention care and management in both clinical and community settings
<p>Leatherstocking Collaborative Health Partners (11 projects)</p>	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.ii Increase certification of primary care practitioners with PCMH certification and/or Advanced Primary Care Models 2. 2.b.vii Implementing the INTERACT project (inpatient transfer avoidance program for SNF) 3. 2.b.viii Hospital-Home Care Collaboration Solutions 4. 2.c.i Development of community-based health navigation services 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.iv Development of Withdrawal Management (e.g., ambulatory detoxification, ancillary withdrawal services) and abstinence services 3. 3.d.iii Implementation of evidence-based medicine guidelines for asthma management 4. 3.g.i Integration of palliative care into the PCMH Model <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health

PPS and Number of Projects	Projects Selected
Millennium Collaborative Care (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management 2. 2.b.iii ED care triage for at-risk populations 3. 2.b.vii Implementing the INTERACT project (inpatient transfer avoidance program for SNF) 4. 2.b.viii Hospital-Home Care Collaboration Solutions 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.f.i Increase support programs for maternal & child health (including high risk pregnancies) <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.i Promote mental, emotional and behavioral (MEB) well-being in communities 2. 4.d.i Reduce premature births
Montefiore Hudson Valley Collaborative (10 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes 3. 2.a.iv Create a medical village using existing hospital infrastructure 4. 2.b.iii ED care triage for at-risk populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.d.iii Implementation of evidence-based medicine guidelines for asthma management <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health 2. 4.b.ii. Increase access to high quality chronic disease prevention care and management in both clinical and community settings

PPS and Number of Projects	Projects Selected
Mount Sinai PPS (10 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 3. 2.b.viii Hospital-Home Care Collaboration Solutions 4. 2.c.i Development of community-based health navigation services <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.iii Implementation of evidence-based medication adherence programs in community-based sites for behavioral health medication compliance 3. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.c.i Evidence-based strategies for disease management in high risk/affected populations <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.b.ii Increase access to high quality chronic disease preventive care and management in both clinical and community settings 2. 4.c.ii Increase early access to, and retention in, HIV care
Nassau Queens PPS (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.b.ii Development of co-located primary care services in the emergency department (ED) 3. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 4. 2.b.vii Implementing the INTERACT project (inpatient transfer avoidance program for SNF) 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.c.i Evidence-based strategies for disease management in high risk/affected populations <p><u>Domain 4:</u></p>

PPS and Number of Projects	Projects Selected
	<ol style="list-style-type: none"> 1. 4.a.iii. Strengthen mental health and substance abuse infrastructure across systems 2. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health
New York-Presbyterian PPS (10 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.b.i Ambulatory Intensive Care Units (ICUs) 3. 2.b.iii ED care triage for at-risk populations 4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.e.i Comprehensive Strategy to decrease HIV/AIDS transmission to reduce avoidable hospitalizations – development of a Center of Excellence 4. 3.g.i Integration of palliative care into the PCMH Model <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.b.i. Promote tobacco use cessation, especially among low SES populations and those with poor mental health 4.c.i. Decrease HIV morbidity
New York-Presbyterian Queens PPS (9 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.ii Increase certification of primary care practitioners with PCMH certification and/or Advanced Primary Care Models 2. 2.b.v Care transitions intervention for skilled nursing facility (SNF) residents 3. 2.b.vii Implementing the INTERACT project (inpatient transfer avoidance program for SNF) 4. 2.b.viii Hospital-home care collaborative solutions <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.d.ii. Expansion of asthma home-based self-management program 4. 3.g.ii Integration of palliative care into nursing homes <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.c.ii Increase early access to, and retention in, HIV care
North Country Initiative	<p><u>Domain 2:</u></p>

PPS and Number of Projects	Projects Selected
(11 projects)	<ul style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.a.ii Increase certification of primary care practitioners with PCMH certification and/or Advanced Primary Care Models 3. 2.a.iv Create a medical village using existing hospital infrastructure 4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ul style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.c.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.c.ii Implementation of evidence-based strategies to address chronic disease – primary and secondary prevention projects <p><u>Domain 4:</u></p> <ul style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.b.ii Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings
NYU Langone Brooklyn (9 projects)	<p><u>Domain 2:</u></p> <ul style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.b.iii ED care triage for at-risk populations 3. 2.b.ix Implementation of observational programs in hospitals 4. 2.c.i Development of community-based health navigation services <p><u>Domain 3:</u></p> <ul style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.c.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.d.ii Expansion of asthma home-based self-management program <p><u>Domain 4:</u></p> <ul style="list-style-type: none"> 1. 4.b.i. Promote tobacco use cessation, especially among low SES populations and those with poor mental health 2. 4.c.ii Increase early access to, and retention in, HIV care

PPS and Number of Projects	Projects Selected
OneCity Health (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes 3. 2.b.iii ED care triage for at-risk populations 4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.d.ii Expansion of asthma home-based self-management program 4. 3.g.i Integration of palliative care into the PCMH Model <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.c.ii Increase early access to, and retention in, HIV care
Refuah Community Health Collaborative (7 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.a.ii Increase certification of primary care practitioners with PCMH certification and/or Advanced Primary Care Models 3. 2.c.i Development of community-based health navigation services <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.a.iii Implementation of evidence-based medication adherence programs in community-based sites for behavioral health medication compliance <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health
SOMOS (10 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine / Population Health Management

PPS and Number of Projects	Projects Selected
	<p>2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes</p> <p>3. 2.b.iii ED care triage for at-risk populations</p> <p>4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions</p> <p><u>Domain 3:</u></p> <ul style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.c.i. Evidence-based strategies for disease management in high risk/affected populations (adults only) 4. 3.d.iii Implementation of evidence-based medicine guidelines for asthma management <p><u>Domain 4:</u></p> <ul style="list-style-type: none"> 1. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health 2. 4.b.ii Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings
Staten Island PPS (11 projects)	<p><u>Domain 2:</u></p> <ul style="list-style-type: none"> 1. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes 2. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 3. 2.b.vii Implementing the INTERACT project (inpatient transfer avoidance program for SNF) 4. 2.b.viii Hospital-based care collaborative solutions 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ul style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.iv Development of Withdrawal Management (e.g., ambulatory detoxification, ancillary withdrawal services) and abstinence services 3. 3.c.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.g.ii Integration of palliative care into nursing homes <p><u>Domain 4:</u></p>

PPS and Number of Projects	Projects Selected
	<ol style="list-style-type: none"> 1. 4.a.iii Strengthen Mental Health and Substance Use Infrastructure across Systems 2. 4.b.ii Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings
Suffolk Care Collaborative (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 3. 2.b.vii Implementing the INTERACT project (inpatient transfer avoidance program for SNF) 4. 2.b.ix Implementation of observational programs in hospitals 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations <p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.b.i Evidence-based strategies for disease management in high risk/affected populations 3. 3.c.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.d.ii Expansion of asthma home-based self-management program <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.a.ii Prevent Substance Use and other Mental Emotional Behavioral Disorders 2. 4.b.ii Increase Access to High Quality Chronic Disease Preventive Care and Management in Both Clinical and Community Settings
WMCH Health (11 projects)	<p><u>Domain 2:</u></p> <ol style="list-style-type: none"> 1. 2.a.i Create Integrated Delivery Systems that are focused on Evidence-Based Medicine/ Population Health Management 2. 2.a.iii Health Home At-Risk Intervention Program: Proactive management of higher risk patients not currently eligible for Health Homes 3. 2.a.iv Create a medical village using existing hospital infrastructure 4. 2.b.iv Care transitions intervention model to reduce 30 day readmissions for chronic health conditions 5. 2.d.i Implementation of Patient Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing populations

PPS and Number of Projects	Projects Selected
	<p><u>Domain 3:</u></p> <ol style="list-style-type: none"> 1. 3.a.i Integration of primary care and behavioral health services 2. 3.a.ii Behavioral health community crisis stabilization services 3. 3.c.i Evidence-based strategies for disease management in high risk/affected populations 4. 3.d.iii Implementation of evidence-based medicine guidelines for asthma management <p><u>Domain 4:</u></p> <ol style="list-style-type: none"> 1. 4.b.i Promote tobacco use cessation, especially among low SES populations and those with poor mental health 2. 4.b.ii. Increase access to high quality chronic disease preventive care and management in both clinical and community settings

Source: Authors' compilation of NYS DOH documents.¹⁴⁷

¹⁴⁷ New York State Department of Health. (n.d.). DSRIP Performing Provider Systems (PPS) [interactive webpage]. Retrieved October 18, 2018 from https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/pps_map/index.htm

Appendix 2. Algorithm to Attribute Members for Valuation and Performance¹⁴⁸

New York's Delivery System Reform Incentive Payment (DSRIP) program attributes Medicaid members and uninsured populations to the 25 Performing Provider Systems (PPS) based upon geography, actual use of services, and enrollee-specific needs (developmental disability, long-term care, behavioral health, and "other"). Each Medicaid member is attributed to one, and only one PPS, with a separate attribution for the initial valuation and thereafter the performance periods. This attribution process is instrumental in calculating total project valuation, ongoing payments, and some DSRIP measures (e.g., emergency department use, readmissions, and other measures in each domain).

Attribution for Valuation

The attribution for valuation was based on membership on December 1, 2014; it represents the maximum funding that a PPS could receive over its DSRIP duration. This fixed amount does not change even if the PPS drop or add partners over time.

If there is a single PPS in a region, the attribution for valuation logic is fairly straight-forward. All Medicaid enrollees in the region are attributed to the single PPS via the PPS partners in that area, regardless of their actual use of Medicaid services or projects selected (i.e., low utilizing and non-utilizing Medicaid members are attributed to the single PPS in the region). The uninsured population in the region are attributed to the single PPS if the PPS added the "11th project" (project 2.d.i, patient activation activities). For regions with single PPS providers, the hierarchical attribution logic is not applicable.

In regions with more than one PPS, the attribution for utilizing Medicaid members¹⁴⁹ is based upon the attribution logic summarized in Exhibit A.2.1. The attribution logic for utilizing Medicaid members is based upon two principles: hierarchy of health care needs ("swim lanes"), and hierarchy of the health care settings/PPS partners where patients receive most of their services ("loyalty").

The first step is looking at the plurality of the care. If utilizing Medicaid members received more than 50% of their qualifying services within a non-PPS participating service, they were removed.

The second step is hierarchical population selection, whereby Medicaid members are placed into one of four swim lanes. On the diagram, these are represented by the arrows in the top row moving from left to right. Developmental disability is the highest priority on the hierarchy, followed by long-term care and behavioral health. Beneficiaries not assigned to these groups are defined in a residual "all others" swim lane.

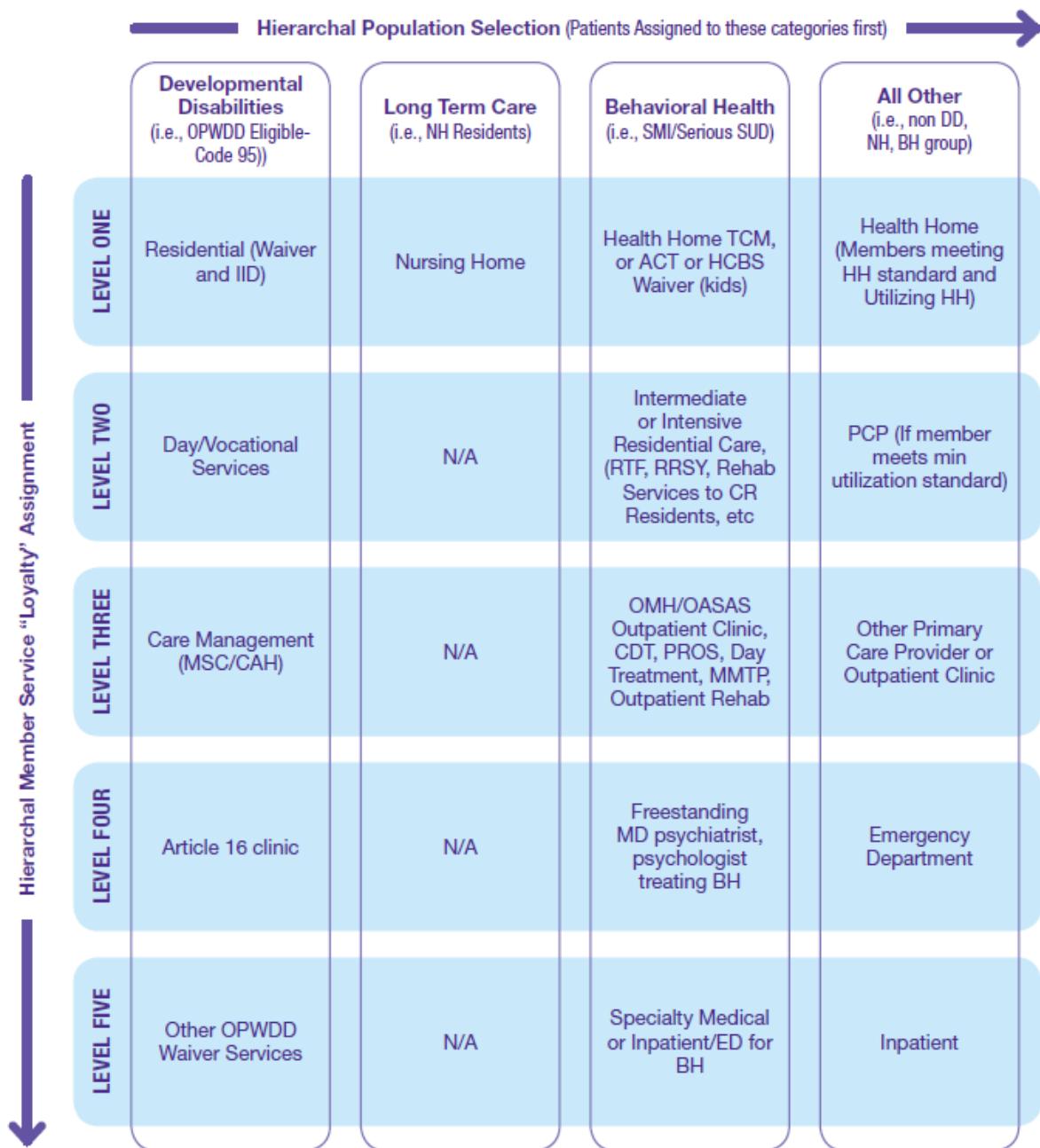
¹⁴⁸ Appendix 2 is adapted from New York DSRIP program STC, Attachment I retrieved from https://www.health.ny.gov/health_care/managed_care/appextension/2017-07-20_rev_att1.htm

¹⁴⁹ Utilizing Medicaid members are defined as those having more than three interactions with the health care system in the past year, and connectivity with a primary care physician or health home.

In the third step, a hierarchical member service loyalty logic is used to attribute individuals to a specific PPS. The loyalty logic is illustrated in Exhibit A2.1 by a movement from the top row downwards. Each swim lane considers different health care settings for the loyalty attribution. For Medicaid members with developmental disabilities, PPS attribution is first assigned based on the where they receive their residential services. If those services are not used, PPS attribution is subsequently assigned by their use of care management services, followed by Article 16 clinics, and finally other waiver services from the Office of Persons with Developmental Disabilities. For individuals assigned to the “all other” swim lane (i.e., they are not identified as a member of the developmental disability, long-term care, or behavioral health patient populations), the loyalty logic first considers the PPS in the region that contains their health home. If they are not using health homes, their assigned primary care providers are subsequently used to attribute them to a PPS. Subsequent considerations in the loyalty hierarchy are other primary care providers or outpatient clinics, emergency departments, or hospitals where they received the majority of their inpatient services.

For the purposes of attribution for valuation, low- and non-utilizing Medicaid members (defined as having three or fewer interactions with the health care system in the past year, and no connectivity with a primary care physician or health home) are attributed similarly to the uninsured population. Attribution of the uninsured and low- utilizing and non-utilizing Medicaid members is dependent on the types of PPS in the region and selection of the “11th project” (project 2.d.i, patient activation activities). In regions with more than one PPS, including a PPS that is led by or involves a public hospital (public hospital PPS) approved to do the 11th project, the uninsured and low-utilizing and non-utilizing members in the region are attributed to the public hospital PPS. As described in Section 2.2.4, non-public hospital PPS were allowed to pursue the 11th project in certain circumstances. In regions where there are multiple PPS, including non-public hospital PPS with approval for the 11th project, the uninsured and low-utilizing and non-utilizing Medicaid members are attributed based on the percentage of Medicaid members assigned to PPS in the region (e.g., if a non-public hospital PPS has 60% of the region’s Medicaid members they will get 60% of the uninsured and low-utilizing and non-utilizing members).

Exhibit A2.1. Hierarchical Attribution Logic



Source: Reproduced from the New York DSRIP program Special Terms and Conditions (STC), Attachment I.¹⁵⁰

Attribution for Performance

¹⁵⁰ Retrieved from

https://www.health.ny.gov/health_care/medicaid/redesign/docs/program_funding_and_mechanics.pdf

Although the method for attributing Medicaid members for performance is similar to attribution for valuation, there are some differences. Attribution for performance does not include a low-utilizing member category. For the purposes of performance, all utilizing Medicaid members, including low-utilizing members, are attributed based on the hierarchical logic presented in Exhibit A2.1 and described above in the attribution for valuation section. Non-utilizing Medicaid members are captured separately. Non-utilizing Medicaid members with a plan-assigned primary care provider (PCP) in a PPS network are included in the attribution counts for that PCP's PPS. If a non-utilizing Medicaid member is not assigned a PCP or a PCP tie exists, the member is attributed to the PPS with the largest presence in the member's zip code. The uninsured are attributed to PPS for performance using the same methodology as attribution for valuation.

Attribution for performance is determined monthly through the matching of the available Medicaid utilization data stemming from claims and encounter reporting to the providers in a PPS network. The member who was in PPS A who increases their utilization of a particular provider in PPS network B, may shift over into PPS B's attributed population for performance, subject to the hierarchical loyalty algorithm. The final performance measurement is based on the attributed population for performance of the final month of the measurement year.

Appendix 3. Additional Details on Research Questions and Hypotheses

The research questions (RQs) and hypotheses used in the Interim Report were edited and reordered from the original text in the CMS-approved Independent Evaluation plan (section B, pp. 5-9) for improved flow and presentation. These editorial changes were discussed with and approved by NYS DOH.

Exhibit A3.1 provides a crosswalk of the RQs listed in the CMS-approved Independent Evaluation plan and Interim Report. Key changes were:

- Reordering to match the presentation of findings in Section 4; the RQs in the Interim Report were relabeled as A through G to avoid confusion with the numbering of the CMS RQs
- Sub-questions from the expanded CMS-approved Independent Evaluation plan were added to RQ-C and RQ-G
- Stylistic edits for consistency throughout the Interim Report

Exhibit A3.1. Crosswalk of CMS research questions from the approved expanded evaluation plan

Interim Report Research Questions	CMS Research Questions
RQ-A. What were the successes and challenges with respect to PPS planning, implementation, operation, and plans for program sustainability from the perspective of DSRIP program planners, administrators, and providers; and why were they successful or challenging?	RQ7. What were the successes and challenges with respect to PPS planning, implementation, operation and plans for program sustainability from the perspectives of DSRIP planners, administrators and providers, and why were they successful and challenging?
RQ-B. Did health care quality improve as a result of clinical improvements in the treatment of selected diseases and conditions?	RQ2. Did health care quality improve as a result of clinical improvements in the treatment of selected diseases and conditions?
RQ-C. Did population health improve as a result of implementation of New York's DSRIP initiative? (Sub-question: Were racial and ethnic disparities on specific population measures reduced following the DSRIP program?)	RQ3. Did population health improve as a result of implementation of the DSRIP initiative?
RQ-D. Did utilization of behavioral health care services increase as a result of the DSRIP program?	RQ4. Did utilization of behavioral health care services increase as a result of DSRIP?
RQ-E. Was avoidable hospital utilization reduced as a result of the DSRIP program?	RQ5. Was avoidable hospital use reduced as a result of DSRIP?
RQ-F. To what extent did PPS achieve health care system transformation, including	RQ1. To what extent did PPSs achieve health care system transformation?

Interim Report Research Questions	CMS Research Questions
increasing the availability of behavioral health care?	
RQ-G. Did the DSRIP program reduce health care costs? (Sub-question: Was the DSRIP program cost effective in terms of New York and federal governments receiving adequate value for their investments?)	RQ6. Did DSRIP reduce health care costs?

Exhibit A3.2 provides a crosswalk of the hypotheses listed in the CMS-approved Independent Evaluation plan and Interim Report. Key changes were:

- Reordering to be consistent with their corresponding RQs (see Section 3.1 for the description of the RQs and hypotheses)
- Additional hypothesis related to supplemental sub-question RQ-C
- Stylistic edits for consistent wording and language
- Adjusted the terminology from “expenditure” to “costs,” to reflect the data available for analysis; for example, capitation payments to plans – one component of expenditures – were not examined
- Consistent language to clarify that all increases or decreases are in relation to the baseline trend; this is clarified in more detail in the main text (see Section 3.1)
- Two-part hypotheses (CMS H5 and CMS H7) were split into separate hypotheses
- The two CMS hypotheses related to expenditures and costs for emergency department and inpatient services (CMS H6, CMS H11) were reorganized into one hypothesis related to emergency department costs (H11) and one hypothesis related to inpatient services costs (H12)

Exhibit A3.2. Crosswalk of CMS hypotheses from the approved expanded evaluation plan

Interim Report Hypotheses	CMS Hypotheses
H1. Health care quality will increase in the following areas: (a) behavioral health, (b) cardiovascular health, (c) diabetes care, (d) asthma, (e) HIV/AIDS, (f) perinatal care, (g) palliative care, and (h) renal care.	CMS H8: Through clinical improvements implemented under DSRIP, health care quality in each of the following areas will increase: a) behavioral health, b) cardiovascular health, c) diabetes care, d) asthma, e) HIV/AIDS, f) perinatal care, g) palliative care, h) renal care
H2a. Population health measures will improve in the following areas: (a) mental health and substance abuse, (b) prevention of chronic diseases, (c) prevention of HIV and STDs, and (d) health of women, infants, and children.	CMS H9: Population health measures will show improvements in the following 4 areas: a) mental health and substance abuse, b) prevention of chronic diseases, c) prevention of HIV and STDs, d) health of women, infants, and children

Interim Report Hypotheses	CMS Hypotheses
H2b. Racial and ethnic disparities in premature deaths, newly diagnosed cases of HIV, preterm births, adolescent pregnancy rates, percentage of unintended pregnancy among live births, and infants exclusively breastfed in the hospital will decrease.	None listed; related to the RQ-C sub-question that was added in the expanded Evaluation Plan
H3. Behavioral health care service utilization will increase.	CMS H5: Utilization of, and expenditures for, behavioral health care service will increase
H4. Primary care utilization will increase.	CMS H3: Primary care utilization will show a greater upward trend
H5. Avoidable hospital utilizations will decrease.	CMS H10. Avoidable hospital use will be reduced
H6. Health care service delivery integration will increase.	CMS H1. Health care service delivery will show greater integration
H7. Health care coordination will increase.	CMS H2. Health care coordination will improve
H8a. Primary care, behavioral health, and dental service utilization among the uninsured, non-utilizing, and low-utilizing populations will increase.	CMS H7. Primary care, behavioral health, and dental service utilization will increase among the uninsured, non-utilizing, and low-utilizing populations, while emergency department use will decrease
H8b. Emergency department utilization among the uninsured, non-utilizing, and low-utilizing populations will decrease.	CMS H7. Primary care, behavioral health, and dental service utilization will increase among the uninsured, non-utilizing, and low-utilizing populations, while emergency department use will decrease
H9. Costs for primary care services will increase.	CMS H4. Expenditures for primary care services will increase
H10. Costs for behavioral health care services will increase.	CMS H5. Utilization of, and expenditures for, behavioral health care service will increase
H11. Costs for emergency department services will decrease.	CMS H6: Expenditures for emergency department and inpatient services will decrease; CMS H11: Costs associated with hospital inpatient and ED services will show reductions or slowed growth
H12. Costs for hospital inpatient services will decrease.	CMS H6: Expenditures for emergency department and inpatient services will decrease; CMS H11: Costs associated with hospital inpatient and ED services will show reductions or slowed growth
H13. Total cost of care will decrease.	CMS H12. Total cost of care will show reductions or slowed growth

Appendix 4: Key Informant Interview Guides

Appendix 4 includes the guides used for the key informant interviews in 2017 and 2018. Key informant interviews were conducted by telephone and lasted between 60 and 90 minutes.

PPS Executive Team Key Informant Interview Guide 2017

Introductory Script (to be read to all informants prior to the interview):

Thank you for taking the time to speak with me today. My name is _____, and I am a member of the NY DSRIP Independent Evaluation team. As you know from the email and the webinar materials, I have been asked to interview PPS administrators to discuss the history of the PPS formation as well as the successes, and challenges with the initiative.

We know your PPS has extensive reporting requirements to DOH. To that end, from publicly facing sources like your website, the PPS applications, and Independent Assessor posted quarterly reports we have collected a summary of your existing projects and would like to just quickly go over them so you can confirm the information we have is accurate and up-to-date.
[Insert detailed PPS projects summary and other relevant information (geographic areas serving, major changes to projects, other known issues)].

Before I pose any questions, I want to go over a few guidelines that will help us complete the discussion:

- Please keep in mind that there are no right or wrong answers. We are seeking your candid feedback on the initiative so far.
- Because we are on the phone, please state your name before you answer a question for the first time. This may feel awkward, but it will be easier as we proceed.
- I am having our discussion recorded. As a backup to the tape, I am having a research assistant, Melissa, listen in with me and take notes.

Now let's begin with introductions so I know who is here. Can all of you provide your names and your titles with a short description of what you do at the PPS?

Have I missed anything about your PPS that I should know before we get started?

Great, now I will go through the questions we have prepared.

1. How was your PPS initially formed? (*If knowledgeable about PPS development*)

- a. Probe: Who were the key champions (people, organizations) of the PPS in the early stages of formation?
- b. Probe: Who developed or contributed to the DSRIP application process (e.g., staff, consultants, community partners)?
- c. Probe: What worked well about the formation?
- d. Probe: What about project selection?

OR

- 1. How did you get involved with DSRIP teams or projects? (*If not knowledgeable about PPS development*)**
 - a. Probe: Please tell us about your involvement in any board, clinical, project workgroups, regional community partner committees, etc.
 - b. Probe: Who are the champions and key members/member organizations of these committees?
- 2. What are some of the biggest challenges your PPS experienced during the early phases (e.g., years 0-2) of project implementation?**
 - a. Probe: Specific project workflows, engagement with community partners, communication approaches, staff buy-in, etc.
 - b. Probe: Did project(s) start dates get delayed or hit major road blocks along the way? If so, please describe them.
 - c. Probe: Are projects not meeting speed and scale targets? If not, why?
 - d. Probe: In your view, which projects require more resources to operate?
 - i. Why do you think it's these projects in particular?
 - e. Probe: What type of resources are the projects lacking?
 - i. e.g., Staffing, Leadership, Community Networks, IT, Physical Infrastructure, Clinical Knowledge, Patient-related needs
- 3. What are some of the biggest successes that you have experienced during the early phases (e.g., years 0-2) of project implementation?**
 - a. Probe: Community needs assessment and the application process?
 - b. Probe: Specific project workflows, engagement with community partners, communication approaches, etc.
 - c. Probe: Project innovations? If yes, please describe them.
 - d. Probe: Projects are meeting or exceeding speed and scale targets? If so, why?
- 4. Please tell us about PPS committees that are related to its governance and about the effectiveness of your PPS' committees in meeting its goals and objectives.**
 - a. Probe: Have you restructured your committees since formation? From project workgroup to performance focused workflow?
 - b. How are these committees used to communicate important information about the PPS or projects?
 - c. Probe: Who are the champions and key members/member organizations of these committees?
 - d. Probe: What has been challenging with regards to the committees?
 - e. Probe: What is the relationship between the PPS and external committees, such as associated hospitals?
- 5. What data are being collected by your PPS and/or NYS DOH that you believe to be the most important to understanding overall DSRIP program success?**

- a. Probe: What are the least important aspects of data collection?
 - b. Probe: How is performance communicated to PPS staff? Community providers?
 - c. Probe: What about reporting: Partner to PPS reporting, PPS to state reporting?
- 6. From your perspective, how valuable is the account support provided by NYS and its consultants? How valuable is the project implementation support?**
- a. Probe: What are the most effective types of TA provided to your PPS?
 - b. Probe: What are the least effective types of TA provided to your PPS?
 - c. Probe: Who is included in regional and/or statewide DSRIP meetings from your PPS?
- 7. In your view, has DSRIP changed the health care system??**
- a. Probe: If yes, for whom? How?
 - b. Probe: If no, why do you think it has remained the same?
- 8. Is there anything you would like to comment on regarding DSRIP in general?**
- a. Probe: What would you ask another PPS if you could?
 - b. Probe: Suggestions for improvement
 - c. Probe: Anything we have not touched on in this interview

Should you have any questions about this interview or evaluation, please feel free to contact Diane Dewar, Principal Investigator for this study at ddewar@albany.edu.

Project Leader Key Informant Guide 2018

Introductory Script (to be read to all informants prior to the interview):

Thank you for taking the time to speak with me today. My name is _____, and I am a member of the NYS DSRIP Independent Evaluation team at the University at Albany. I am here with my colleague(s) _____ who will be assisting me today. As you know from the emails and FAQ sheet, we have been asked to interview PPS project leaders to discuss the planning, implementation and operations of DSRIP projects as well as the successes and challenges with the initiative.

Thank you to those of you who completed the pre-survey we sent out. Your responses were very helpful in getting to know you all a little bit better and providing us with project-specific information for [insert PPS name]. Today's interview is going to build off of the questions that were asked in the survey.

Before I pose any questions, I want to go over a few guidelines that will help us complete our discussion:

- Our interview consists of a series of open-ended questions that are very broad in nature, and this is intentional to elicit a wider response. Please free to answer these questions based on your knowledge, feelings, understanding and experience.
 - Please keep in mind that there are no right or wrong answers. We understand that each of you may have different perspectives. We are seeking your candid feedback on the initiative so far. What we learn from this interview will be included in reports submitted to NYS DOH and your responses will be de-identified.
 - Because we are on the phone, please state your name before you answer a question for the first time. This will help us accurately record your responses.
 - We are having our discussion recorded and as a backup to the tape, _____, is taking notes.
 - We've built in some time (through our last question) to capture any of your final thoughts or anything we may have missed, so feel free to share at that time.
-

Now let's begin with introductions so we know who is here. Can all of you provide your names and your titles with a short description of what you do at the PPS?

Great, now I will go through the questions we have prepared.

- 1. What are some of the biggest challenges your PPS experienced (during years 0-present) of project implementation?**
 - Probe: Specific project workflows, engagement with community partners, communication approaches, funding and contracting challenges, staff buy-in, etc.
 - Probe: Did project(s) start dates get delayed or hit major road blocks along the way? If so, please describe them.
 - Probe: Are projects meeting speed and scale targets? If not, why?
 - Did attribution shifts affect this?
 - Probe: In your view, which projects require more resources to operate?
 - Why do you think it's these projects in particular?
 - Probe: What type of resources were the projects lacking?
 - e.g., Staffing, Leadership, Community Networks, IT, Physical Infrastructure, Clinical Knowledge, Patient-related needs
 - Probe: Overlap with other PPS entities in your counties
- 2. What are some of the biggest successes that you experienced during project implementation?**
 - Probe: Specific project workflows, engagement with community partners, communication approaches, etc.
 - Probe: Project innovations? If yes, please describe them.
 - Probe: Projects are meeting or exceeding speed and scale targets? If so, why?

- 3. What data are being collected by your PPS and/or NYS DOH that you believe to be the most important to understanding overall DSRIP project success?**
 - a. Probe: What data do you wish you had access to?
 - b. Probe: How is performance communicated to PPS staff? Community providers?
 - c. Probe: What about reporting: Partner to PPS reporting, PPS to state reporting?
- 4. From your perspective, how valuable is the support provided by NYS DOH and its consultants (i.e. KPMG, PCG- IA, ASTs)?**
 - a. Probe: How valuable is the project implementation support?
 - i. Specific symposiums/meetings? MAX series? PPS meetings?
 - b. Probe: What are the most effective types of TA provided to your PPS?
 - c. Probe: What are the least effective types of TA provided to your PPS?
- 5. What have you done to prepare for the shift to value-based payment?**
 - a. Probe: Are projects sustainable beyond DSRIP? Will VBP support them? If not, what else is needed to support them (regulatory changes, billing changes, practice/professional scope, etc.)
- 6. In your view, have DSRIP projects changed the health care system?**
 - a. Probe: If yes, for whom? How?
 - b. Probe: If no, why do you think it has remained the same?
 - c. Probe: Has care changed for patients?
- 7. Is there anything you would like to comment on regarding DSRIP in general?**

Thank you all for your time and feedback, it's been very helpful to get all of your perspectives!

Appendix 5: Focus Group Guide

Appendix 5 provides the template used for partner focus groups conducted in 2017 and 2018. The focus group guide was tailored to the specific categories of providers that attended a given focus group. Questions that were only asked of certain categories of providers are indicated in the template below.

Focus Group Guide 2017 and 2018

Welcome, everyone. Thank you for taking time out of your busy schedule to attend today's focus group. My name is [name], and this is [research assistant]. I will conduct the discussion, and my assistant [name] will observe and take notes. We are from University at Albany, and we are conducting these focus groups as part of an independent evaluation of DSRIP. The evaluation is also collecting feedback and data from surveys.

The purpose of today's focus group is to gather information that will contribute to our understanding of how the Delivery System Reform Incentive Payment (DSRIP) transformation is affecting [PROVIDER CATEGORY] in New York State. In today's focus group, I will ask you several questions. Your personal opinions and views are very important for us to understand. There are no right or wrong answers. Please feel welcome to express yourself freely during the discussion – we appreciate your candor and your willingness to participate.

There are a few practical issues I would like to discuss before we get started. The focus group today will last for 90 minutes. We understand that you are busy health care professionals, so we fully understand if you are paged or need to step outside to take a phone call or respond to a message.

We value the opinion of each and every one of you here, and we would like to give everyone the chance to express their opinions during the conversation. We are only talking to a limited number of [provider types] so feel free to express your opinion, even if it differs from everyone in the group, as your perceptions may represent many others across New York State. We will be tape recording today's session to ensure that we accurately capture everything that is discussed. We want to be as attentive as possible to what is shared today because we value your time and your participation. The recording will help us expand upon the handwritten notes and catch any important details that are missed in the notetaking process. None of what we record or write down today will be attributed to any individuals or identified by name or organization. Tapes will be destroyed as soon as they are transcribed. If something comes up that you do not want recorded, we can turn off the recorder at that point.

1. Tell us your name and your organization and briefly how your engagement with DSRIP began.
2. How has the DSRIP transformation affected your responsibilities at the organization you work for?
3. What services does your organization provide? Do you bill Medicaid for those services? [only for focus groups with mental health and substance use professionals]

4. What type of services does your organization provide? [only for focus groups with community-based organizations]
5. Looking back to when DSRIP began, how would you characterize implementation and operation of DSRIP?
6. Looking back over the first few years, what has worked well with DSRIP?
7. What has worked less well over the first few years?
8. Have you formed any new connections with other practitioners [clinical groups/organizations]?

Prompt: If so, why?

Prompt: Self-initiated vs PPS project initiated?

9. How has the dynamic changed between primary care physicians and specialists? [only for focus groups with primary care physicians, clinic managers, health home organizations, specialists]
10. The PPS you are involved with has selected certain projects to implement from the DSRIP project toolkit. Some of those projects may directly or indirectly impact your areas of work. Could you share a little about the impacts of these DSRIP projects?

Prompt: How are these projects influencing your work, if at all?

11. How has the population you serve changed since launching DSRIP? [only for focus groups with community-based organizations]
12. *What have you done* to prepare for the change to value based payment? [only for focus groups with category 1 (primary care physicians, clinic managers, health home organizations, and specialists), category 2 (mental health and substance abuse professionals), or category 3 (hospitals, nursing home, hospice, and home care professionals) providers.]
13. What are the barriers to achieving progress on value based performance?

Prompt: What support or resources do you need to overcome these barriers?

14. How has DSRIP's focus on avoidable emergency department utilization affected your work?
15. As a behavioral health or substance abuse provider, how has the focus on integration with primary care impacted your work with patients? [only for focus groups with mental health and substance use professionals]
16. How have the efforts to improve population health and integrate delivery systems impacted your daily work? [only for focus groups with hospitals, nursing homes, hospice, and home care professionals and community-based organizations]
17. What's one thing you would change right now?

Prompt: Why did you choose that aspect specifically?

18. Our discussion today was to help us understand how [insert category of provider here] are managing the DSRIP transformation. Have we missed anything?

Thank you so much for your participation today. Getting your feedback on DSRIP is essential to our evaluation process, and we appreciate everyone's willingness to discuss it with us today. If you have any questions after today about the independent evaluation, please don't hesitate to contact us at the University at Albany.

Appendix 6: Statewide Partner Survey Instruments

Appendix 6 includes the partner survey instruments used in 2017 and 2018.

Statewide Partner Survey Instrument 2017

1. What is your name?
2. What is the name of your organization?
3. What is your position?
4. How many PPS-selected DSRIP projects are you involved with and knowledgeable about?

If you are involved with more than 3 DSRIP related projects at your organization, please think of the 3 projects with which you are most involved. The project(s) may be within one PPS or several projects across multiple PPS depending on your service area and involvement.

5. Using the drop-down menu below, please indicate the **first** project you are involved with and the corresponding PPS.

PPS:

Project:

6. Please indicate your level of satisfaction with <Project> implementation as related to working with <PPS>.

Very satisfied (1)
Satisfied (2)
Neither satisfied nor dissatisfied (3)
Dissatisfied (4)
Very dissatisfied (5)
Not applicable (6)
I don't know (7)

7. Please indicate your level of satisfaction with the current operation of <Project> as related to working with <PPS>.

Very satisfied (1)
Satisfied (2)
Neither satisfied nor dissatisfied (3)
Dissatisfied (4)
Very dissatisfied (5)
Not applicable (6)
I don't know (7)

8. How satisfied were you with <Project> operations at your organization overall during Demonstration Years 0-2 (2014-2017)?

Very satisfied (1)
Satisfied (2)
Neither satisfied nor dissatisfied (3)
Very dissatisfied (4)
Not applicable (5)

I don't know (6)

9. What would you change about current operation of the project within <PPS>?

10. What would you change about the current operation of the project within your organization?

11. Please indicate the degree of change to which you perceive the project is changing patient care.

Very positive change (1)

Positive change (2)

No change (3)

Negative change (4)

Very negative change (5)

12. How effective do you perceive the project to be at meeting its intended goals currently?

Extremely effective (1)

Very effective (2)

Moderately effective (3)

Slightly effective (4)

Not effective at all (5)

I don't know (6)

13. Why do you feel this way?

<Items 5 through 13 were repeated up to three times for respondents participating in more than one project.>

14. One focus of DSRIP was to integrate primary, specialty, and behavioral health care. Has the clinical care at your organization changed since DSRIP was initiated?

Yes, very positive change (1)

Yes, positive change (2)

No change (3)

No, negative change (4)

No, very negative change (5)

I don't know (6)

Not applicable, my organization does not provide clinical services (7)

15. Have you observed any of the following benefits to primary care and behavioral health services integration? (Please select all that apply).

Improved communication leading to more coordinated care (1)

Improved recognition of mental health disorders (2)

Increased primary care providers (PCPs) use of behavioral health intervention (3)

Decreased stigma of mental health conditions (4)

Improved understanding of patient needs (5)
Improved patient and provider satisfaction (6)
Improved clinical outcomes (7)
Reduced avoidable hospital utilization (8)
Increased productive capacity (9)
Reduced medical costs (10)
Other (please specify): (11) _____
N/A (12)

16. In your view, are patients experiencing better care since the launch of DSRIP?

Yes, very positive change (1)
Yes, positive change (2)
No change (3)
No, negative change (4)
No, very negative change (5)
I don't know (6)

17. Another focus of DSRIP was population health interventions. Do you believe DSRIP has changed any aspect of population health within your service area?

Yes, very positive change (1)
Yes, positive change (2)
No change (3)
No, negative change (4)
No, very negative change (5)
I don't know (6)

18. Has DSRIP changed the way your organization provides services?

Yes (1)
No (2)
I don't know (3)

19. If yes, in what ways has DSRIP changed the way your organization provides services?

20. How do you characterize your understanding of value based payment?

Very knowledgeable (1)
Somewhat knowledgeable (2)
Only at a little knowledgeable (3)
Not at all knowledgeable (4)

21. Have you made changes to your practice or organization to prepare for value based payment?

Yes (1)
No (2)
I don't know (3)

22. Do you require more resources/knowledge for the shift to value based payment?

Yes (1)
No (2)
I don't know (3)

23. How effective do you perceive DSRIP to be overall?

- Extremely effective (1)
- Very effective (2)
- Moderately effective (3)
- Slightly effective (4)
- Not effective at all (5)

24. In what ways is it effective or ineffective?

25. Please share any suggestions you may have for state-level changes or program improvements for DSRIP as a whole.

Statewide Partner Survey Instrument 2018

The Independent Evaluator of the New York State Delivery System Reform Incentive Payment (DSRIP) program is conducting a survey of project partners. The survey includes questions about your perceptions of DSRIP and how DSRIP has affected organizations and patients.

Your feedback will help improve programs by letting the Department of Health and your PPS know which aspects of DSRIP have been effective and which have not. Evaluating these changes each year helps determine whether improvements are taking place over time.

1. What type of organization do you work for?¹⁵¹

- Community-based organization
- Primary care provider
- Non-primary care practitioner
- Clinic
- Hospital
- Behavioral health organization
- Substance use treatment organization
- Skilled nursing facility/ nursing home
- Hospice/ palliative care center
- Home care agency
- Government office
- Pharmacy
- Health home/ care management program
- Other (specify)

The next items ask about your perceptions of DSRIP overall. The survey will ask about your specific projects in a later section.

¹⁵¹ This is a partner self-selected category type.

2. How have the services or clinical care at your organization changed since DSRIP was initiated?

Very positive change
Some positive change
No change
Some negative change
Very negative change

3. Have you observed any of the following benefits from DSRIP? (Please select all that apply).

More coordinated care
Improved recognition of mental health disorders
Increased primary care provider use of behavioral health intervention
Improved understanding of patient needs
Improved patient satisfaction
Improved clinical outcomes
Reduced avoidable hospital utilization
Reduced medical costs
None of the above

4. [Skip if 3= none of the above] Do you expect these benefits to continue after DSRIP funding ends?

[List each benefit respondent selected above with yes/no/ I don't know options for each]

5. In your view, are patients experiencing better care since the launch of DSRIP?

Yes, very positive change
Yes, some positive change
No change
No, some negative change
No, very negative change
I don't know

6. Do you believe DSRIP has changed any aspect of population health within your service area?

Very positive change
Some positive change
No change
Some negative change
Very negative change
I don't know

7. How effective do you perceive DSRIP to be overall?

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not at all effective

8. In what ways do you feel that DSRIP is working well?

9. Please share any suggestions you have for program improvements for DSRIP.

The next set of questions will ask about value based payment.

10. How do you characterize your understanding of value based payment?

- Very knowledgeable
- Somewhat knowledgeable
- A little knowledgeable
- Not at all knowledgeable

11. Has your practice or organization made changes to prepare for value based payment?

- Yes
- No

12. Do you require more resources to facilitate the shift to value based payment?

- Yes
- No

13. [If 12=yes] What types of resources would help your organization shift to value based payment?

- Additional training (specify training topics: _____)
- One-on-one consulting
- Additional funding for infrastructure changes
- Peer training and support
- Improved access to performance data (specify data types: _____)
- Other (specify: _____)

14. [If any responses selected in 13] Which of these resources would be MOST helpful to your organization's shift to value based payment? [List all selected in 10]

The following section will ask for your perceptions of DSRIP projects.¹⁵²

15. Please select each PPS you work with on projects.
 16. Below is a list of [PPS] projects. Please select each project with which you are actively involved. [List customized by PPS] [Repeat per PPS]
 17. Please indicate your level of satisfaction with the past 12 months of operation of <Project> at <PPS>.
 - Very satisfied
 - Somewhat satisfied
 - Neither satisfied nor dissatisfied
 - Somewhat dissatisfied
 - Very dissatisfied
 - Not applicable
 18. Please indicate the degree to which you perceive the project is changing patient care.
 - Very positive change
 - Some positive change
 - No change
 - Some negative change
 - Very negative change
 19. How effective do you currently perceive the project to be at meeting its intended goals?
 - Extremely effective
 - Very effective
 - Moderately effective
 - Slightly effective
 - Not at all effective
- [#17,18, 19 repeated for each PPS's projects]
20. [After all projects] Is there anything else you would like to share about DSRIP?

¹⁵² Partner responses were limited to up to 3 projects in the 2017 survey. There were no such limitations in the 2018 survey; partners could provide responses about all projects with which they participated.

Appendix 7. Additional Details on DSRIp Dataset Measures Used in the Interim Report

Appendix 7 provides additional details on the measures examined in the Interim Report to address RQ-B through RQ-G (see Exhibit 3.1). Information is compiled from the DSRIp Measures Specification Manual corresponding to Measurement Year 3 (July 10, 2017), and additional consultation with NYS DOH. The “years available for trending” refers to the years available for and used in the current Interim Report. Additional years will be available and used in the final summative report.

RQ-B. Health Care Quality Measures

Asthma Medication Management for People Aged 5-64

Full measure name:	Medication Management for People with Asthma (5-64 Years) – 75% of Treatment Days Covered
Steward and specification version:	HEDIS® 2017
Projects associated with measure:	3.d.i – 3.d.iii
Numerator description:	Number of people who filled prescriptions for asthma controller medications during at least 75% of their treatment period
Denominator description:	Number of people, ages 5 to 64 years, who were identified as having persistent asthma, and who received at least one controller medication
Data source:	MDW Claims
Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)

Controller-to-Total Asthma Medication Ratio

Full measure name:	Asthma Medication Ratio (5 – 64 Years)
Steward and specification version:	HEDIS® 2017
Projects associated with measure:	3.d.i – 3.d.iii
Numerator description:	Number of people with a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year
Denominator description:	Number of people, ages 5 to 64 years, who were identified as having persistent asthma
Data source:	MDW Claims
Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)

RQ-C. Population Health Measures

Age-Adjusted Percentage of Adults Reporting Binge Drinking

Full measure name:	Age-adjusted percentage of adult binge drinking during the past month
Projects associated with measure:	4.a.i – 4.a.iii
Numerator description:	Number of respondents age 18 or older who reported binge drinking on one or more occasions in the past 30 days. Binge drinking is defined as men having 5 or more drinks or women having 4 or more drinks on one occasion.
Denominator description:	Number of people age 18 or older
Data source:	eBRFSS
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Age-Adjusted Percentage of Adults Reporting Poor Mental Health

Full measure name:	Age-adjusted percentage of adults with poor mental health for 14 or more days in the last month
Projects associated with measure:	4.a.i – 4.a.iii
Numerator description:	Number of respondents age 18 or older who reported experiencing poor mental health for 14 or more days in the last month
Denominator description:	Number of people age 18 or older
Data source:	eBRFSS
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Age-Adjusted Suicide Death Rate per 100,000

Full measure name:	Age-adjusted suicide death rate per 100,000
Projects associated with measure:	4.a.i – 4.a.iii
Numerator description:	Number of deaths of people age 18 or older with an ICD-10 primary cause of death code: X60-X84 or Y87.0
Denominator description:	Number of people age 18 or older
Data source:	NYS DOH Vital Statistics
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Percentage of Adults Reporting Current Smoking

Full measure name:	Percentage of cigarette smoking among adults
Projects associated with measure:	4.b.i – 4.b.ii
Numerator description:	Number of people age 18 or older who report currently smoking cigarettes
Denominator description:	Number of people age 18 or older
Data source:	eBRFSS
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Percentage of Premature Deaths

Full measure name:	Percentage of premature death (before age 65 years)
Projects associated with measure:	4.a.i – 4.a.iii, 4.b.i – 4.b.ii, 4.c.i – 4.c.iv, 4.d.i
Numerator description:	Number of people who died before age 65 in the measurement period
Denominator description:	Number of deaths in the measurement period
Data source:	NYS DOH Vital Statistics
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Percentage of Adults Aged 50-75 with Up-to-Date Colorectal Cancer Screening

Full measure name:	Percentage of adults who receive a colorectal cancer screening based on the most recent guidelines - Aged 50-75 years
Projects associated with measure:	4.b.i – 4.b.ii
Numerator description:	Number of respondents age 50-75 years who received a colorectal cancer screening exam (used a blood stool test at home in the past year; and/or, sigmoidoscopy in the past 5 years and blood stool test in the past 3 years; and/or, had a colonoscopy in the past 10 years)
Denominator description:	Number of people age 50-75
Data source:	eBRFSS
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Newly Diagnosed HIV Cases per 100,000

Full measure name:	Newly diagnosed HIV case rate per 100,000
Projects associated with measure:	4.c.i – 4.c.ii
Numerator description:	Number of people newly diagnosed with HIV, regardless of concurrent or subsequent AIDS diagnosis
Denominator description:	Number of people
Data source:	NYS HIV Surveillance System
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Ratio of Premature Deaths: Black Non-Hispanic versus White Non-Hispanic

Full measure name:	Percentage of premature death (before age 65 years) – Ratio of Black non-Hispanics to White non-Hispanics
Projects associated with measure:	4.a.i – 4.a.iii, 4.b.i – 4.b.ii, 4.c.i – 4.c.iv, 4.d.i
Numerator description:	Percentage of Black non-Hispanics who died before age 65
Denominator description:	Percentage of White non-Hispanics who died before age 65
Data source:	NYS DOH Vital Statistics
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Ratio of Premature Deaths: Hispanic versus White Non-Hispanic

Full measure name:	Percentage of premature death (before age 65 years) – Ratio of Black non-Hispanics to White non-Hispanics
Projects associated with measure:	4.a.i – 4.a.iii, 4.b.i – 4.b.ii, 4.c.i – 4.c.iv, 4.d.i
Numerator description:	Percentage of Hispanics who died before age 65
Denominator description:	Percentage of White non-Hispanics who died before age 65
Data source:	NYS DOH Vital Statistics
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Disparities in HIV Case Rates: Black Non-Hispanic versus White Non-Hispanic

Full measure name:	Newly diagnosed HIV case rate per 100,000—Difference in rates (Black and White) of new HIV diagnoses
Projects associated with measure:	4.c.i – 4.c.ii
Numerator description:	Rate of Black non-Hispanics newly diagnosed with HIV, regardless of concurrent or subsequent AIDS diagnosis
Denominator description:	Rate of White non-Hispanics newly diagnosed with HIV, regardless of concurrent or subsequent AIDS diagnosis
Data source:	NYS HIV Surveillance System
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Disparities in HIV Case Rates: Hispanic versus White Non-Hispanic

Full measure name:	Newly diagnosed HIV case rate per 100,000—Difference in rates (Hispanic and White) of new HIV diagnoses
Projects associated with measure:	4.c.i – 4.c.ii
Numerator description:	Rate of Hispanics newly diagnosed with HIV, regardless of concurrent or subsequent AIDS diagnosis
Denominator description:	Rate of White non-Hispanics newly diagnosed with HIV, regardless of concurrent or subsequent AIDS diagnosis
Data source:	NYS HIV Surveillance System
Years available for trending:	Annual: MY0, MY1, MY2, MY3

RQ-D. Behavioral Health Care Utilization Measures

Initiation of Treatment for Alcohol and Other Drugs

Full measure name:	Initiation of Alcohol and Other Drug Dependence Treatment (1 visit within 14 days)
Steward and specification version:	HEDIS® 2017
Projects associated with measure:	3.a.i – 3.a.iv
Numerator description:	Number of people who initiated treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter, or partial hospitalization within 14 days of the index episode
Denominator description:	Number of people age 13 and older with a new episode of alcohol or other drug (AOD) dependence
Data source:	MDW Claims
Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)

Engagement in Treatment for Alcohol and Other Drugs

Full measure name:	Engagement of Alcohol and Other Drug Dependence Treatment (Initiation and 2 visits within 44 days)
Steward and specification version:	HEDIS® 2017
Projects associated with measure:	3.a.i – 3.a.iv

Numerator description:	Number of people who initiated treatment AND who had two or more additional services with a diagnosis of AOD within 30 days of the initiation visit
Denominator description:	Number of people age 13 and older with a new episode of alcohol or other drug (AOD) dependence
Data source:	MDW Claims
Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)

Adherence to Antipsychotic Medications for People with Schizophrenia

Full measure name:	Adherence to Antipsychotic Medications for People with Schizophrenia
Steward and specification version:	HEDIS® 2017
Projects associated with measure:	3.a.i – 3.a.iv
Numerator description:	Number of people who remained on an antipsychotic medication for at least 80% of their treatment period
Denominator description:	Number of people, ages 19 to 64 years, with schizophrenia who were dispensed at least 2 antipsychotic medications during the measurement year
Data source:	MDW Claims
Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)

Follow-up Within 30 Days of Hospitalization for Mental Illness

Full measure name:	Follow-up after hospitalization for mental illness – within 30 days
Steward and specification version:	HEDIS® 2017
Projects associated with measure:	3.a.i – 3.a.iv
Numerator description:	Number of discharges where the patient was seen on an ambulatory basis or who was in intermediate treatment with a mental health provider within 30 days of discharge
Denominator description:	Number of discharges between the start of the measurement year to 30 days before the end of the measurement year for patients ages 6 years and older, who were hospitalized for treatment of selected mental health disorders
Data source:	MDW Claims
Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)

RQ-E. Hospital Utilization Measures

Potentially Preventable Readmissions

Full measure name:	Potentially Avoidable Readmissions +/-
Steward and specification version:	3M
Projects associated with measure:	2.a.i – 2.a.v, 2.b.i – 2.b.ix, 2.c.i – 2.c.ii
Numerator description:	Number of readmission chains (at risk admissions followed by one or more clinically related readmissions within 30 days of discharge)
Denominator description:	Number of people as of June 30 of the measurement year
Data source:	MDW Claims
Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)

Potentially Preventable Emergency Visits

Full measure name:	Potentially Preventable Emergency Room Visits +/-
Steward and specification version:	3M
Projects associated with measure:	2.a.i – 2.a.v, 2.b.i – 2.b.ix, 2.c.i – 2.c.ii
Numerator description:	Number of preventable emergency room visits as defined by revenue and CPT codes
Denominator description:	Number of people (excludes those born during the measurement year) as of June 30 of the measurement year
Data source:	MDW Claims
Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)

Potentially Preventable Emergency Visits for Persons with a Behavioral Health Diagnosis

Full measure name:	Potentially Preventable Emergency Room Visits (for persons with BH diagnosis) +/-
Steward and specification version:	3M
Projects associated with measure:	3.a.i – 3.a.iv
Numerator description:	Number of preventable emergency room visits as defined by revenue and CPT codes
Denominator description:	Number of people with a BH diagnosis (BH definition used in member attribution; excludes those born during the measurement year) as of June 30 of the measurement year
Data source:	MDW Claims

Years available for trending:	Monthly, from end of MY0 to end of MY3 (37 months)
-------------------------------	--

RQ-F. Health Care System Transformation Measures

Percent of Eligible Providers Meeting Meaningful Use Criteria Who Conduct Bidirectional Exchange with Qualified Entities

Full measure name:	Meaningful Use Certified Providers who conduct bidirectional exchange
Steward and specification version:	NYS-specific
Projects associated with measure:	2.a.i – 2.a.v, 2.b.i – 2.b.ix, 2.c.i – 2.c.ii
Numerator description:	Number of eligible providers meeting meaningful use criteria, who both 1) make data available and 2) access data using SHIN-NY with a QE
Denominator description:	Number of eligible providers meeting meaningful use criteria in the PPS network
Data source:	Qualified Entity Survey
Years available for trending:	Annual: MY2, MY3 (note: survey question changed in MY2, so it is inappropriate to compare to earlier time points although MY1 is available)

Percent of Eligible Providers Meeting Meaningful Use Criteria Who Have Participating Agreements with Qualified Entities

Full measure name:	Meaningful Use Certified Providers who have a participating agreement
Steward and specification version:	NYS-specific
Projects associated with measure:	2.a.i – 2.a.v, 2.b.i – 2.b.ix, 2.c.i – 2.c.ii
Numerator description:	Number of eligible providers meeting meaningful use criteria, who have at least one participating agreement with a qualified entity (QE)
Denominator description:	Number of eligible providers meeting meaningful use criteria in the PPS network
Data source:	Qualified Entity Survey
Years available for trending:	Annual: MY2, MY3 (note: survey question changed in MY2, so it is inappropriate to compare to earlier time points although MY1 is available)

Hospital Care Transition Composite Measure

Full measure name:	H-CAHPS – Care Transition; CMS Data Set H_COMP_7_SA and H_COMP_7_A
Steward and specification version:	H-CAHPS V9.0 (Q23, 24, and 25)
Projects associated with measure:	2.a.i – 2.a.v, 2.b.i – 2.b.ix, 2.c.i – 2.c.ii
Numerator description:	Average of hospital specific results for the Care Transition composite using Strongly Agree and Agree responses
Denominator description:	Hospitals with H-CAHPS participating in the PPS network
Data source:	HCAHPS survey
Years available for trending:	Annual: MY1, MY2, MY3

Primary Care as Usual Source of Care

Full measure name:	Primary Care - Usual Source of Care
Steward and specification version:	1351a_C&G CAHPS Adult Primary Care (version 3.0, Q2)
Projects associated with measure:	2.a.i – 2.a.v, 2.b.i – 2.b.ix, 2.c.i – 2.c.ii
Numerator description:	Percent of Responses 'Yes'
Denominator description:	All responses
Data source:	CG-CAHPS survey
Years available for trending:	Annual: MY1, MY2, MY3

Up-to-Date Care Coordination Composite Measure

Full measure name:	Care Coordination
Steward and specification version:	1351a_C&G CAHPS Adult Primary Care (version 3.0, Q13, 17 and 20)
Projects associated with measure:	2.a.i – 2.a.v, 2.b.i – 2.b.ix, 2.c.i – 2.c.ii
Numerator description:	Number responses 'Usually' or 'Always' that provider seemed to know important history, follow-up to give results from tests, and talked about all prescription medicines
Denominator description:	All responses
Data source:	CG-CAHPS survey
Years available for trending:	Annual: MY1, MY2, MY3

Non-Use of Primary and Preventive Care Services among attributed Medicaid members

Full measure name:	Non-use of primary and preventive care services
Steward and specification version:	NYS-specific
Projects associated with measure:	2.d.i
Numerator description:	The percentage of Medicaid members who do not have at least one claim with a preventive services CPT or equivalent code in the measurement year
Denominator description:	The percentage of Medicaid members who do not have at least one claim with a preventive services CPT or equivalent code in the baseline measurement year
Data source:	MDW Claims
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Emergency Department Use by Uninsured

Full measure name:	ED Use by Uninsured +/-
Steward and specification version:	NYS-specific with SPARCS
Projects associated with measure:	2.d.i
Numerator description:	The percentage of ED visits which are self-pay payer typology only for all hospitals in the PPS network in the measurement year
Denominator description:	The percentage of ED visits for self-pay payer typology only for all hospitals in the PPS network in the baseline measurement year
Data source:	SPARCS
Years available for trending:	Annual: MY0, MY1, MY2, MY3

Appendix 8: Clinician & Group CAHPS 3.0 Survey Composite Score Items

Appendix 8 shows the items that were used to calculate the composite scores in Exhibit 4.14. For each item, respondents were asked to consider how often they had a specific experience in the past six months, and offered the response options of Never, Sometimes, Usually, and Always. Responses were averaged to compute the composite scores.

Exhibit A8.1. Percent of patients answering “Usually” or “Always” to patient satisfaction items

	DY1	DY2	DY3
How Well Doctors Communicate with Patients	92.3%	91.1%	92.7%
How often did this provider explain things in a way that was easy to understand?	92.1%	91.1%	92.9%
How often did this provider listen carefully to you?	92.9%	91.5%	93.2%
How often did this provider show respect for what you had to say?	94.0%	93.0%	94.1%
How often did this provider spend enough time with you?	90.1%	88.9%	90.6%
Care Coordination	83.9%	82.9%	84.0%
How often did this provider seem to know the important information about your medical history?	90.2%	89.2%	91.0%
When this provider ordered a blood test, x-ray or another test for you, how often did someone from this provider's office follow up to give you those results?	84.1%	82.4%	82.9%
How often did you and someone from this provider's office talk about all the prescription medicines you were taking?	77.3%	77.3%	78.2%
Getting Timely Appointment, Care, and Information	85.1%	83.3%	86.0%
When you contacted this provider's office to get an appointment for the care you needed right away, how often did you get an appointment as soon as you needed?	83.9%	81.5%	85.5%
When you made an appointment for a check-up or routine care with this provider, how often did you get an appointment as soon as you needed?	87.4%	86.0%	88.4%
When you contacted this provider's office during regular office hours, how often did you get an answer to your medical question that same day?	84.2%	82.4%	84.0%
Helpful, Courteous, and Respectful Office Staff	89.6%	88.9%	90.5%
How often were clerks and receptionists at this provider's office as helpful as you thought they should be?	87.4%	86.1%	88.2%
How often did clerks and receptionists at this provider's office treat you with courtesy and respect?	91.9%	91.6%	92.7%

Source: Clinician & Group CAHPS 3.0 survey