Nevada Comprehensive Care Waiver (NCCW) Evaluation:

Program Year 1 (PY1) - Program Year 4 (PY4)

2013-2018

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Executive Summary

The Nevada Comprehensive Care Waiver (NCCW) sought to improve the Medicaid delivery system through a demonstration project to implement mandatory care management services throughout the State for a group of high-cost, high-need beneficiaries that were not served by the current Managed Care Organizations (MCOs). This group of beneficiaries would receive care management services from a care management organization (CMO) that would support improved quality of care, generate savings and make the Medicaid program more efficient. Enrollment in the CMO was mandatory for demonstration-eligible, fee-for-service (FFS) Medicaid beneficiaries with qualifying health conditions. The key components of the NCCW program were to:

1) maintain Medicaid State plan eligibility;
2) maintain Medicaid State plan benefits;
3) allow the State to require individuals to enroll into the CMO to receive care management benefits;
4) improve healthcare quality and health outcomes for the enrolled population; and,
5) generate cost efficiencies for the State to support the long-term sustainability of the Medicaid program.

The five-year Nevada Comprehensive Care Waiver (NCCW) demonstration project had three goals: 1) provide care management to high-need, high-cost beneficiaries who received services on a FFS basis; 2) improve the quality of care that high-need, high-cost Nevada Medicaid beneficiaries in the FFS system received through care management and financial incentives; and, 3) establish long-lasting reforms that sustain the improvements in the quality of health and wellness for Nevada Medicaid beneficiaries and provide care in a more cost-efficient manner. These goals were evaluated by testing a set of four hypotheses, addressing 10 research questions.

- Hypothesis 1 (H1). Enrollment in a CMO improves the quality of care for Medicaid beneficiaries with a demonstration-qualifying condition compared to enrollment in the FFS system without the additional care coordination provided by the CMO;
- Hypothesis 2 (H2). Enrollment in a CMO improves health outcomes for Medicaid beneficiaries with a demonstration-qualifying condition compared to enrollment in the FFS system without the additional care coordination provided by the CMO;
- Hypothesis 3 (H3). Enrollment in a CMO reduces the total and per capita costs of providing Medicaid services to Medicaid beneficiaries with a demonstration-qualifying condition compared to the enrollment in the FFS system without the additional care coordination provided by the CMO; and,
- Hypothesis 4 (H4). Medicaid beneficiaries enrolled in a CMO are more satisfied with the quality of their health care than the beneficiaries in the FFS system without the additional care coordination provided by the CMO.

This NCCW evaluation report encompasses the results from Program Year 1 (PY1; June 1, 2014 to May 31, 2015), Program Year 2 (PY2; June 1, 2015 to May 31, 2016), Program Year 3 (PY3; June 1, 2016 to May 31, 2017) and Program Year 4 (PY4; June 1, 2017 to May 31, 2018) of the NCCW known as the Health Care Guidance Program (HCGP). Of the four hypotheses, only one was partially confirmed—H3—in that enrollment in a CMO was found to reduce the per capita costs of providing Medicaid

services to Medicaid beneficiaries with a demonstration-qualifying condition compared to the enrollment in the FFS system without the additional care coordination provided by the CMO. The hypothesis was rejected with respect to a reduction in total costs, meaning that the evidence did not support that aspect of the hypothesis.

H1) "Enrollment in a CMO improves the quality of care for Medicaid beneficiaries with a demonstration-qualifying condition compared to enrollment in the FFS system without the additional care coordination provided by the CMO" was rejected—in other words, the evidence did not support the hypothesis.

H2) "Enrollment in a CMO improves health outcomes for Medicaid beneficiaries with a demonstration-qualifying condition compared to enrollment in the FFS system without the additional care coordination provided by the CMO" was rejected—such that, the evidence did not support the hypothesis.

H3) "Enrollment in a CMO reduces the total and per capita costs of providing Medicaid services to Medicaid beneficiaries with a demonstration-qualifying condition compared to the enrollment in the FFS system without the additional care coordination provided by the CMO" was rejected for total costs (Research Question 1), but was confirmed for per-member-per-month (PMPM) costs (Research Question 2). Although the costs of the program were seen to increase overall, the PMPM medical costs of enrolled members did decrease over time compared to the FFS population.

H4) "Medicaid beneficiaries enrolled in a CMO are more satisfied with the quality of their health care than the beneficiaries in the FFS system without the additional care coordination provided by the CMO" was neither confirmed nor rejected as it was written since there were no data from those in the FFS that did not receive the care coordination by the CMO to compare them to the those that did receive the additional care coordination. In this case, there was insufficient evidence to be able to determine if the hypothesis was supported or not.

Quality monitoring of the NCCW consisted of 23 condition-specific Pay for Performance (P4P) Measures and 27 condition-specific and quality indicators referred to as Non-P4P Measures. The CMO was paid a PMPM amount of $15.35 with the possibility of receiving an incentive payment each year if they met the P4P threshold. After calculating the PY1 Quality Measures and Savings, the Nevada Division of Health Care Financing and Policy's (DHCFP) actuary, Milliman, determined that no incentive payment would be made to the CMO based on quality. The same conclusion was made by Milliman for PY2 and PY3 based on the Quality Measures & Savings Calculations Reports for each year. Results of the NCCW evaluation based on PY1-PY3 data indicate that the CMO made progress in some areas, but has room for improvement in many others.

Introduction

Program Background

Nevada's comprehensive care management program is a comprehensive demonstration that seeks to improve the Medicaid delivery system. The State of Nevada contracted with three MCOs in urban Clark and Washoe counties for eligible Medicaid beneficiaries, while the remainder of the State handled Medicaid as a FFS program. This meant that many Medicaid beneficiaries enrolled in FFS did not have access to care management services that could have improved the quality of care and generate program savings. To address this issue, in 2012, the State of Nevada submitted a Medicaid section 1115 waiver application entitled, Nevada Comprehensive Care Waiver (NCCW).

The goal of the NCCW was to implement mandatory care management services throughout the State for a group of high-cost, high-need beneficiaries that were not served by the current MCOs. This group of beneficiaries would receive care management services from a CMO. The CMO would support improved quality of care, which also would generate savings and make the Medicaid program more efficient. Enrollment in the CMO was mandatory for demonstration-eligible, FFS Medicaid beneficiaries with a qualifying health condition(s) or high utilization. The key components of the NCCW program were to:

1) maintain Medicaid State plan eligibility;
2) maintain Medicaid State plan benefits;
3) allow the State to require individuals to enroll into the CMO to receive care management benefits;
4) improve healthcare quality and health outcomes for the enrolled population; and,
5) generate cost efficiencies for the State to support the long-term sustainability of the Medicaid program.

The five program components were addressed through a five-year NCCW demonstration project, which had three goals:

1) provide care management to high-need, high-cost beneficiaries who received services on a FFS basis;
2) improve the quality of care that high-need, high-cost Nevada Medicaid beneficiaries in FFS received through care management and financial incentives; and,
3) establish long-lasting reforms that sustain the improvements in the quality of health and wellness for Nevada Medicaid beneficiaries and provide care in a more cost-efficient manner.

Upon initial implementation of the demonstration project, the State planned to enroll individuals up to at least the minimum of 37,000 and no higher than the maximum of 41,500 (enrollment range). The NCCW demonstration eligibility was limited to identified individuals in the State plan with one of the following qualifying diagnoses, which rendered the individual a beneficiary with high-costs and high-needs:

- Asthma;
- Cerebrovascular disease, aneurysm, and epilepsy;
- Chronic obstructive pulmonary disease (COPD), chronic bronchitis, and emphysema;

- Diabetes mellitus;
- End stage renal disease (ESRD) and chronic kidney disease;
- Heart disease and coronary artery disease (CAD);
- HIV/AIDS;
- Mental health disorders including dementia, psychotic disorders, anxiety disorders, psychosis, paranoia, bipolar disorder, schizophrenia, amnesia, delirium, and mood disorders;
- Musculoskeletal system diseases including osteoarthritis, spondylosis, disc displacement, Schmorl's Nodes, disc degeneration, disc disorder with and without myelopathy, postlaminectomy syndrome, cervical disorders, spinal stenosis, spondylolisthesis, nonallopathic spinal lesions, fracture of the femur, and spinal sprain;
- Neoplasm/tumor;
- Obesity;
- Pregnancy;
- Substance use disorder; and,
- Complex Condition/High Utilizer: Individuals with complex conditions incurring high treatment costs exceeding $100,000 in claims per year.

The following populations were excluded from the demonstration:

- All beneficiaries enrolled in a managed care organization (MCO);
- All beneficiaries dually eligible for Medicare;
- Individuals receiving case management services through the State's 1915(c) home and community based services (HCBS) waivers;
- Individuals enrolled in the State's Intellectual Disabilities/Developmental Disabilities (ID/DD or MR/DD) section 1915(c) waiver;
- Individuals in the State's Title XXI Children's Health Insurance Program (CHIP) entitled Nevada Check Up;
- Individuals in the child welfare system (juvenile justice or foster care programs);
- Individuals receiving emergency Medicaid;
- Individuals receiving targeted case management (TCM); and,
- Residents of Intermediate Care Facilitations for individuals with Mental Retardation (ICF/MRs).

During the initial waiver period, the State contracted with a CMO, McKesson, which provided direct care management for the demonstration population. McKesson later changed their name to AxisPoint Health (APH). The CMO was responsible for the following components of care coordination:

- Comprehensive care management;
- Care coordination and health promotion;
- Coordination transitional care, including coordinating appropriate follow-up from inpatient to other settings;
- Referral to community and social support services, if relevant; and,
- Use of health information technology (HIT) to coordinate services, as feasible and appropriate.

The CMO was required to provide the following care management services to all eligible beneficiaries:

- A comprehensive assessment (including physical, emotional, and psychological health; functional status; current health status; health history; self-management knowledge and behaviors; current treatment recommendations and medication; and need for support services) of each enrolled beneficiary to determine the individual's care and coordination needs;
- Assist beneficiaries in selecting a primary care provider (PCP);
- Work with the beneficiary's Health care team to develop, manage, and maintain a care plan; and,
- The Health Care Team must, at a minimum, consist of the beneficiary and/or the beneficiary's designee, the care manager, the PCP, licensed/certified behavioral/mental health specialists (based on beneficiary needs), a pharmacist (based on beneficiary need), a nutritionist (base on beneficiary need), and other key clinicians and caregivers as necessary based on beneficiary need.

Additionally, the CMO could provide the following care management services based on the needs of the beneficiary:

- Disease management interventions;
- Care management interventions;
- Oncology care coordination;
- Chronic kidney disease management;
- Mental health program;
- Pregnancy care coordination;
- Complex condition care management; and,
- Health care management for individuals who are high utilizers.

Finally, the CMO also was obligated to:

- Provide recipient education;
- Operate a nurse triage and advice call center;
- Provide support for continuity of care transitions;
- Operate an emergency department redirection management program; and,
- Link beneficiaries to community resources.

Quality and Performance Monitoring

Quality monitoring of the NCCW consisted of 23 condition-specific P4P Measures and 27 condition-specific and quality indicators referred to as Non-P4P Measures. The DHCFP actuary was responsible for calculating the Return on Investment (ROI) and the P4P Measures yearly, while the CMO vendor calculated the Non-P4P measures, which were later verified during the Performance Measure Validation (PMV) audits. Audits conducted by the DHCFP's External Quality Review Organization (EQRO), Health Services Advisory Group (HSAG). The CMO was paid a PMPM amount of $15.35 with the possibility of receiving an incentive payment each year if they met the P4P threshold. The results from these Quality and Performance Monitoring efforts were used in this evaluation of the NCCW. This

evaluation report encompasses the results from PY1 (June 1, 2014 to May 31, 2015) through PY3 (June 1, 2016 to May 31, 2017) of the HCGP only, due to lack of claims data in PY4. However, provider and recipient survey data for PY4 were available and included in the report. Several data sources were also unavailable for PY4, including the PY4 AQAR, the PY4 P4P, and the PY4 PMV.

Evaluation Plan

The DHCFP contracted with the Center for Surveys, Evaluation, and Statistics (CSES) at the University of Nevada, Reno (UNR) to conduct the evaluation of the project, based on the NCCW Evaluation Design Plan developed by DHCFP and HSAG, and approved by the Centers for Medicare and Medicaid Services (CMS). The evaluation plan included 10 research questions to address four hypotheses.

Hypotheses

H1) Enrollment in a CMO improves the quality of care for Medicaid beneficiaries with a demonstration-qualifying condition compared to enrollment in the FFS system without the additional care coordination provided by the CMO. (Research Questions 1, 4, 6, 10).

H2) Enrollment in a CMO improves health outcomes for Medicaid beneficiaries with a demonstration-qualifying condition compared to enrollment in the FFS system without the additional care coordination provided by the CMO. (Research Questions 5, 6, 8).

H3) Enrollment in a CMO reduces the total and per capita costs of providing Medicaid services to Medicaid beneficiaries with a demonstration-qualifying condition compared to the enrollment in the FFS system without the additional care coordination provided by the CMO. (Research Questions 1, 2, 3, 5, 7).

H4) Medicaid beneficiaries enrolled in a CMO are more satisfied with the quality of their health care than the beneficiaries in the FFS system without the additional care coordination provided by the CMO. (Research Question 9).

Research Questions

1) What is the impact of the CMO on access to care; the quality, the efficiency, and coordination of care; and the cost of care, for each demonstration population or relevant population group? The State must assess these impacts for each qualifying diagnosis.
2) Did enrollment in a CMO yield any changes in total per capita costs (inclusive of care management costs) for high-need, high-cost beneficiaries? Did this vary by qualifying diagnosis? The State must include a comparison of pre- and post-demonstration per capita costs (total, medical, and administrative).
3) How did outcomes, costs (total, administrative, medical), and quality compare between the CMO and the State's FFS system for each demonstration-qualifying condition?
4) How did the CMO utilize health information technology?

5) How has enrollment in the CMO improved follow-up after hospitalization for persons with asthma, coronary artery disease, COPD, heart failure, or mental health hospitalization?
6) How has enrollment in the CMO impacted utilization of primary care services?
7) Do members enrolled in the CMO program have fewer readmissions to hospitals as compared to historical FFS data?
8) Does member enrollment in the CMO for pregnancies reduce the incidence and severity of preterm births and very low birth weight births as compared to historical FFS data?
9) Are individuals enrolled in the CMO satisfied with the care coordination provided?
10) What impact does the use of reserved eligibility slots (per STC 29(a)) have on continuity of care?

Evaluation Design

An impact evaluation was conducted using a quasi-experimental time series design. A randomized control trial design with a control group was not used, as it would have been unethical, and not allowed by CMS, to not enroll all eligible Medicaid beneficiaries in the study. As an alternative, a comparison group was developed with Medicaid beneficiaries that had qualifying conditions the year prior to the program implementation.

Methods and Results by Research Question

1. What is the impact of the CMO on access to care; the quality, the efficiency, and coordination of care; and the cost of care, for each demonstration population or relevant population group? The State must assess these impacts for each qualifying diagnosis.

Methods

The Baseline (BL) for calculations to address this question was from June 1, 2013 to May 31, 2014. The comparison groups were made up of members enrolled during PY1, members enrolled during PY2, and members enrolled in PY3. Data for PY4 was inaccessible and not included in answering the research question. The data sources used to address this research question include final SAS databook claims and databook member files that were asked for by UNR with member exclusions already put in place by DHCFP's actuary (Milliman), administrative costs for the HCGP provided to us by the DHCFP, calculated P4P measures by Milliman, and PMV reports for Non-P4P measures provided to us by the DHCFP's EQRO, HSAG. Data management and all analyses utilized SAS Version 9.4 and EPI Data software.

The methodology used by Milliman to give UNR completed SAS databook claims and member files is as follows: Raw eligibility and claims data files were imported using a SAS code written by Milliman that was later validated by HSAG for correctness. Claims data files were identified and duplicates were removed for drug, professional, and facility claims. Inpatient claims for drug, professional, and facility claims were created and then merged together and separated by member months based on eligibility. Members who are enrolled in a MCO, dually eligible for Medicare, receiving case management services through the State's 1915(c) home and community based services waivers, enrolled in the State's Intellectual Disabilities/Developmental Disabilities section 1915 (c) waiver, enrolled in the State's Title XXI Children's Health Insurance Program (CHIP) entitled Nevada Check Up,

enrolled in the child welfare system, receiving emergency Medicaid, receiving Targeted Case Management (TCM), or Residents of Intermediate Care Facilities for Individuals with Intellectual Disabilities were excluded. Members were filtered and included only if they had a qualifying chronic condition, did not receive TCM services, and were not in aid codes for institutional living. In addition, those who had medical claims in excess of $500,000 were flagged and excluded.

Using the calculated P4P performance measures provided to us by Milliman, we calculated p-values using Chi-square tests to compare Baseline measures to PY1, compare Baseline measures to PY2, and to compare PY1 measures to PY2. With the addition of PY3 data, additional comparisons were made between Baseline and PY3. The significance cut-off was a p-value less than .05. Using "Appendix III: Nevada NCCW Quality Measures and Related Qualifying Conditions" we calculated medical and administrative costs, the CMO's impact of the areas of 1) access to care; 2) quality, efficiency, and coordination of care; and 3) cost of care were assessed. Those measures where lower rates show improvement were separated out of the total and were also separated from specific qualifying diagnosis calculations.

Access to care refers to the ease of access to and use of the health care system. Access to care is important as it connects individuals to a network of care to meet their health needs and improve their health and well-being outcomes. Access to care is commonly assessed based on well-care visits for children, adolescents, and adults. This was assessed using two metrics, Prenatal and Postpartum Care (PPC.1 and PPC.2) and Weeks of Pregnancy at Time of Enrollment (measures WOP.1, WOP.2, WOP.3, WOP.4, and WOP.5). A description of these measures can be found in "Appendix III: Nevada NCCW Quality Measures and Related Qualifying Conditions". To assess access to care, these specific measures were summed and separated by Baseline, PY1, PY2, and PY3. A Chi-square analysis was conducted with a significance cut-off measure of 0.05 to determine if there was a statistically significant difference between Baseline and PY1, Baseline and PY2, and Baseline and PY3 (Table 1). Baseline measures WOP.1 through WOP.5 were not calculated during the Baseline year. Note: The terms "statistically significant" or "significant differences" are used interchangeably throughout this report and mean that differences found between numbers are not simply due to chance.

Quality, efficiency, and coordination of care, defined by the Institute of Medicine as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge," was assessed using 32 measures (descriptions found in "Appendix III: Nevada NCCW Quality Measures and Related Qualifying Conditions"). Quality, efficiency and coordination of care is important as these elements can contribute to improved continuity of care and health outcomes. The measures assessed include those that were marked with an "X" in the column for "Quality, Efficiency, Coordination of Care" in "Appendix III: Nevada NCCW Quality Measures and Related Qualifying Conditions." To assess quality of care, these specific measures were summed and separated by Baseline, PY1, PY2, and PY3. A Chi-square analysis was conducted with a significance cut-off measure of 0.05 to determine if there was a statistically significant difference between Baseline and PY1, Baseline and PY2, and Baseline and PY3 (Table 2).

Cost of care (see Tables 3, 4, and 5) refers to the medical and administrative costs for providing health care to program enrollees. Medical costs were calculated using the completed SAS databook

claims and member files provided to UNR by Milliman (methodology can be found above in Q1). Using a SAS program written by UNR, we converted ICD 9 and ICD 10 codes from Milliman's completed databook claims and member files using the first diagnosis. ICD 9 and ICD 10 codes (for claims after October 2015) were converted into diagnosis categories and then were grouped into qualifying conditions based on the categories found in "Appendix II: Crosswalk of Qualifying Diagnoses for Performance Measure Validation."

Demonstration-qualifying conditions included: 1) asthma; 2) cerebrovascular disease, aneurysm, and epilepsy; 3) chronic obstructive pulmonary disease (COPD), chronic bronchitis, and emphysema; 4) Diabetes-mellitus; 5) end stage renal disease (ESRD) and chronic kidney disease; 6) heart disease and coronary artery disease (CAD); 7) HIV/AIDS; 8) mental health (disorders including dementia, psychotic disorders, anxiety disorders, psychosis, paranoia, bipolar disorder, schizophrenia, amnesia, delirium, and mood disorders; 9) musculoskeletal system (diseases include osteoarthritis, spondylosis, disc displacement, Schmorl's Nodes, disc generation, disc disorder with and without myelopathy, post-laminectomy syndrome, cervical disorders, spinal stenosis, spondylolisthesis, non-allopathic spinal lesions, fracture of the femur, and spinal sprain; 10) neoplasm/tumor; 11) obesity; 12) pregnancy; 13) complex condition/high utilizer (individuals with complex conditions incurring high treatment costs exceeding $100,000 in claims per year).

Member months were calculated for those enrolled during the Baseline, while member months for PY1, PY2, and PY3 were given to us by the DHCFP. Then, the total costs were divided by the number of member months to get medical costs PMPM. Administrative costs were provided by the DHCFP for the costs incurred from HSAG, Milliman, UNR, and the DHCFP to run and monitor the CMO. Administrative costs were defined by the following: UNR's costs needed to evaluate the first two years of the program; HSAG's Non-P4P PMV reviews, HIT compliance reviews, and other duties. Milliman's costs were related to calculating P4P performance measures. The DHCFP's costs were related to those necessary to oversee the program. Total administrative costs for the year prior to the beginning of the program, PY1, PY2, PY3, and PY4 are shown in Table 3.

Results

As mentioned above, access to care was assessed using two metrics, Prenatal and Postpartum Care (PPC.1 and PPC.2) and Weeks of Pregnancy at Time of Enrollment (measures WOP.1, WOP.2, WOP.3, WOP.4, and WOP.5). These specific measures were summed and separated by Baseline, PY1, and PY2. This indicator is listed as "pregnancy" as the qualifying condition under Table 1, and access to care for this qualifying condition significantly increased from baseline for PY1, PY2, and PY3.

Table 1: Access

		Baseline			PY1		BL-PY1		PY2		BL-PY2	PY3			BL-PY3
Qualifying condition	Num.	Denom.	%^	Num.	Denom.	%^	p-value	Num.	Denom.	%^	p-value	Num.	Denom.	%^	p-value
Pregnancy[1]	212	1,760	12.0%	1,860	9,472	19.6%	<0.0001*	1,671	8,317	20.1%	<0.0001*	346	1,745	19.8%	<0.0001*
Total	**212**	**1,760**	**12.0%**	**1,860**	**9,472**	**19.6%**	**<0.0001***	**1,671**	**8,317**	**20.1%**	**<0.0001***	**346**	**1,745**	**19.8%**	**<0.0001***

*Statistically significant change.

[1]Baseline measure WOP was not calculated.

^A percentage in green indicates an increase from Baseline, red indicates a decrease from Baseline.

While there were some significant increases in the quality, efficiency, and coordination of care for some qualifying conditions (i.e., respiratory, obesity, substance abuse, and chronic condition/high utilizer), overall, the HCGP did not improve quality, efficiency, and coordination of care between Baseline and PY1 and Baseline and PY2 for the members enrolled. Based on data found in Table 2, there was a statistically significant reduction in members that either received appropriate medication, screenings, immunizations, or other services for their care throughout the first two years of the program (p-value <0.0001 for BL-PY1,p-value <0.0001 for BL-PY2), but a statistically significant increase for BL-PY3 (p-value <0.0001). This is a negative result for PY1 and PY2, but a positive outcome for PY3, as it would be desirable to increase the number of members receiving appropriate medications and services.

Table 2: Quality, Efficiency, Coordination of Care

	Baseline			PY1			BL-PY1	PY2			BL-PY2	PY3			BL-PY3
Qualifying condition	**Num.**	**Denom.**	**%^**	**Num.**	**Denom.**	**%^**	**p-value**	**Num.**	**Denom.**	**%^**	**p-value**	**Num.**	**Denom.**	**%^**	**p-value**
Respiratory	797	3,592	**22.2%**	698	3,621	**19.3%**	0.0023*	771	3,136	**24.6%**	0.0203*	762	3,068	**24.8%**	0.0109*
Neurological	192	495	**38.8%**	23	183	**12.6%**	<0.0001*	8	83	**9.6%**	<0.0001*	25	210	**11.9%**	<0.0001*
Diabetes	6,586	13,069	**50.4%**	7,073	14,059	**50.3%**	0.9304	6,465	12,936	**50.0%**	0.6522	6,244	12,312	**50.7%**	0.6096
Cardiovascular	3,387	7,674	**44.1%**	2,947	7,414	**39.7%**	<0.0001*	2,594	7,042	**36.8%**	<0.0001*	2,518	6,785	**37.1%**	<0.0001*
Mental Health	587	1,699	**34.5%**	593	1,822	**32.5%**	0.2087	531	1,813	**29.3%**	0.0008*	406	1,814	**22.4%**	<0.0001*
Musculoskeletal	248	479	**51.8%**	163	589	**27.7%**	<0.0001*	161	644	**25.0%**	<0.0001*	120	179	**67.0%**	<0.0001*
Cancer	5,159	17,954	**28.7%**	10,344	36,313	**28.5%**	0.5459	11,161	40,154	**27.8%**	0.0199*	9,856	31,871	**30.9%**	<0.0001*
Obesity[1]	129	24,648	**0.5%**	2,933	67,493	**4.3%**	<0.0001*	3,459	72,012	**4.8%**	<0.0001*	3,097	72,012	**4.3%**	<0.0001*
Substance Abuse	462	3,462	**13.3%**	469	3,668	**12.8%**	0.4841	570	3,306	**17.2%**	<0.0001*	554	3342	**16.6%**	<0.0001*
Chronic condition/High Utilizer	4,228	16,646	**25.4%**	4,797	17,973	**26.7%**	0.0063*	4,777	16,011	**29.8%**	<0.0001*	5,274	16,877	**31.2%**	<0.0001*
General Preventive Health	1,493	21,431	**7.0%**	23,876	124,801	**19.1%**	0.9368	25,360	133,807	**19.0%**	0.9368	6,258	16,803	**37.2%**	<0.0001*
Total	**23,268**	**111,149**	**20.9%**	**53,916**	**277,936**	**19.4%**	**<0.0001***	**55,857**	**290,944**	**19.2%**	**<0.0001***	**35,114**	**165,273**	**21.2%**	**<0.0001***

*Statistically significant change

[1]Baseline measure ABA was not calculated.

^A percentage in green indicates an increase from Baseline, red indicates a decrease from Baseline.

Total PMPM administrative costs for Baseline, PY1, PY2, PY3, and PY4 were calculated and are shown in Table 3. In addition to administrative expenditures, a cost of $15.35 PMPM was added into administrative expenditures to take into account the program fee that was paid to the CMO vendor for PY1 through PY3. The State provided us member months that were used to calculate costs associated with the program fee (member months were multiplied by the $15.35 program fee to generate these costs). Member months and program fees were not available for PY4. Total administrative costs are combined with total medical costs to calculate total program costs in Q2.

Table 3. Administrative Costs Associated With the HCGP

Year	Administrative Expenditures	Member Months	Program Fee	Program Fee Costs	Total Administrative Costs
Baseline Cost	$147,851.75	N/A	$15.35	N/A	$147,851.75
PY1 Cost	$394,232.62	450,851	$15.35	$6,920,562.85	$7,314,795.47
PY2 Cost	$342,092.75	442,286	$15.35	$6,789,090.10	$7,131,182.85
PY3 Cost	$338,204.75	467,494	$15.35	$7,176,032.90	$7,514,237.65
PY4 Cost	$452,818.75	N/A	N/A	N/A	$452,818.75
Total Cost	**$1,675,200.62**	**$1,360,631.00**		**$20,885,685.85**	**$22,560,886.47**

2. Did enrollment in a CMO yield any changes in total per capita costs (inclusive of care management costs) for high-need, high-cost beneficiaries? Did this vary by qualifying diagnosis? The State must include a comparison of pre- and post-demonstration per capita costs (total, medical, and administrative).

Methods

Using the final databook claims and membership data provided to us by the State's actuary (see methodology in Q1 for exclusions applied to create this data set), total cost by condition, total member months by condition, and resultant PMPM costs by condition were calculated. Using a SAS program written by UNR, we converted ICD 9 and ICD 10 codes from Milliman's completed databook claims and member files using the first diagnosis. ICD 9 and ICD 10 codes (for claims after October 2015) were converted into diagnosis categories and then were grouped into qualifying conditions based on the categories found in "Appendix II: Crosswalk of Qualifying Diagnoses for Performance Measure Validation." Medical expenditure costs were then summed up for each qualifying diagnosis and then divided by the member months of the individuals that had the qualifying diagnosis for each year (Baseline, PY1, PY2, and PY3).

Administrative costs were defined by the following: UNR's costs needed to evaluate all years of the program, HSAG's Non-P4P performance measure validation reviews, HIT compliance reviews, and other duties. Milliman's costs were related to calculating P4P performance measures. The DHCFP's costs were related to those necessary to oversee the program. In addition, a fee of $15.35 PMPM was added into administrative expenditures to take into account the program fee that was paid to the CMO vendor (see Table 3 above).

Results

Table 4 displays total per PMPM costs by program year and shows changes in costs by percentage and dollars that were calculated by the State's actuary. Enrollment in a CMO yielded a decrease in cost from Baseline PMPM costs to PY1 ($455.79 to $431.88) and a further decrease from Baseline PMPM costs to PY2 ($455.79 to $364.43). In PY3, the cost was reduced ($455.79 to $385.22), but was still more expensive than in PY2.

Table 4. Costs Associated with the HCGP

Year	Total Administrative Costs	Total Medical Costs	Total Costs	Member Months	Total PMPM Costs
Baseline Cost	$147,851.75	$195,315,428.70	$195,463,280.45	428,842	$455.79
PY1 Cost	$7,314,795.47	$187,397,252.97	$194,712,048.44	450,851	$431.88
PY2 Cost	$7,131,182.85	$154,051,829.01	$161,183,011.86	442,286	$364.43
PY3 Cost	$7,176,033.00	$172,911,287.34	$180,087,320.34	467,494	$385.22
Total Cost	$21,769,863.07	$709,675,798.02	$731,445,661.09	1,789,473	$1,637.32

Table 5 displays PMPM costs split by qualifying condition for the Baseline year, PY1, PY2, and PY3. PMPM cost differences and percentage differences were found between the Baseline and each PY.

Differences were calculated from Baseline to PY with a *negative value implying cost reductions* and are displayed in Table 5.

Table 5 also shows a decrease in PMPM costs for most conditions in PY1 with the greatest reduction in AIDS (-37.14%), Obesity (-45.77%), and Pregnancy (-34.18%) related costs. Total PMPM cost from Baseline to PY1 across all conditions decreased by 8.74%. PMPM costs showed an even greater decrease in PY2 with the greatest reduction in Asthma (-56.20%), Pregnancy (-75.08%), and Substance Abuse (-57.72%) related costs. Increased costs were observed for End Stage Renal Disease (24.49%) and High Utilizer (10.28%). However, total PMPM cost from Baseline to PY2 across all conditions decreased by 23.52%. Finally, in PY3, the biggest changes were heart disease (-44.07%), Asthma/COPD (-41.47%) and mental health (37.5%). The total cost across all conditions decreased by 18.79%.

Obesity related costs in PY2 was observed to have increased by 382.89% and by 382.14% in PY3, but this may be attributed to inconsistencies from using new ICD 10 codes for obesity related cases. Based on the costs we calculated in Tables 4-5, enrollment in the CMO during PY1, PY2, and PY3 (although PY3 was higher than PY2) yielded a decrease in per-capita costs for high-need, high-cost beneficiaries. This decrease in PMPM costs is a positive result. See Table 5.

Table 5. Total Annual Costs by Qualifying Condition – Eligible FFS Beneficiaries (CMO and Trend)

Condition	Baseline		PY1		BL-PY1	PY2		BL-PY2	PY3		BL-PY3
	Total Cost	PMPM Cost	Total Cost	PMPM Cost	PMPM % Difference	Total Cost	PMPM Cost	PMPM % Difference	Total Cost	PMPM Cost	PMPM % Difference
Asthma/COPD	$11,555,089.61	$26.94	$11,754,976.82	$26.07	-3.24%	$5,219,796.47	$11.80	-56.20%	$7,371,426.55	$15.77	-41.47%
Cerebrovascular Disease	$5,519,433.69	$12.87	$5,768,574.01	$12.79	-0.59%	$4,443,179.89	$10.05	-21.91%	$4,787,012.80	$10.24	-20.44%
Diabetes	$3,680,462.22	$8.58	$3,750,968.34	$8.32	-3.06%	$3,785,374.70	$8.56	-0.23%	$4,599,012.76	$9.84	14.66%
End Stage Renal Disease	$3,609,767.59	$8.42	$4,238,055.70	$9.40	11.67%	$4,634,637.38	$10.48	24.47%	$4,936,740.69	$10.56	25.42%
Heart Disease	$9,959,417.87	$23.22	$9,715,364.46	$21.55	-7.21%	$6,230,383.25	$14.09	-39.32%	$6,070,990.27	$12.99	-44.07%
HIV/AIDS	$788,876.79	$1.84	$521,312.16	$1.16	-37.14%	$528,357.98	$1.19	-35.33%	$598,817.24	$1.28	-30.39%
Mental Health	$74,731,967.69	$174.26	$64,326,691.65	$142.68	-18.13%	$46,858,930.50	$105.95	-39.20%	$50,913,739.53	$108.91	-37.50%
Musculo-skeletal	$11,446,221.08	$26.69	$12,500,623.43	$27.73	3.88%	$8,131,159.84	$18.38	-31.14%	$8,521,759.75	$18.23	-31.70%
Neoplasm	$8,669,314.12	$20.22	$8,285,803.66	$18.38	-9.09%	$7,976,293.25	$18.03	-10.83%	$7,367,881.25	$15.76	-22.06%
Obesity	$359,427.47	$0.84	$204,907.49	$0.45	-45.77%	$1,790,066.44	$4.05	382.14%	$1,790,742.41	$3.83	356.01%
Pregnancy	$7,911,880.04	$18.45	$5,434,986.72	$12.05	-34.66%	$2,033,651.81	$4.60	-75.07%	$5,612,480.00	$12.01	-34.93%
Substance Abuse	$3,568,484.31	$8.32	$3,466,041.95	$7.69	-7.61%	$1,556,053.49	$3.52	-57.69%	$2,446,780.00	$5.23	-37.09%
High Utilizer	$53,515,086.22	$124.79	$57,428,946.58	$127.38	2.07%	$60,863,944.01	$137.61	10.27%	$67,893,904.09	$145.23	16.38%
Total	**$195,315,428.70**	**$455.45**	**$187,397,252.97**	**$415.65**	**-8.74%**	**$154,051,829.01**	**$348.31**	**-23.52%**	**$172,911,287.34**	**$369.87**	**-18.79%**

3. How did outcomes, costs (total, administrative, medical), and quality compare between the CMO and the State's fee-for-service (FFS) system for each demonstration-qualifying condition?

Methods

We used completed SAS databook claims and member files provided to UNR by Milliman (methodology can be found above in Q1). Using SAS code provided to us to separate the CMO

population and the trend population by the State's actuary (Milliman), we separated out both populations by Baseline, PY1, PY2, and PY3. The CMO population is made up of all FFS members with a qualifying condition that have had STC exclusions applied (see methods in Q1). The trend population is made up of all FFS members where STC exclusions have been applied and consists of Medicaid recipients who met the eligibility, but not the condition requirements to be placed in the CMO group.

Using a SAS program written by UNR, we converted ICD 9 and ICD 10 codes from Milliman's completed databook claims and member files using the first diagnosis for each of the populations. ICD 9 and ICD 10 codes (for claims after October 2015) were converted into diagnosis categories and then were grouped into qualifying conditions based on the categories found in "Appendix II: Crosswalk of Qualifying Diagnoses for Performance Measure Validation." Since specific performance measures were difficult to isolate, we compared the qualifying conditions between the two separate populations for each year (Baseline, PY1, PY2, and PY3).

Using the member months calculated for Q2, the PMPM costs were calculated. Results of calculations can be seen in Figure 1 for total average PMPM costs and in Table 6 and Table 7 for costs split between qualifying conditions. Differences were calculated from Baseline to PY with a *negative value implying cost reduction.* This method takes into account that the CMO beneficiaries require more care and are costlier on average than the beneficiaries who do not have a qualifying diagnosis (seen in the difference between the CMO and Trend population costs).

Results

For members in the CMO population PMPM costs decreased from Baseline to PY1 ($414.87 PMPM to $379.84 PMPM), from Baseline to PY2 ($414.87 PMPM to $325.69 PMPM, and from Baseline to PY3 ($414.87 PMPM to $332.05 PMPM). Trend population PMPM costs decreased from Baseline to PY1 ($40.57 PMPM to $35.82 PMPM), decreased from Baseline to PY2 ($40.57 PMPM to $22.62 PMPM), and decreased again from baseline to PY3 ($40.57 PMPM to $37.82). The CMO member population shows a larger decrease in PMPM costs when compared to the Non-CMO trend population. This is a positive result (see Figure 1). However, members of the Non-CMO trend population experienced larger percent decreases in PMPM costs, which can be observed in Tables 6-7. Total PMPM costs for the trend population dropped by 11.72% from BL-PY1 and 44.25% from BL-PY2, but only 6.79% for PY3. Total PMPM costs for the CMO population dropped 8.45% from BL-PY1, 21.50% from BL-PY2, and 19.96% from BL-PY3.

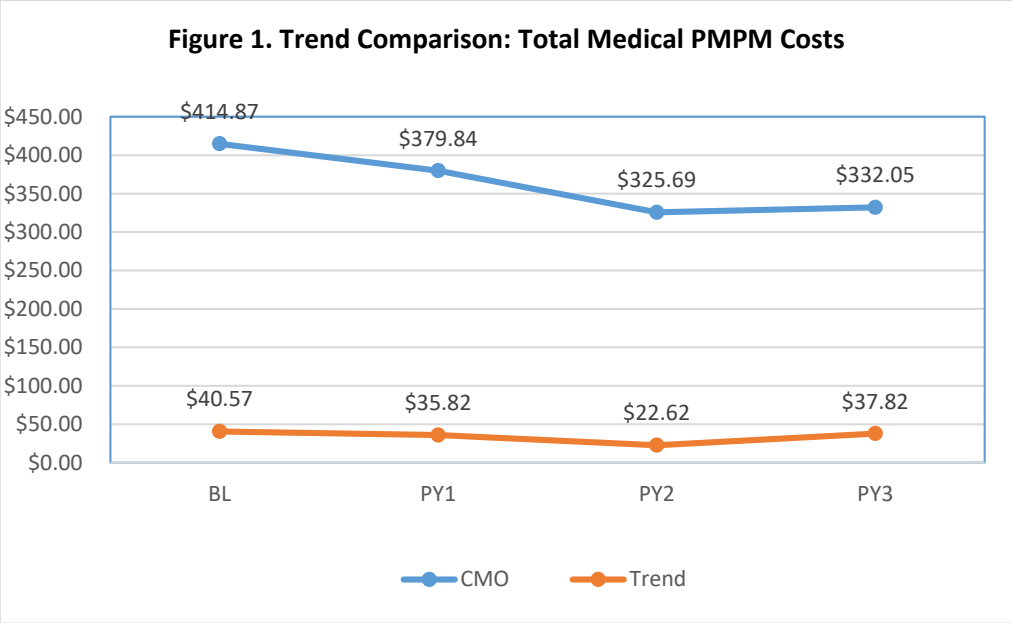


Table 6. Costs by Qualifying Condition - CMO											
Condition	Baseline		PY1		BL-PY1	PY2		BL-PY2	PY3		BL-PY3
	Total Cost	PMPM Cost	Total Cost	PMPM Cost	PMPM % Difference	Total Cost	PMPM Cost	PMPM % Difference	Total Cost	PMPM Cost	PMPM % Difference
Asthma/COPD	$9,368,971.69	$21.85	$9,450,118.04	$20.96	-4.06%	$4,694,515.49	$10.61	-51.42%	$5,967,110.41	$12.76	-41.58%
Cerebrovascular Disease	$4,499,301.28	$10.49	$4,900,977.96	$10.87	3.61%	$3,921,201.51	$8.87	-15.50%	$4,233,789.40	$9.06	-13.67%
Diabetes	$3,629,411.12	$8.46	$3,698,997.03	$8.20	-3.06%	$3,714,361.94	$8.40	-0.77%	$4,077,319.21	$8.72	3.09%
End Stage Renal Disease	$3,535,250.87	$8.24	$4,189,895.08	$9.29	12.73%	$4,522,135.45	$10.22	24.03%	$4,284,134.01	$9.16	11.21%
Heart Disease	$8,540,215.39	$19.91	$8,528,063.92	$18.92	-5.02%	$5,660,815.37	$12.80	-35.73%	$5,310,544.27	$11.36	-42.95%
HIV/AIDS	$788,876.79	$1.84	$521,312.16	$1.16	-37.14%	$528,357.98	$1.19	-35.06%	$491,023.87	$1.05	-42.92%
Mental Health	$70,460,892.42	$164.31	$59,677,461.80	$132.37	-19.44%	$46,609,355.38	$105.38	-35.86%	$49,671,565.87	$106.25	-35.34%
Musculoskeletal	$10,114,571.10	$23.59	$11,129,088.70	$24.68	4.66%	$7,264,530.93	$16.42	-30.36%	$7,263,330.19	$15.54	-34.14%
Neoplasm	$7,982,667.96	$18.61	$7,603,588.96	$16.86	-9.40%	$7,315,700.54	$16.54	-11.14%	$6,863,906.99	$14.68	-21.11%
Obesity	$347,706.97	$0.81	$196,558.46	$0.44	-46.23%	$1,363,985.35	$3.08	280.36%	$1,341,870.24	$2.87	254.36%
Pregnancy	$7,173,221.56	$16.73	$4,866,079.53	$10.79	-35.47%	$1,476,379.78	$3.34	-80.04%	$3,276,349.22	$7.01	-58.11%
Substance Abuse	$2,894,989.14	$6.75	$2,964,991.00	$6.58	-2.58%	$1,517,692.68	$3.43	-49.17%	$2,737,076.69	$5.85	-13.26%
High Utilizer	$48,579,396.79	$113.28	$53,521,949.46	$118.71	4.80%	$55,457,454.84	$125.39	10.69%	$59,714,282.55	$127.73	12.76%
Total	**$177,915,473.08**	**$414.87**	**$171,249,082.10**	**$379.84**	**-8.45%**	**$144,046,487.24**	**$325.69**	**-21.50%**	**$155,232,302.92**	**$332.05**	**-19.96%**

PMPM costs for the CMO population are divided by qualifying conditions in Table 6. The greatest reduction of costs from BL-PY1 were observed in cases related to HIV/Aids (37.14% decrease), Obesity (46.23% decrease), and Pregnancy (35.47% decrease). Increased PMPM costs were observed in cases related to Cerebrovascular Disease (3.61% increase), End Stage Renal Disease (12.73% increase), Musculoskeletal (4.66% increase), and High Utilizer (4.80% increase). The greatest reduction of costs from BL-PY2 were observed in cases related to Pregnancy (80.04% decrease), Asthma/COPD (51.42% decrease), and Substance Abuse (49.17% decrease). Increased PMPM costs from BL-PY2 were observed in cases related to End Stage Renal Disease (24.03% increase), Obesity (280.36% increase), and High Utilizer (10.69% increase). The greatest reduction of costs from BL-PY3 were pregnancy (58.11% decrease) heart disease (42.95% decrease) and HIV/AIDS (42.92%). The greatest increases in costs outside of obesity were high utilizer (12.76%), end stage renal disease (11.21% increase) and diabetes (3.09%).

Table 7. Costs by Related Condition - Trend

	Baseline		PY1		BL-PY1	PY2		BL-PY2	PY3		BL-PY3
	Total Cost	PMPM Cost	Total Cost	PMPM Cost	PMPM % Difference	Total Cost	PMPM Cost	PMPM % Difference	Total Cost	PMPM Cost	PMPM % Difference
Total	$17,399,955.62	$40.57	$16,148,170.87	$35.82	-11.72%	$10,005,341.77	$22.62	-44.25%	$17,678,984.45	$37.82	-6.79%

4. How did the CMO utilize health information technology?

Methods

HSAG conducted a Readiness Review of the CMO vendor prior to Medicaid beneficiaries being enrolled in the program. After program implementation, HSAG conducted PMV audits of the CMO. Annual Quality Assurance Reports (AQAR) were prepared and provided to the DHCFP by the CMO vendor as per the CMO contract. To assess how the CMO utilized health information technology, the "2013-2014 Readiness Review of McKesson Health Solutions" conducted by HSAG; the PMV reports "2014-2015 Validation of Performance Measures for (McKesson)/AxisPoint Health"; "2015-2016 Validation of Performance Measures for (McKesson)/AxisPoint Health"; and "2016-2017 Validation of Performance Measures" all conducted by HSAG; the "FY 2014-2015 Compliance Review of McKesson Technologies, Inc." conducted by HSAG; the "Program Year 1 AQAR", the "Program Year 2 AQAR" and the "Program Year 3 AQAR" reported by APH were reviewed. There was no "Program Year 4 AQAR" Documentation of health information technology utilization is described in the tables below drawn from the aforementioned sources.

Results

One aspect assessed in the Readiness Review conducted by HSAG was the capability of the CMO's Management Information System (MIS) to perform the requirements of the contract. To complete the Readiness Review, HSAG reviewed documents, conducted observations, and interviewed key care management staff in order to assess 15 standards. The HSAG reviewers scored each element for each standard as either complete, incomplete, or incomplete—critical.

The CMO contract specifies that the CMO must "operate a Management Information System (MIS) capable of maintaining, providing, documenting, and retaining information sufficient to substantiate and report the CMO's compliance with the Contract requirements." The purpose of the Readiness Review was to verify that the CMO had an appropriate operational structure to oversee the coordination of Medicaid services to program participants and meet the structural, operational, and administrative requirements of the contract.

Table 8 describes the scores for the 11 elements from "Standard XI. Management Information System." The Readiness Review indicated that the CMO's MIS (Standard XI) had 10 complete critical requirements and one incomplete critical requirement—updating enrollee records.

Table 8. Readiness Review Results: Standard XI. Management Information System

Element	Score
Policies and Procedures	Complete, No Action Required
HIPAA & HITECH Compliance	Complete, No Action Required
Linking Enrollee Records	Complete, No Action Required
Storing Data	Complete, No Action Required
Analysis of Data	Complete, No Action Required
Enrollee Electronic Tracking Record	Complete, No Action Required
Tracking Contact Data	Complete, No Action Required
Transmit and Report Data	Complete, No Action Required
Sharing Health Information	Complete, No Action Required
Non-Administrative Source Data	Complete, No Action Required
Updating Enrollee Records	**Incomplete, Action Required, Critical**

Source: "2013-2014 Readiness Review of McKesson Health Solutions" by HSAG

The purpose of the PMV is to verify, on an annual basis, that the CMO collects and reports complete and accurate performance measure data for contractually required Non-P4P performance measures. The information technology platform is just one component of the PMV audit. One aspect of the PMV audit process relevant to assessing this research question was the validation of the information technology platform and its ability to capture information from a variety of sources. PMV activities reported in 2014-2015, 2015-2016, and 2016-2017 focused on two objectives:

1. Assess the accuracy of the required performance measures reported by the CMO; and,

2. Determine the extent to which the measures calculated by the CMO follow DHCFP's specifications and reporting requirements.

The EQRO reviewed source code for the Non-P4P performance measures, a completed Information Systems Capabilities Assessment Tool (ISCAT), and other supporting documentation. The EQRO also conducted site visits with the CMO, which included interviews, system demonstration, review of data output files, primary source verification, observation of data processing, and report of data reports. "2014-2015 Validation of Performance Measures for (McKesson)/AxisPoint Health"; "2015-2016

Validation of Performance Measures for (McKesson)/AxisPoint Health"; and "2016-2017 Validation of Performance Measures" (hereafter referred to as PMV reports) all conducted by HSAG, were reviewed for this section of the NCCW evaluation report. In 2014-15, 24 Non-P4P measures, with 63 individual indicators or rates were reviewed. The EQRO found 26 indicators/rates to be "Not Completed," while the remaining 37 indicators the CMO calculated and reported appropriately. In subsequent PMV reports, six indicators not completed were removed; two indicators were reportable, and two new indicators were added.

In the 2015-16 and 2016-17 PMV reports, 22 Non-P4P measures were validated and all were deemed reportable. (See "Appendix I: Tracked Outcomes for Improvement" extracted from the NCCW Evaluation Design Plan in the Appendix of this evaluation report.) Data retrieval, integration, data control, and source code development and documentation of performance measure calculations were all deemed to be adequate in all three PMV reports. Review of the PMV reports provides evidence of the types of information the CMO was able to capture and report successfully through its IT platform (Table 9).

Table 9. Measure-Specific Validation Results for the CMO			
Measure ID	Non-P4P Measure Name	Audit Validation Results	
		2014-15 PMV Report	2015-16 and 2016-17 PMV Reports
CCHU.1	Ambulatory Care-Sensitive Condition Hospital Admission	Reportable	Reportable
CCHU.2	"Avoidable" Emergency Room Visits	Reportable	Reportable
CCHU.3-5	Care Transitions – 24 Hours, 7 Days, and 30 Days of Discharge	**Not Completed**	
CCHU.6	Care Transitions – Receipt of Transition Record to Patient	**Not Completed**	
CCHU.7	Transition of Care – Reconciled Medication List	**Not Completed**	
FUP	Follow-Up with PCP After Hospitalization		Reportable
MRP	Medication Reconciliation Post-Discharge		Reportable
DEM	Cognitive Assessment for Dementia	**Not Completed**	Reportable
NEUR	Stroke and Stroke Rehabilitations – Discharged on Antithrombotic Therapy	Reportable	Reportable
CKD	Adult Kidney Disease – Laboratory Testing (Lipid Profile)	Issue with technical specifications	Reportable
CAN	Hormonal Therapy for Stage IC-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer	**Not Completed**	
RA	Disease-modifying Anti-Rheumatic Drug (DMARD) Therapy for Rheumatoid Arthritis	Reportable	Reportable
OST	Osteoporosis – Pharmacologic therapy for men and women aged 50 years and older	Reportable	Reportable
OBS	Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents	Reportable	Reportable
CAP	Children and Adolescents' Access to Primary Care Practitioners	Reportable	Reportable
W15	Well-Child Visits in the First 15 Months of Life	Reportable	Reportable
W34	Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	Reportable	Reportable
AWC	Adolescent Well-Care Visits	Reportable	Reportable
CIS	Childhood Immunization Status	**Not Completed**	Reportable
PPC	Prenatal and Postpartum Care	Reportable	Reportable
WOP	Weeks of Pregnancy at Time of Enrollment	Reportable	Reportable
FPC	Frequency of Ongoing Prenatal Care	Reportable	Reportable
ABA	Adult BMI Assessment	Reportable	Reportable
BCS	Breast Cancer Screening	Reportable	Reportable
CCS	Cervical Cancer Screening	Reportable	Reportable
COL	Colorectal Cancer Screening	Reportable	Reportable

Sources: "2014-2015 Validation of Performance Measures for (McKesson)/AxisPoint Health"; "20152016 Validation of Performance Measures for (McKesson)/AxisPoint Health"; and "2016-2017 Validation of Performance Measures" by HSAG

The Compliance Review and AQARs contain evidence of the CMO's use of HIT for care management activities and adherence to the contract requirements and standards. The evaluation plan specified the following types of HIT usage and capabilities to assess:

- Information used to generate reports for quality improvement, such as:
  - Identifying barriers or gaps in care;
  - Identifying missed health care opportunities; and,
  - Assessing compliance with care transitions.

- Compliance with standards established by the State for use of HIT for quality measurement and quality improvement.

- Ability of the CMO to use the IT platform to assist in:
  - Completing comprehensive assessments of members;
  - Generating tailored care management plans for each member,
  - Providing ongoing care coordination and management for the members enrolled in the program; and,
  - Generating and using reports to improve the quality of services and care received by the members in the CMO.

The "FY 2014-2015 Compliance Review of McKesson Technologies, Inc." by HSAG provided evidence of how the CMO has utilized HIT in working towards compliance with the Standards. The CMO met these HIT-related standards: stratification of enrollees, establishing the care management team, reassessment of the care plan, mental health care hospital readmissions, coordination with nurse triage and nurse advice call service, Emergency Department redirection management, linking ED usage to PCPs, and information provided to and collected from PCPs (Table 10). Two HIT related standards were partially met: feedback to providers and operational structure and reporting.

Table 10. 2014-2015 CMO Use of Health Information Technology		
Applicable Standards/ Requirements	**Health information Technology-Related Findings**	**Score**
I. Stratification of Enrollees **1. Stratification of Enrollees**	Calculated risk scores and level for enrollees using a predictive modeling program. Used risk level and clinical status to determine frequency and timing of care manager interactions. Developed care plans for enrollees using assessment in the care management system. The enrollees' risk level and clinical status determined the frequency and timing of the care manager's interactions.	Met
II. Care Management Team **1. Establishing the Care Management Team**	The care management file reviews provided evidence that team enrollees shared information in the care management system as they provided the support (e.g., nutritional, social, etc.) needed to assist the enrollee.	Met
III. Care Planning **1. Reassessment of the Care Plan**	When medical and pharmacy claims were updated, the predictive model and care-gap analysis were used to re-assess enrollee utilization. Information about PCP, medication lists, and goal achievement status was updated in the VITAL application during care managers' routine calls to enrollees. Alerts were generated in the system based on enrollee responses to the assessment and communicated with provider offices.	Met
IV. Mental Health Care Management Services **1. Hospital Readmissions**	Use of the VITAL system screens to collect information about medical history, post-discharge self-management plans. Discharge plan sent to other settings and PCP.	Met
VI. Nurse Triage and Call Services **1. Coordination with Nurse Triage and Nurse Advice Call Service**	Collection of demographic and assessment information, generation of recommendations and referrals through application-guided prompts.	Met
VII. Emergency Department Redirection **1. Emergency Department Redirection Management** **2. Linking ED Usage to PCPs**	Use of ED claims to compare two groups of enrollees with varying ED usage. CMO planned conduct a pilot by randomly assigning half of each group to receive outreach from the CMO. Using the ED claims to create the two groups described above, providers, purchasers, payers, and consumers will be worked with after discharge from a hospital to reduce unnecessary hospital readmission and emergency room visits. The CMO will then compare enrollees in the two groups who received and did not receive the outreach.	Met Met
IX. Feedback to PCPs **1. Feedback to PCPs** **Information Provided to and Collected from PCPs**	Fax Alert to providers to alert them to gaps in care for enrollee. Use of Fax Alerts, letters, and provider portal to alert provider to gaps in care, health risk assessment, care management activities, lab test results, and medical alerts. Use of provider portal for providers to communicate with case management team and HCGP team.	Partially Met Met
XII. Operational Structure and Reporting	Enrollee Stratification Report Enrollee Contact Report Call Center and Nurse Triage Report Provider Profiling Report	Partially Met

Source: "FY 2014-2015 Compliance Review of McKesson Technologies, Inc." by HSAG

The PY3 AQAR by APH identified other uses of information technology, as well as a continuation of uses identified in 2014-2015 (PY1) and 2015-2016 (PY2) (see Table 11). Clinical Care Alerts were generated with an Advanced Pharmacy Analytics platform that used claims data, patient demographics, and condition to alert providers to gaps in care such as poor medication adherence, suboptimal therapy, and mediation conflicts. The AQAR was self-reported by APH and has not been validated.

Table 11. Evidence of HIT Usage in PY3
Health information Technology-Related Activities
Clinical Care Alerts
Quality Reporting Enrollee Stratification Report
Gaps in Care Letters
Provider Portal
Individualized case management and care management services
Quality Improvement Process/System
Gaps in Care Reporting
Population Profiler Report
PCP to Enrollee Report
Number of Enrollees with an Active Care Plan
Number of Enrollees Successfully Contacted
Nurse Triage and Nurse Advice Report
Provider Engagement Report
Summary of Enrollee Utilization Report
Provider Profiling Report
Monthly Reassessment Report
Annual Reassessment Report
Persons Enrolled and 'Served' in the HCGP

Source: "Program Year 3 Annual Quality Assurance Report" by AxisPoint Health

5. How has enrollment in the CMO improved follow-up after hospitalization for persons with asthma, coronary artery disease, COPD, heart failure, or mental health hospitalization?

Methods

To assess the impact of CMO enrollment on follow-up after hospitalizations for persons with asthma, coronary artery disease, COPD, heart failure, or mental health hospitalizations, five metrics (ASM.4, CAD.3, SPR.3, HF.4, and MH.4) were analyzed (See Appendix III: Nevada NCCW Quality Measures and Related Qualifying Conditions for descriptions). Using the calculated P4P performance measures provided to us by the State's actuary, we calculated p-values by using Chi-square tests to compare Baseline measures to PY1, compare Baseline measures to PY2, and to compare Baseline measures to PY3. The significance cut-off was a p-value less than .05. Baseline follow-up data for each specific metric was compared to PY1 and then again to PY2 and once again to PY3 (Figures 2-6).

Results

When comparing Baseline enrollment in the CMO to follow-up after hospitalization for persons with certain indicators (ASM.4, CAD.3, SPR.3, HF.4, and MH.4), only MH.4 showed statistically significant decreases in percent follow-up. When comparing the Baseline to PY1, the decrease from 37.6% to 31.2% was statistically significant (p-value < 0.0001). When compared to the Baseline, PY2 also saw a statistically significant decrease in follow-up after hospitalization for those with a Mental Health diagnosis, from 37.6% to 28.6% (p-value < 0.0001). The same was true for PY3 (37.6% to 27.0%). However, this is a statistically significant change in the wrong direction. This result for Mental Health is negative, as it would be desirable to increase the percent follow-up after hospitalization. Overall, it seems that asthma, coronary artery disease, heart failure, and COPD did not show any statistically significant changes (increase or decrease) during PY1, PY2, or PY3 when compared to Baseline measures. This also is a negative result as it would be desirable to have an increase in follow-up after hospitalization for all conditions. See Table 12.

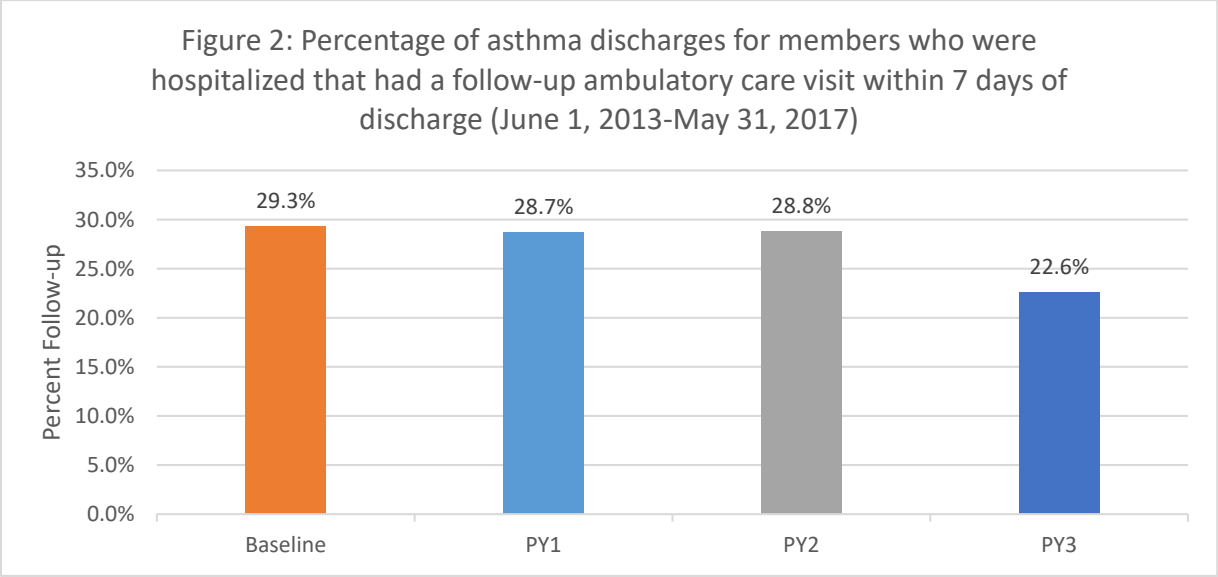
Table 12: Follow-up After Hospital

	Baseline			PY1			BL-PY1	PY2			BL-PY2	PY3			BL-PY3
Qualifying condition	**Num.**	**Denom.**	**%^**	**Num.**	**Denom.**	**%^**	**p-value**	**Num.**	**Denom.**	**%^**	**p-value**	**Num.**	**Denom.**	**%^**	**p-value**
Respiratory	175	571	**30.6%**	168	570	**29.5%**	0.6653	166	531	**31.3%**	0.8257	163	552	**29.5%**	0.6828
Cardiovascular	139	422	**32.9%**	165	459	**35.9%**	0.3894	172	506	**34.0%**	0.4052	182	498	**36.5%**	0.2534
Mental Health	637	1,694	**37.6%**	615	1,972	**31.2%**	<0.0001*	777	2,720	**28.6%**	<0.0001*	680	2520	**27.0%**	<0.0001*
Chronic condition/High Utilizer	4,228	16,646	**25.4%**	4,797	17,973	**26.7%**	0.0063*	4,777	16,011	**29.8%**	<0.0001*	4578	17420	**26.3%**	0.06349
Total	**5,179**	**19,333**	**26.8%**	**5,745**	**20,974**	**27.4%**	**0.174**	**5,892**	**19,768**	**29.8%**	**<0.0001***	**5,603**	**20,990**	**26.7%**	**0.83**

*statistically significant change
^A percentage in green indicates an increase from Baseline, red indicates a decrease from Baseline.

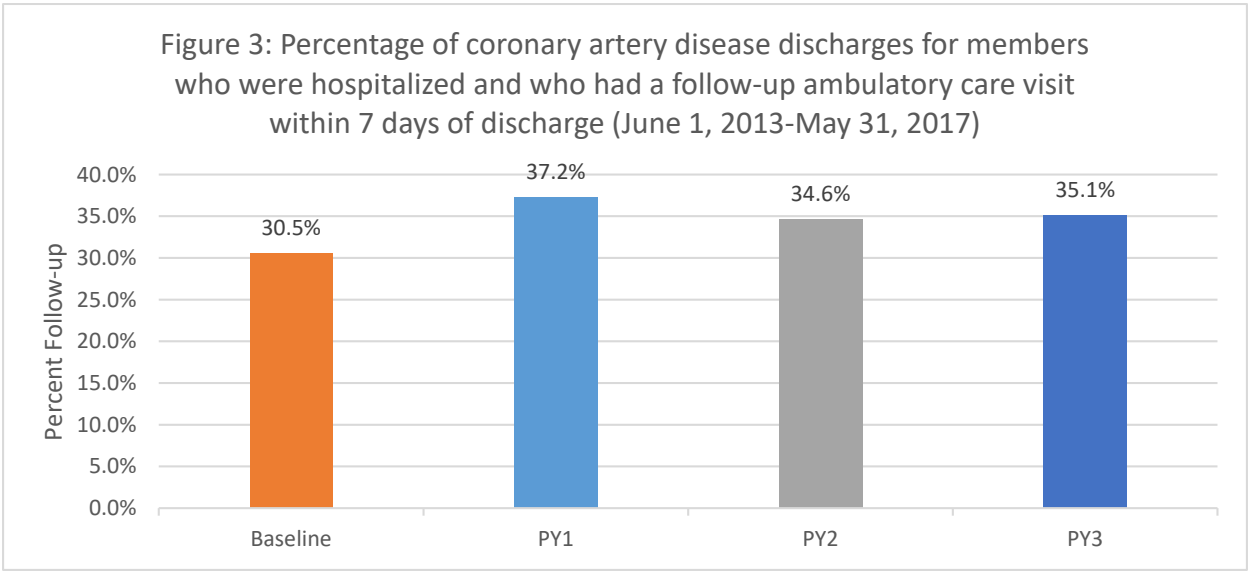
Asthma

The percentage of asthma discharges for members who were hospitalized that had a follow-up ambulatory care visit within seven days of discharge did not significantly decrease from Baseline to PY1. Percentages of asthma discharges for members also did not significantly decrease from Baseline to PY2. Percentages of asthma discharges for members significantly decreased from Baseline to PY2. Percentages of asthma discharges for members did not significantly increase from PY1 to PY2 and significantly decreased from PY2-PY3 (Figure 2). This is a negative result as it would be desirable to see a statistically significant increase in percent follow-up.



Coronary Artery Disease

The percentage of coronary artery disease discharges for members who were hospitalized and who had a follow-up ambulatory care visit within seven days of discharge did not significantly increase from Baseline to PY1, PY2, or PY3. Percentages of coronary artery discharges for members did not significantly decrease from PY1 to PY2 and did not significantly decrease from PY2 to PY3 (Figure 3). This is a negative result as it would be desirable to see a statistically significant increase in the percentage of post-hospitalization follow-up.

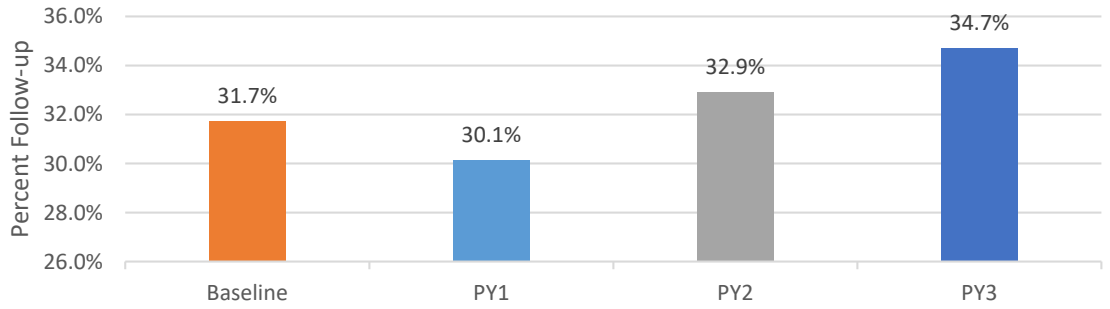


Chronic Obstructive Pulmonary Disease (COPD)

The percentages of discharges for members who were hospitalized with a primary discharge diagnosis of COPD and who had a follow-up ambulatory care visit within seven days of discharge did not significantly decrease from Baseline to PY1. Percentages of COPD discharges also did not significantly

increase from Baseline to PY2 or from Baseline to PY3. Percentages of COPD discharges for members did not significantly increase from PY1 to PY2 or from PY2 to PY3 (Figure 4). This is a negative result as it would be desirable to see a statistically significant increase in percent follow-up. While not statistically significant, PY3 saw improvements in percent follow-up.

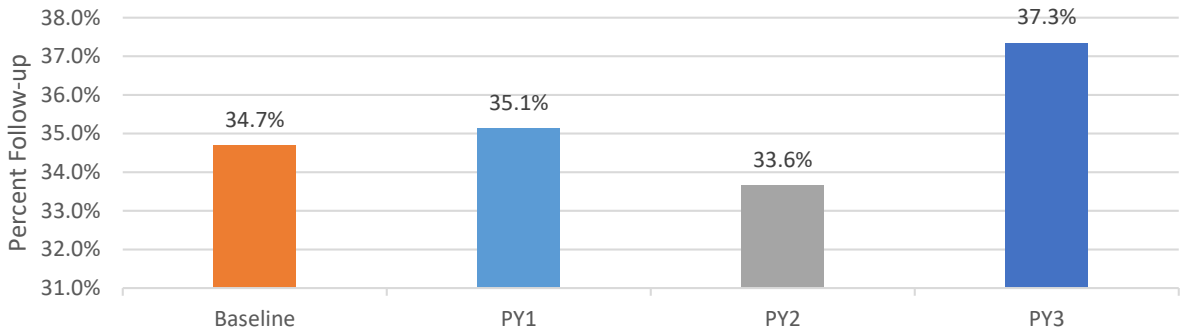
Figure 4: Percentage of discharges for members who were hospitalized with a primary discharge diagnosis of COPD and who had a follow-up ambulatory care visit within 7 days of discharge (June 1, 2013-May 31, 2017)



Heart Failure

The percentages of discharges for members who were hospitalized with a primary discharge diagnosis of heart failure and had a follow-up ambulatory care visit within seven days of discharge did not significantly increase from Baseline to PY1 or from Baseline to PY3. Percentages of heart failure discharges also did not significantly decrease from Baseline to PY2. Percentages of heart failure discharges for members also did not significantly decrease from PY1 to PY2. Percentages of heart failure discharges for members significantly increased from PY2 to PY3 (Figure 5). This is a negative result for PY1 and PY2 but a positive result for PY3 as it would be desirable to see a statistically significant increase in percent follow-up

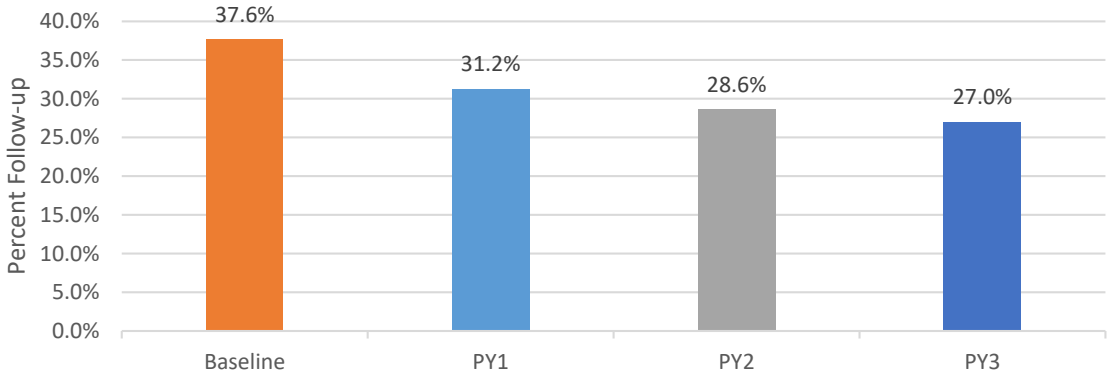
Figure 5: Percentages of discharges for members who were hospitalized with a primary discharge diagnosis of heart failure and had a follow-up ambulatory care visit within 7 days of discharge (June 1, 2013- May 31, 2017)



Mental Health

Percentages of discharges for members six years of age and older who were hospitalized for treatment of select mental health disorders and who had an outpatient visit, an intensive outpatient encounter or partial hospitalization with a mental health practitioner and received follow-up within seven or 30 days of discharge significantly decreased from Baseline to PY1, PY2, and PY3. Percentages of select mental health disorder discharges for this group of members also significantly decreased from Baseline to PY2. However, percentages of select mental health disorder discharges did not significantly decrease from PY1 to PY2 or from PY2 to PY3 (Figure 6). This is a negative result as it would be desirable to see a statistically significant increase in percent follow-up.

Figure 6: Percentages of discharges for members who were hospitalized for treatment of select mental health disorders and received follow-up within 7 or 30 days of discharge.



6. How has enrollment in the CMO impacted utilization of primary care services?

Methods

To assess whether enrollment in the CMO impacted utilization of primary care services, preventive and primary care measures from "Appendix III: Nevada NCCW Quality Measures and Related Qualifying Conditions" were assessed. Thirty-three specific measures related to the primary care/quality indicator category were then summed up and separated by Baseline, PY1, PY2, and PY3 (specific measures can be found in "Appendix III: Nevada NCCW Quality Measures and Related Qualifying Conditions" denoted by an "X" in the primary care/preventive service column). A Chi-square analysis was conducted with a significance cut-off measure of 0.05 to determine if there was a statistically significant difference between Baseline and PY1, Baseline and PY2, and Baseline and PY3. Results of analyses can be seen in Table 13.

Using the completed SAS databook claims and member files provided to UNR by Milliman (methodology can be found above in Q1), the Healthcare Common Procedural Coding System (HCPCS) variable was used to identify certain services related to primary/preventive services, which include: receiving immunizations (influenza, Dtap, MMR, etc.), screening tests (cancers, LDL-C screenings, spirometry testing, neuropathy screening, etc.), and child wellness visits, or given certain medications to treat specific conditions (mood stabilizers, anti-depressants, etc.). The billed costs for these services were summed up by program year to generate primary care/preventive service costs.

Results

When comparing enrollment in the CMO for persons in the primary care services domain, there was a statistically significant decrease between Baseline measures and PY1 measures (p-value <0.0001). There was also a statistically significant decrease between Baseline measures and PY2 measures (p-value <0.0001). There was also a statistically significant decrease between Baseline measures and PY3 measures (p-value <0.0001). Based on these analyses, enrollment in the CMO was seen to reduce the use of primary care and preventive services. In particular, the greatest declines were seen in the neurological, musculoskeletal, and general preventative qualifying conditions. This is a negative result as it is desirable for enrollees to increase use of primary care services and preventive services (see Table 13).

Table 13. Primary Care/Preventive Service

	Baseline			PY1			BL-PY1	PY2			BL-PY2	PY3			BL-PY3
Qualifying condition	Num.	Denom.	%^	Num.	Denom.	%^	p-value	Num.	Denom.	%^	p-value	Num.	Denom.	%^	p-value
Respiratory	797	3,592	**22.2%**	698	3,621	**19.3%**	0.0023*	771	3,136	**24.6%**	0.0203*	762	3,068	**24.8%**	0.0109*
Neurological	192	495	**38.8%**	23	183	**12.6%**	<0.0001*	8	83	**9.6%**	<0.0001*	25	210	**11.9%**	<0.0001*
Diabetes	6,586	13,069	**50.4%**	7,073	14,059	**50.3%**	0.9304	6,465	12,936	**50.0%**	0.6522	6,244	12,312	**50.7%**	0.6096
Cardiovascular	3,387	7,674	**44.1%**	2,947	7,414	**39.7%**	<0.0001*	2,594	7,042	**36.8%**	<0.0001*	2,518	6,785	**37.1%**	<0.0001*
Mental Health	587	1,699	**34.5%**	593	1,822	**32.5%**	0.2087	531	1,813	**29.3%**	0.0008*	406	1,814	**22.4%**	<0.0001*
Musculoskeletal	248	479	**51.8%**	163	589	**27.7%**	<0.0001*	161	644	**25.0%**	<0.0001*	156	605	**25.8%**	<0.0001*
Cancer	5,159	17,954	**28.7%**	10,344	36,313	**28.5%**	0.5459	11,161	40,154	**27.8%**	0.0199*	9,856	31,871	**30.9%**	<0.0001*
Obesity[1]	129	24,648	**0.5%**	2,933	67,493	**4.3%**	<0.0001*	3,459	72,012	**4.8%**	<0.0001*	2,192	29,468	**7.4%**	<0.0001*
General Preventive Health	14,754	36,712	**40.2%**	52,035	175,337	**29.7%**	<0.0001*	55,133	182,623	**30.2%**	<0.0001*	51,386	169,456	**30.3%**	<0.0001*
General Preventive Health[2]	69	197	**35.0%**	172	996	**17.3%**	<0.0001*	186	1,067	**17.4%**	<0.0001*	2	68	**2.9%**	<0.0001*
Total	**31,839**	**106,322**	**29.9%**	**76,809**	**306,831**	**25.0%**	**<0.0001***	**80,283**	**320,443**	**25.1%**	**<0.0001***	**73,547**	**255,657**	**28.8%**	**<0.0001***

*Statistically significant change.

[1]Baseline measure ABA was not calculated.

[2]Reduction indicates improvement in General Preventative Health

Green indicates an increase in primary care/preventive service (positive outcome) from Baseline to PY. Red indicates a decrease in primary care/preventive service (negative outcome) from Baseline to PY.

When comparing annual costs for primary care services, average PMPM costs increased from Baseline ($62.21) to PY1 ($73.13) by 17.6%, from Baseline ($62.21) to PY2 ($99.05) by 59.2% and from Baseline ($62.21) to PY3 ($86.31) by 38.7% (see Table 14).

Table 14. Preventive Care Costs

Year	Cost	Member Months	PMPM (Avg)
BL	$26,676,932.82	428,842	$62.21
PY1	$32,972,863.65	450,851	$73.13
PY2	$43,808,495.00	442,286	$99.05
PY3	$40,349,102.00	467,494	$86.31
Total	**$143,807,393.47**	**$1,789,473.00**	**$80.36**

Costs include those for immunizations, screening test, and child wellness visits.

7. Do members enrolled in the CMO program have fewer readmissions to hospitals as compared to historical FFS data?

Methods

To assess whether enrollment in the CMO program led to fewer readmissions to hospitals compared to historical FFS data, completed SAS databook claims and member files provided to UNR by Milliman (methodology can be found above in Q1) were used in the analysis. The place of service code for inpatient hospitals was used to subset the completed database provided by Milliman. The admission date and discharge dates for members admitted into hospitals were used to identify members who were readmitted into hospitals in less than seven days and in less than thirty days. These members were separated by program year (Baseline, PY1, PY2, and PY3) based on the time of admission and billed costs associated with the individual readmitted in the <7 and <30 day time frame were calculated. Re-hospitalization rates were calculated using those who were readmitted (<7 and <30 days) as the numerator and the total number of hospital admissions was used as the denominator.

Results

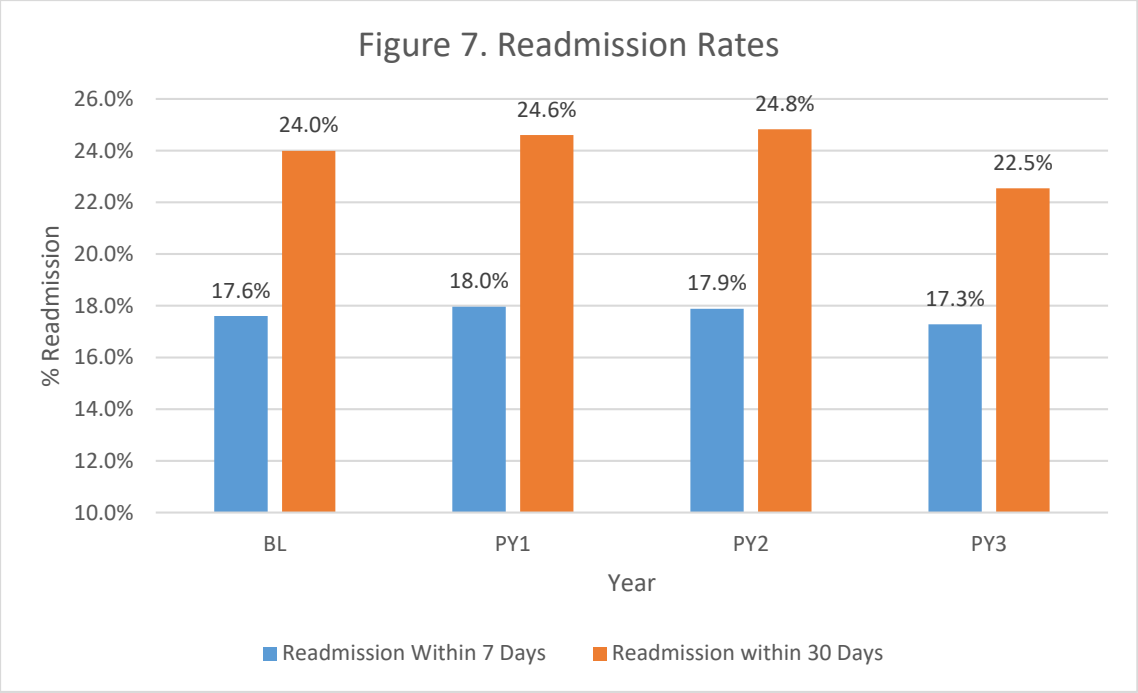
When comparing readmission within seven days after hospitalization for members enrolled in the HCGP, there was a slight increase from Baseline to PY1 from 17.6% to 18.0% (p-value = 0.2428), a slight increase from Baseline to PY2 from 17.6% to 17.9% (p-value = 0.3563), and a slight decrease from Baseline to PY3 from 17.6% to 17.3% (p-value = 0.2691). All changes were not statistically significant. A similar observation was made for readmission within 30 days with a slight increase from Baseline to PY1 from 24.0% to 24.6% (p-value = 0.0764), a statistically significant increase from Baseline to PY2 from 24.0% to 24.8% (p-value = 0.0133), and a statistically significant decrease from Baseline to PY3 from 24.0% to 22.5% (p-value < 0.0001). This is a negative result for PY1 and PY2, but a positive one for PY3, as it would be desirable to see a decrease in readmission shortly after hospitalization. See Table 15 and Figure 7.

Table 15. Members Readmitted to Hospitals Within Certain Time Period

	BL	%	PY1	%	PY2	%	PY3	%
Readmission Within 7 Days	5,132	17.6%	5,888	18.0%	6,466	17.9%	7,249	17.3%
Readmission within 30 Days	6,994	24.0%	8,064	24.6%	8,978	24.8%	9,454	22.5%
Total Members Admitted to Hospitals	29,153		32,777		36,161		41,942	

*Statistically significant change.

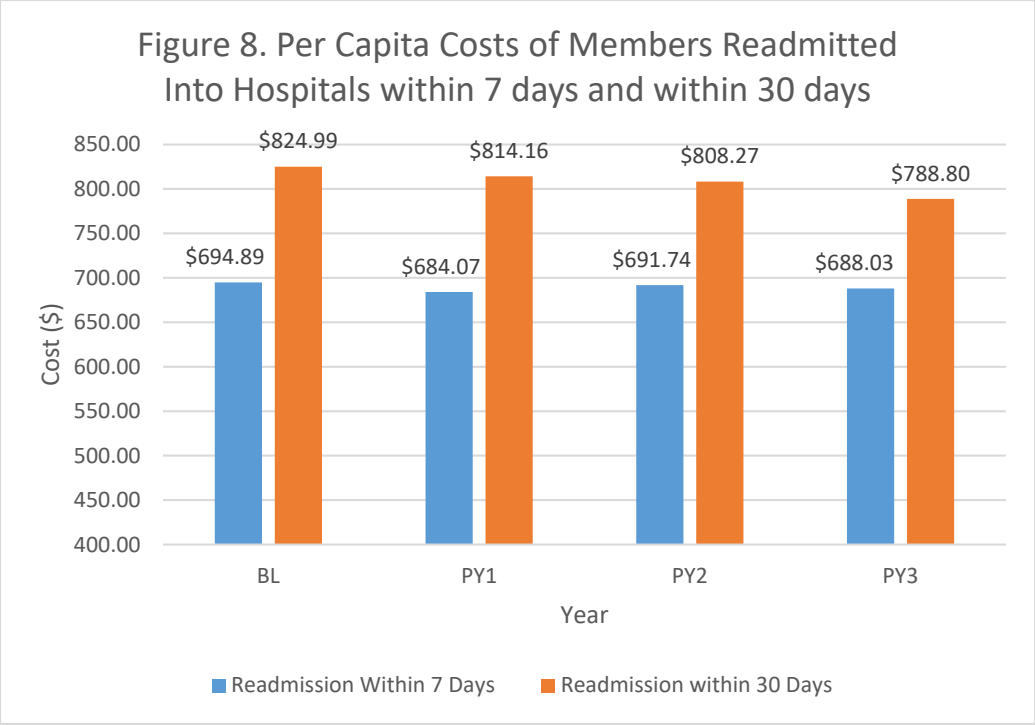
Green indicates decrease in readmissions (positive outcome) from Baseline to PY. Red indicates an increase in readmissions (negative outcome).



Per capita costs for readmissions showed a slight decrease from Baseline to PY1 ($694.89 to $684.07 per member readmitted) and a slight decrease from Baseline to PY2 ($694.89 to $691.74 per member readmitted). A similar observation was made for readmission within 30 days with a slight decrease from Baseline to PY1 ($824.99 to $814.16 per member readmitted), a slight decrease from Baseline to PY2 from ($824.99 to $808.27 per member readmitted) and a decrease from Baseline to PY3 from ($824.99 to $788.80 per member readmitted). This is a positive result indicating reduction of costs associated with hospital readmissions. See Table 16 and Figure 8.

Table 16. Cost of Readmission to Hospitals

	Baseline			PY1			PY2			PY3			
	Total Cost	Members Re-admitted	Cost per member	Total Cost	Members Re-admitted	Cost per member	Total Cost	Members Re-admitted	Cost per member	Total Cost	Members Re-admitted	Cost per member	Total Cost
Readmission Within 7 Days	$3,566,166.87	5,132	$694.89	$4,027,794.17	5,888	$684.07	$4,472,809.52	6,466	$691.74	$4,987,554.54	7,249	$688.03	$4,987,529.47
Readmission within 30 Days	$5,769,967.33	6,994	$824.99	$6,565,396.13	8,064	$814.16	$7,256,673.64	8,978	$808.27	$7,457,323.64	9,454	$788.80	$7,457,315.20



8. Does member enrollment in the CMO for pregnancies reduce the incidence and severity of preterm births and very low birth weight births as compared to historical FFS data?

Methods

To assess whether member enrollment in the CMO for pregnancies reduced the incidence and severity of preterm births and low birth weight births compared to historical FFS data, we used completed SAS databook claims and member files provided to UNR by Milliman (methodology can be found above in Q1). Using the primary diagnosis variable, we used ICD 9 and 10 codes (after October 2015 for PY2) to calculate the number of pre-term births and low birth weight births. For this particular research question, pre-term birth was categorized into four categories, which include: extremely pre-term (<28 weeks completed gestation), very pre-term (28 to <32 weeks completed gestation), moderate pre-term (32 to <34 weeks completed gestation), and late pre-term (34 to <37 weeks completed gestation). Low birth weight (LBW) was categorized into three categories, which include: extremely low birth weight (<1,000g), very low birth weight (1,000g to >1.500g), and low birth weight (1,500g to <2,500g).

Results

From Baseline to PY1, total pre-term births increased by from 392 to 473, but from Baseline to PY2, pre-term births decreased from 392 to 372, and increased again to 442. The overall increase in pre-term births from Baseline to PY3 is a negative result.

From Baseline to PY1, there were no statistically significant changes between the categories for severity. However, from BL to PY2, there was a statistically significant shift from Moderate Preterm to

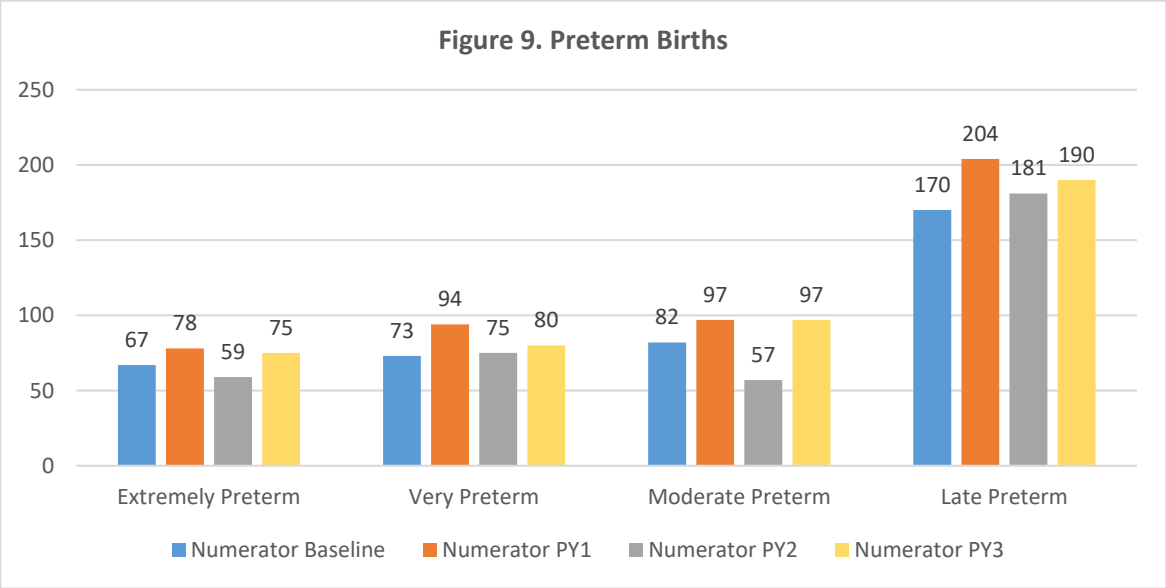
Late Preterm births. There were no statistically significant changes in PY3 This is a positive result as a greater fraction of preterm births were of lower severity. See Table 17 and Figure 9.

Table 17. Preterm Birth Count

	Baseline		PY1		PY2		PY3		% BL-PY1		% BL-PY2		% BL-PY3	
	Births	% of Total	Births	% of Total	Births	% of Total	Births	% of Total	% Difference	p-value	% Difference	p-value	% Difference	p-value
Extremely Preterm	67	17.09%	78	16.49%	59	15.86%	75	16.97%	-0.60%	0.8137	-1.23%	0.6466	-0.12%	0.9622
Very Preterm	73	18.62%	94	19.87%	75	20.16%	80	18.10%	1.25%	0.6427	1.54%	0.5906	-0.52%	0.8456
Moderate Preterm	82	20.92%	97	20.51%	57	15.32%	97	21.95%	-0.41%	0.8819	-5.60%	0.0451*	1.03%	0.7183
Late Preterm	170	43.37%	204	43.13%	181	48.66%	190	42.99%	-0.24%	0.9438	5.29%	0.1427	-0.38%	0.9117
Total Preterm Births		**392**		**473**		**372**		**442**						

*Statistically significant change.

Green indicates decrease (positive outcome) from Baseline to PY. Red indicates an increase (negative outcome) from Baseline to PY.

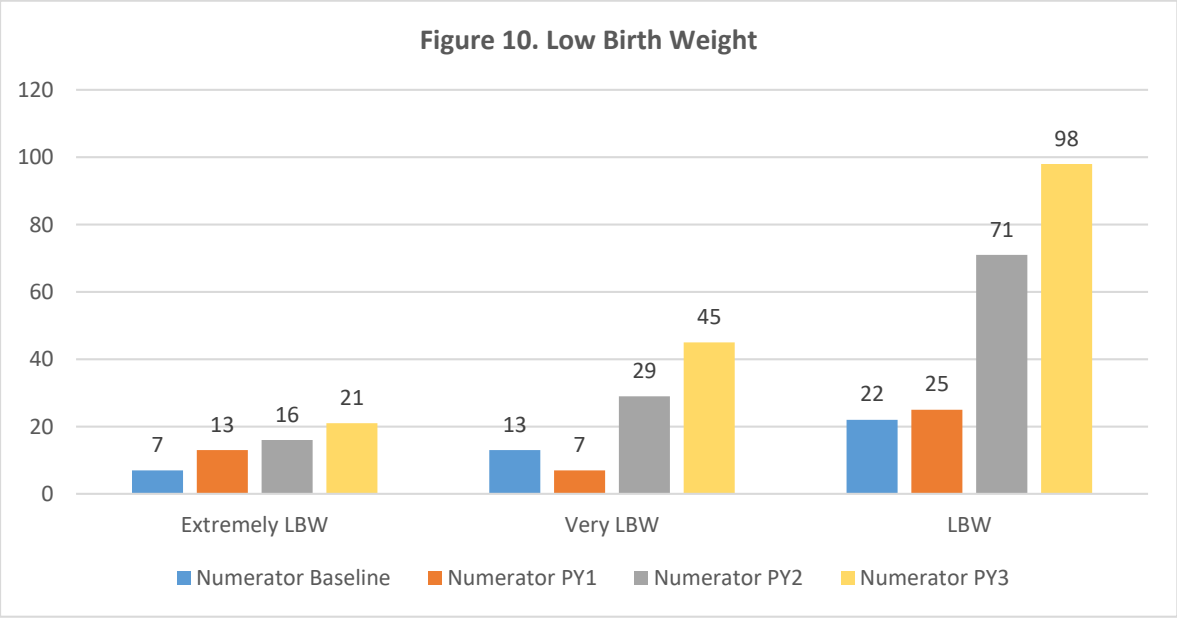


From Baseline to PY1, total low birthweight births increased by 7.1% from 42 to 45 and from Baseline to PY2, low birthweight births continued to increase by 176.2% from 42 to 116. The increases in low birthweight births are negative results. From BL-PY1, there was a 15.40% decrease of Very LBW births relative to total LBW births and a 12.22% increase in Extremely LBW births compared to total LBW births. This shift towards more severe LBW births is a negative outcome, but due to small sample sizes, is not statistically significant. From BL-PY2, Extremely LBW births and Very LBW births decreased when compared to total LBW births. From BL-PY3, extremely LBW and LBW decreased by 3.87% and 3.51% respectively. This shift towards less severe LBW births is a positive outcome but is not statistically significant. See Table 18 and Figure 10.

The "FY 14-15 Compliance Report" written by HSAG references the extended length of time between the date of enrollment and the date of care needs assessment. Overall, there was a mean of 72

days between the enrollment and assessment. This gap is especially challenging with respect to the time limitations of pregnancy and could account for some of the increase in low birthweight births.

Table 18. Low Birth Weight Count														
	Baseline		PY1		PY2		PY3		% BL-PY1		% BL-PY2		% BL-PY3	
	Births	% of Total	Births	% of Total	Births	% of Total	Births	% of Total	% Difference	p-value	% Difference	p-value	% Difference	p-value
Extremely LBW	7	16.67%	13	28.89%	16	13.79%	21	12.80%	12.22%	0.176	-2.87%	0.6509	-3.87%	0.6892
Very LBW	13	30.95%	7	15.56%	29	25.00%	45	27.44%	-15.40%	0.0881	-5.95%	0.4543	-3.51%	0.7913
LBW	22	52.38%	25	55.56%	71	61.21%	98	59.76%	3.17%	0.7665	8.83%	0.3193	7.38%	0.4884
Total LBW Births		**42**		**45**		**116**		**164**						



9. Are individuals enrolled in the CMO satisfied with the care coordination provided?

Methods

To answer question nine, an annual "Enrollee Satisfaction Survey" created by the DHCFP was sent to Medicaid enrollees to measure enrollee satisfaction. A Baseline survey was mailed out in June 2014 to gather Baseline data. The annual survey was sent to enrollees at the end of PY1 (June 2015, this survey was conducted by CareCall Inc.), at the end of PY2 (June 2016), and the end of PY3 (June 2017). Please note, this Enrollee Satisfaction Survey was not available for PY4. Instead two other surveys were available (Case Management Participant Satisfaction Survey and a Disease Management Satisfaction Survey) was available which is described in the third and fourth paragraph of this section.

The Baseline survey was sent to 33,866 Medicaid beneficiaries with a qualifying diagnosis and 3,031 completed the survey (9% response rate). The PY1 survey was sent to 34,857 enrollees and 3,205 completed the survey (9.2% response rate). The PY2 survey was sent to 38,544 enrollees and 2,153 completed the survey (5.6% response rate). The PY3 survey was sent to 37,912 enrollees and 2,341 completed the survey (6.2% response rate). The majority of participants in the Baseline survey, PY1 survey, PY2 survey, and PY3 survey indicated English was the main language they spoke at home (83.7%, 83.6%, 81.2%, and 85.2% respectively).

Additionally, the CMO Agency collected participant satisfaction data on the Health Care Guidance Program (The Case Management Participant Satisfaction Survey). The 2015-2016 Survey (PY2) was sent to 957 candidates and had 115 completions (12% response rate). The 2016-2017 (PY3) survey was sent to 499 candidates and had 69 (13.8% response rate) completions. The 2017-2018 (PY4) survey was sent to 624 candidates and had 92 (14.7% response rate) completions.

Finally, the quarterly disease management satisfaction report also helps to answer question nine. This survey features different questions and was conducted quarterly, from 2015 through the first half of 2018. The results of each question are reported with a line graph to show change over time.

The results section below presents the findings from these survey questions at each time point, first for the enrollee satisfaction survey, then the case management satisfaction survey, and finally for the disease management satisfaction report.

Results: Enrollee Satisfaction Survey

Although it appears that a majority of participants were satisfied with their care across time periods, satisfaction percentages decreased slightly from Baseline to PY1 and PY2 (see Table 19). Slightly more participants at the Baseline (74.5%) time period and PY1 (75.9%) rated their care as 'best care possible' or 'good care' compared to PY2 (69.5%) and PY2 (70.1%); however, slightly more participants rated their care as 'poor care' or 'worst care possible' at Baseline (6.6%) compared to PY1 (4.7%), PY2 (4.2%) and PY3 (5.1%). In addition, the hypothesis that "Medicaid beneficiaries enrolled in a CMO are more satisfied with the quality of their health care than are beneficiaries in the FFS system without the additional care coordination provided by the CMO" could not be addressed because there were no data from those in the FFS that did not receive the care coordination by the CMO to compare to those that did receive the additional care coordination.

Quality of Care from the HCGP

The Baseline measure and PY1 survey asked participants "How would you rate all of the health care you have received over the last six months?" and the PY2 and PY3 measure asked participants "How would you rate the care you have received from the Health Care Guidance Program?" on a scale from *1 = Worst care possible* to *5 = Best care possible* (see Table 19 and Figure 11). At Baseline, PY1, PY2, and PY3, most participants (74.5%, 75.9%, 69.5%, and 70.1%, respectively) indicated the care they received as 'best care possible' or 'good care.' At Baseline, PY1, PY2, and PY3, a minority of participants indicated the care they received was 'poor care' or 'worst care possible' (6.6%, 4.7%, 4.2%, and 5.1%, respectively). See Table 19 and Figure 11.

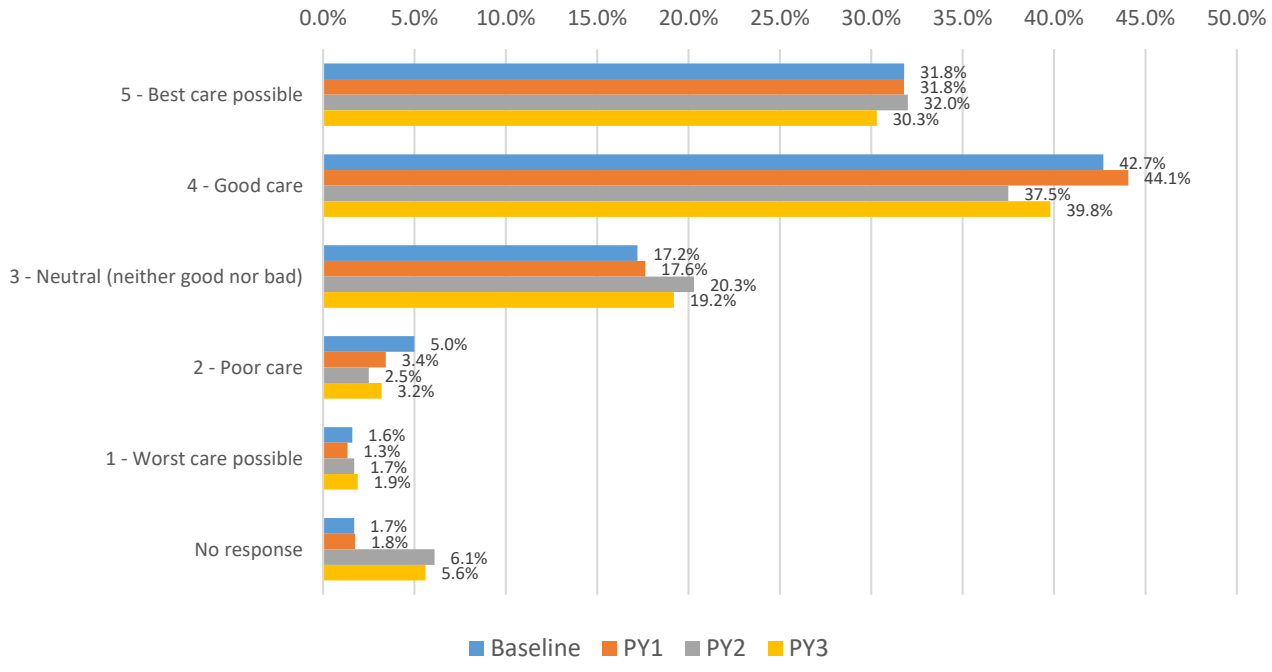
The mean rating of the care received at Baseline was 4.00 (sd = .92). The mean rating of care received from the HCGP in PY1 was 4.03 (sd = .87); in PY2 it was 4.02 (sd = .91); and, in PY3 it was 3.99 (sd = .92). Mean ratings on this question did not significantly differ between Baseline, PY1, PY2, and PY3 $F(3, 10359) = .1.38$, $p = .24$.

Table 19. How would you rate the care you have received from the Health Care Guidance Program?

	Baseline		PY1		PY2		PY3	
	n	%	n	%	n	%	n	%
5 - Best care possible	965	31.8%	1019	31.8%	688	32.0%	709	30.3%
4 - Good care	1,293	42.7%	1412	44.1%	808	37.5%	932	39.8%
3 - Neutral (neither good nor bad)	522	17.2%	565	17.6%	437	20.3%	450	19.2%
2 - Poor care	152	5.0%	110	3.4%	53	2.5%	75	3.2%
1 - Worst care possible	49	1.6%	43	1.3%	36	1.7%	45	1.9%
No response	50	1.7%	56	1.8%	131	6.1%	130	5.6%
Total	3,031	100.0%	3,205	100.0%	2,153	100.0%	2341	100.0%

[1]Note that the question asked in the Baseline and PY1 survey was "How would you rate all of the health care you have received over the last six months?" and the question in the PY2 and PY3 surveys was "How would you rate the care you have received from the Health Care Guidance Program?"

Figure 11. How would you rate the care you have received from the Health Care Guidance Program?

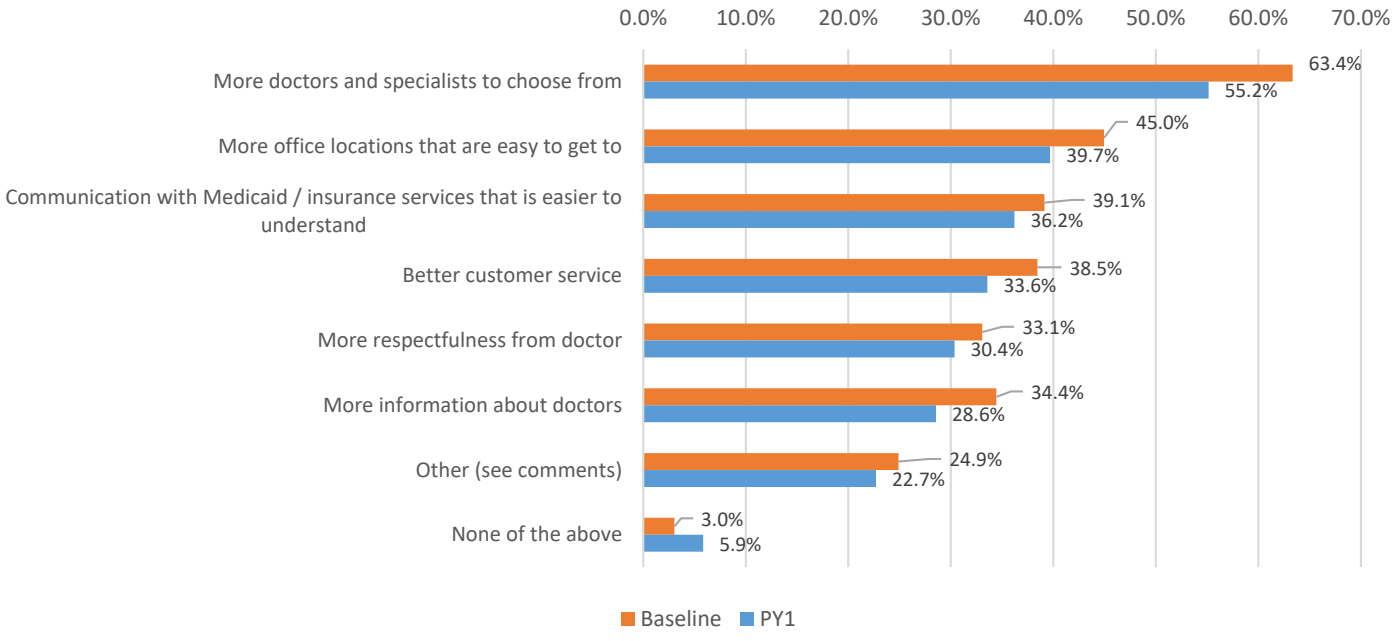


For Baseline and PY1, participants who answered worst care possible, poor care, or neutral were then asked, "If you rated the health care you received as 1, 2 or 3, how could it have been better? (Please mark all answers that apply)." The response options appear to be different between the Baseline and PY1 survey and the PY2 and PY3 survey; thus, results are presented separately. At the Baseline and PY1 surveys, the most frequently selected responses were more doctors and specialists to choose from, more office locations that are easy to get to, and communication with Medicaid/insurance services that is easier to understand (see Table 20 and Figure 12).

Table 20. If you rated the health care you received as 1, 2 or 3, how could it have been better? (Please mark all answers that apply.)

	Baseline		PY1	
	n	%	n	%
More doctors and specialists to choose from	458	63.4%	396	55.2%
More office locations that are easy to get to	325	45.0%	285	39.7%
Communication with Medicaid / insurance services that is easier to understand	283	39.1%	260	36.2%
Better customer service	278	38.5%	241	33.6%
More respectfulness from doctor	239	33.1%	218	30.4%
More information about doctors	249	34.4%	205	28.6%
Other (see comments)	180	24.9%	163	22.7%
None of the above	22	3.0%	42	5.9%

Figure 12. If you rated the health care you received as 1, 2 or 3, how could it have been better? (Please mark all answers that apply.)

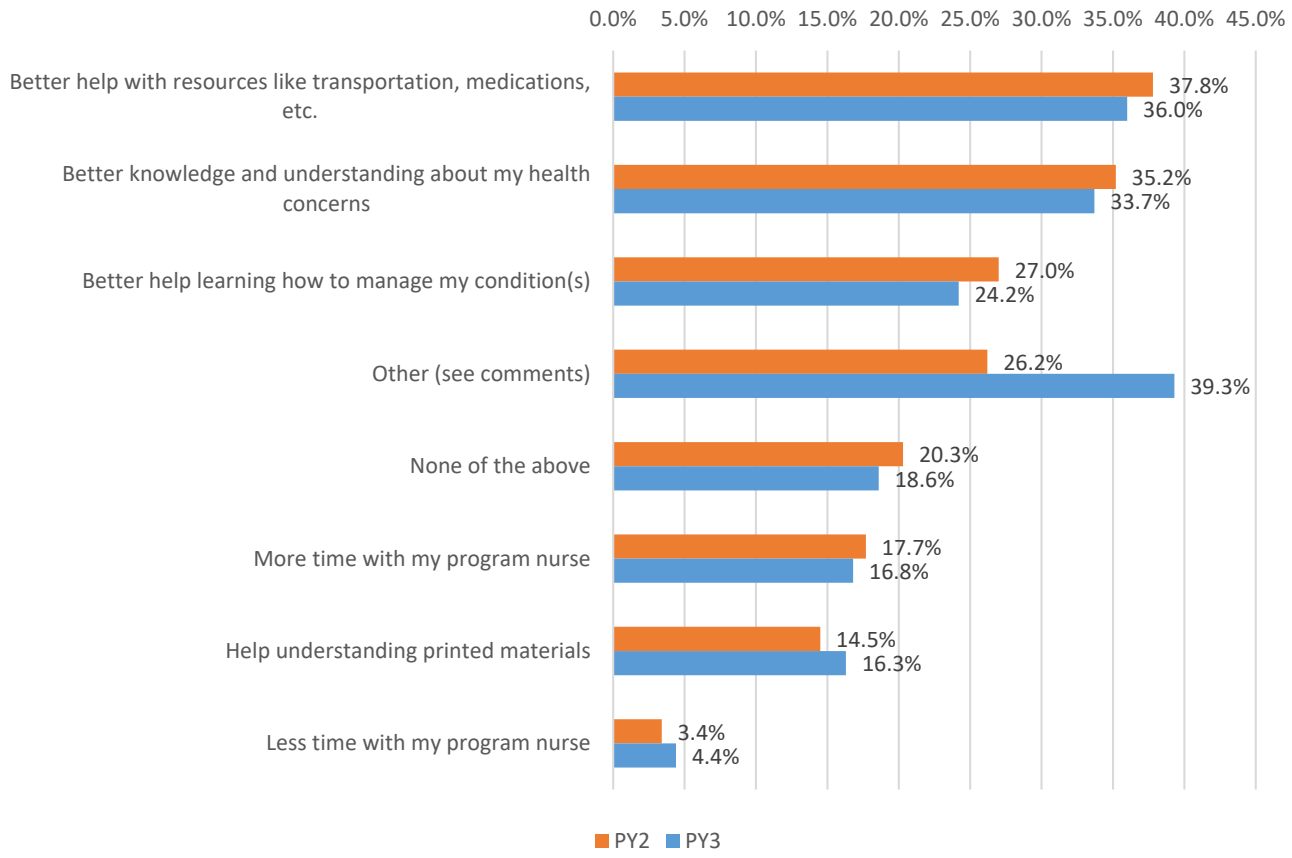


For PY2 and PY3, the most frequently selected responses were better help with resources like transportation, medications etc.; better knowledge and understanding about my health concerns; other; and better help learning how to manage my condition(s). Other surpassed better help learning how to manage my condition(s) in PY3 (see Table 21 and Figure 13).

Table 21. If you rated the health care you received as 1, 2 or 3, how could it have been better? (Please mark all answers that apply.)

	PY2		PY3	
	n	%	n	%
Better help with resources like transportation, medications, etc.	199	37.8%	205	36.0%
Better knowledge and understanding about my health concerns	185	35.2%	192	33.7%
Better help learning how to manage my condition(s)	142	27.0%	138	24.2%
Other (see comments)	138	26.2%	224	39.3%
None of the above	107	20.3%	106	18.6%
More time with my program nurse	93	17.7%	96	16.8%
Help understanding printed materials	76	14.5%	93	16.3%
Less time with my program nurse	18	3.4%	25	4.4%

Figure 13. If you rated the health care you received as 1, 2 or 3, how could it have been better? (PY2 and PY3)

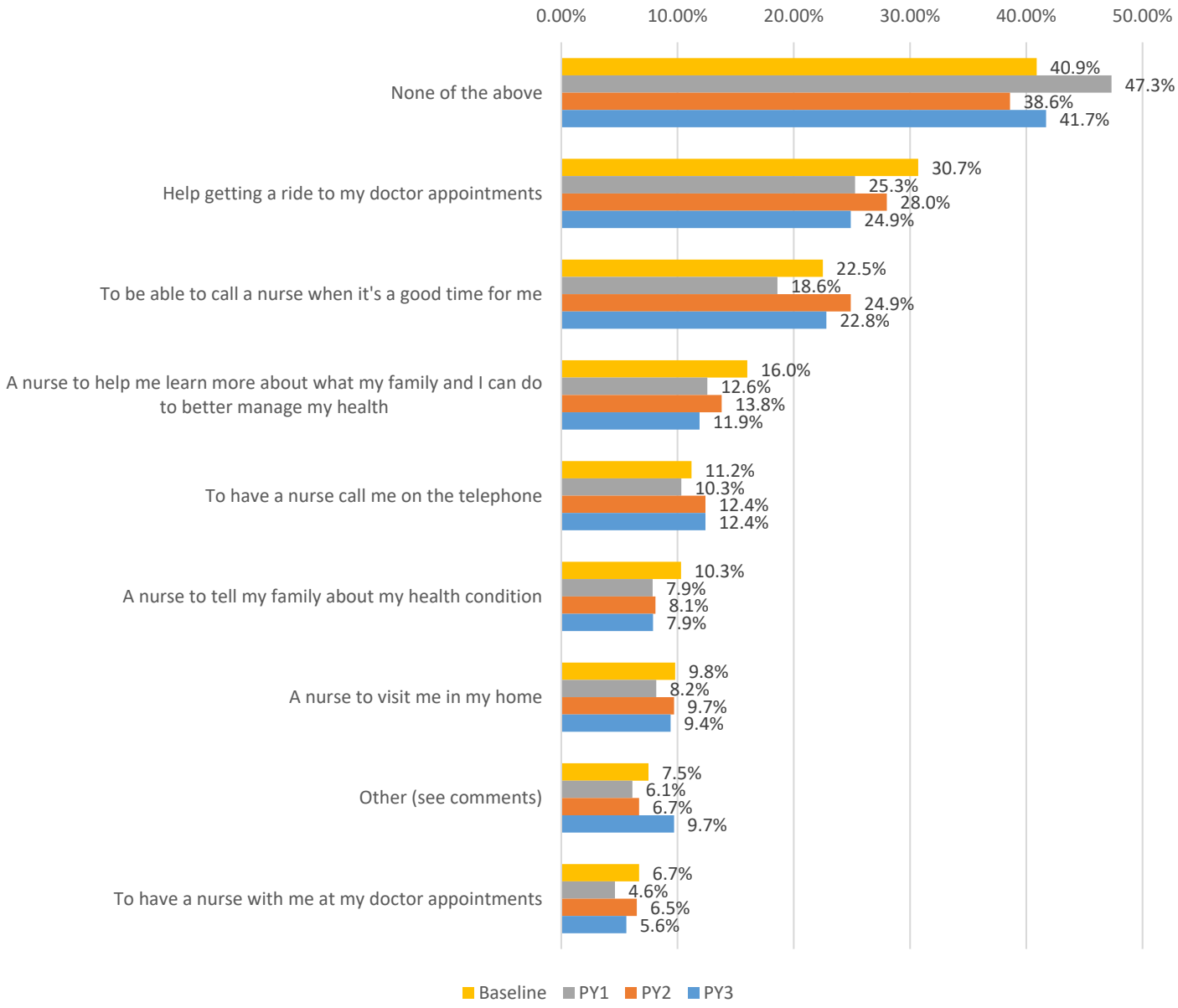


Nevada Medicaid FFS Health Care Services

Participants were asked, "What kind of Nevada Medicaid Fee-for-Service health care services would be helpful to you? (Please mark all answers that apply)." For all four time points, the most frequently selected answers were none of the above, help getting a ride to my doctor appointments, and to be able to call a nurse when it's a good time for me (see Table 22 and Figure 14).

Table 22. What kind of Nevada Medicaid Fee-for-Service health care services would be helpful to you? (Please mark all answers that apply.)								
	Baseline		PY1		PY2		PY3	
	n	%	n	%	n	%	n	%
None of the above	1,239	40.9%	1517	47.3%	832	38.6%	976	41.7%
Help getting a ride to my doctor appointments	930	30.7%	810	25.3%	602	28.0%	582	24.9%
To be able to call a nurse when it's a good time for me	682	22.5%	596	18.6%	536	24.9%	534	22.8%
A nurse to help me learn more about what my family and I can do to better manage my health	484	16.0%	403	12.6%	298	13.8%	279	11.9%
To have a nurse call me on the telephone	338	11.2%	331	10.3%	267	12.4%	290	12.4%
A nurse to tell my family about my health condition	311	10.3%	252	7.9%	174	8.1%	184	7.9%
A nurse to visit me in my home	297	9.8%	262	8.2%	208	9.7%	221	9.4%
Other (see comments)	226	7.5%	196	6.1%	145	6.7%	228	9.7%
To have a nurse with me at my doctor appointments	202	6.7%	148	4.6%	140	6.5%	131	5.6%

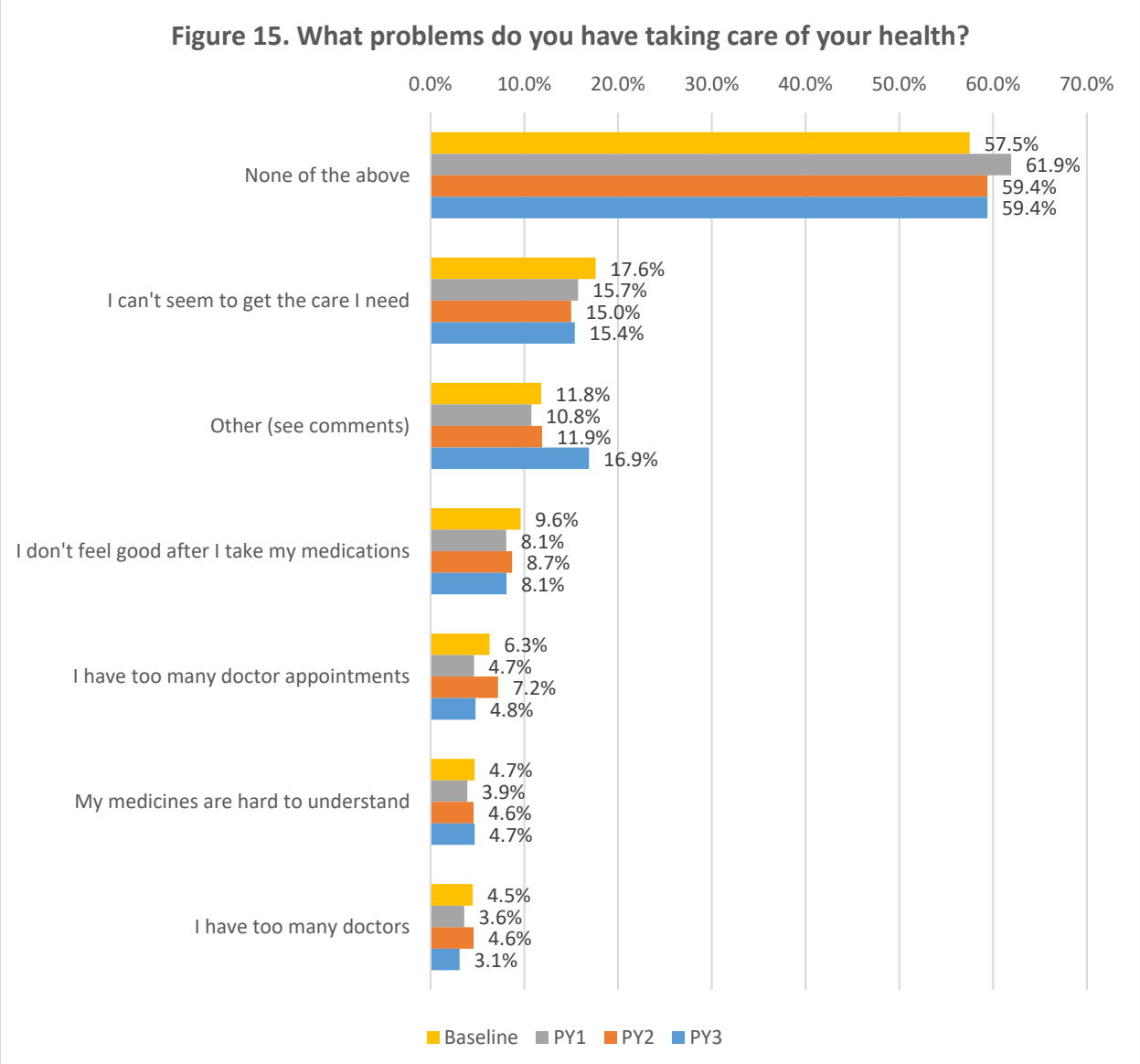
Figure 14. What kind of Nevada Medicaid Fee-for-Service health care services would be helpful to you?



Problems Taking Care of Health

Participants were asked, "What problems do you have taking care of your health? (Please mark all answers that apply)." For all four time points, the most frequently selected answers were none of the above; I can't seem to get the care I need; other; and, I don't feel good after I take my medicines (see Table 23 and Figure 15).

Table 23. What problems do you have taking care of your health? (Please mark all answers that apply)								
	Baseline		PY1		PY2		PY3	
	n	%	n	%	n	%	n	%
None of the above	1,742	57.5%	1,985	61.9%	1,279	59.4%	1,390	59.4%
I can't seem to get the care I need	533	17.6%	504	15.7%	323	15.0%	361	15.4%
Other (see comments)	356	11.8%	345	10.8%	257	11.9%	395	16.9%
I don't feel good after I take my medications	290	9.6%	259	8.1%	188	8.7%	189	8.1%
I have too many doctor appointments	190	6.3%	149	4.7%	154	7.2%	112	4.8%
My medicines are hard to understand	143	4.7%	126	3.9%	98	4.6%	111	4.7%
I have too many doctors	137	4.5%	115	3.6%	99	4.6%	72	3.1%

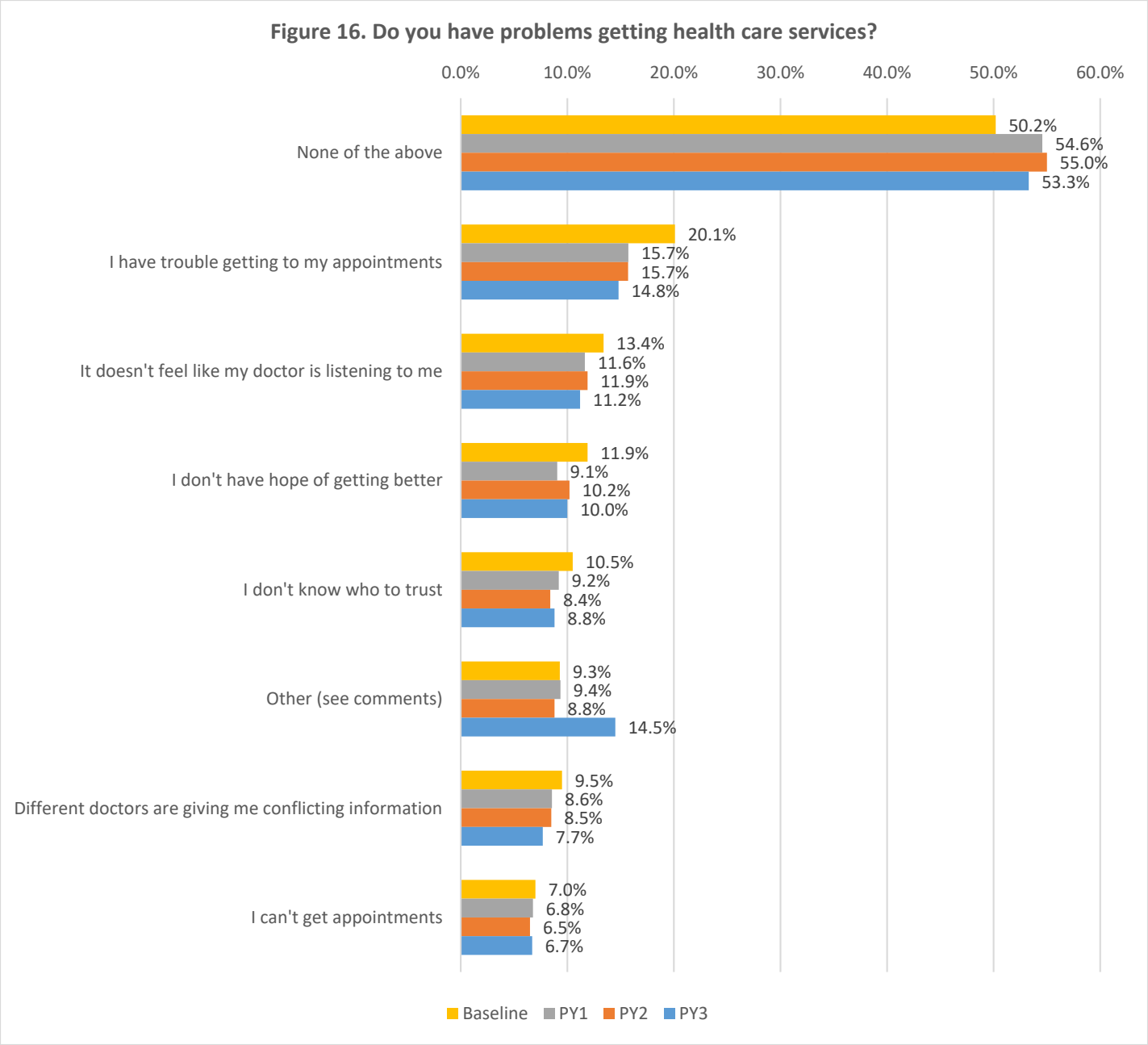


Problems Getting Health Care Services

Participants were asked, "Do you have problems getting health care services? (Please mark all answers that apply)." For all four time points, the most frequently selected answers were none of the above, I have trouble getting to my appointments, it doesn't feel like my doctor is listening to me, and I don't have hope of getting better (see Table 24 and Figure 16).

Table 24. Do you have problems getting health care services? (Please mark all answers that apply)

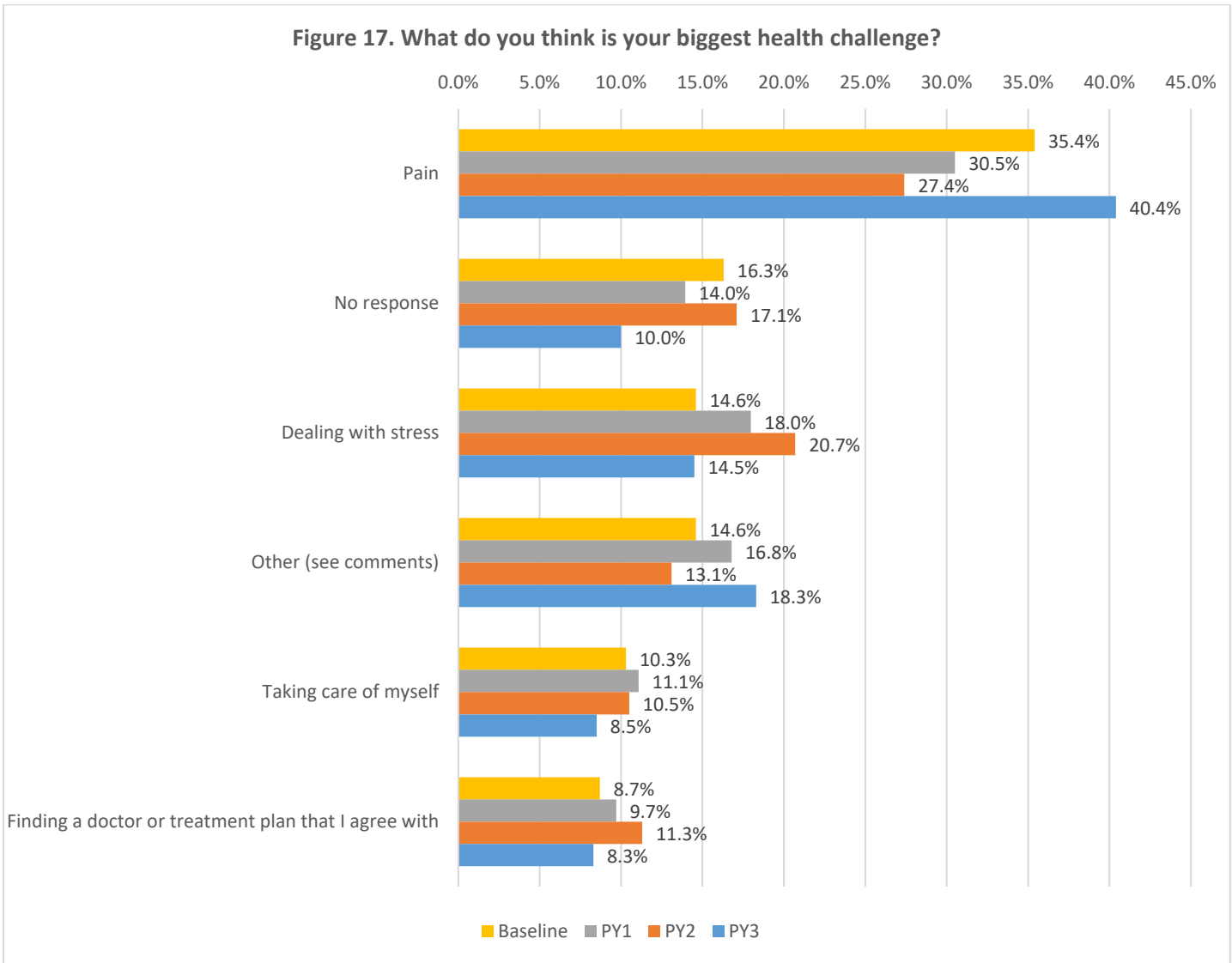
	Baseline		PY1		PY2		PY3	
	n	%	n	%	n	%	n	%
None of the above	1,520	50.2%	1,749	54.6%	1,184	55.0%	1,248	53.3%
I have trouble getting to my appointments	608	20.1%	504	15.7%	337	15.7%	347	14.8%
It doesn't feel like my doctor is listening to me	405	13.4%	373	11.6%	256	11.9%	261	11.2%
I don't have hope of getting better	360	11.9%	290	9.1%	219	10.2%	235	10.0%
I don't know who to trust	319	10.5%	295	9.2%	180	8.4%	206	8.8%
Other (see comments)	283	9.3%	300	9.4%	189	8.8%	340	14.5%
Different doctors are giving me conflicting information	289	9.5%	274	8.6%	183	8.5%	179	7.7%
I can't get appointments	213	7.0%	217	6.8%	140	6.5%	156	6.7%



Health Challenges

Participants were asked, "What do you think is your biggest health challenge?" For all four time points, pain was the most frequently selected choice (see Table 25 and Figure 17). For the Baseline measure, the other most frequently selected choices were no response and dealing with stress. For PY1, the next most frequently selected responses were dealing with stress and other. For PY2, the next most frequently selected responses were dealing with stress and no response. For PY3, the next most frequently selected responses were other and dealing with stress.

Table 25. What do you think is your biggest health challenge?								
	Baseline		PY1		PY2		PY3	
	n	%	n	%	n	%	n	%
Pain	1,074	35.4%	978	30.5%	590	27.4%	945	40.4%
No response	494	16.3%	447	14.0%	369	17.1%	235	10.0%
Dealing with stress	443	14.6%	576	18.0%	445	20.7%	339	14.5%
Other (see comments)	443	14.6%	538	16.8%	281	13.1%	428	18.3%
Taking care of myself	312	10.3%	355	11.1%	225	10.5%	199	8.5%
Finding a doctor or treatment plan that I agree with	265	8.7%	311	9.7%	243	11.3%	195	8.3%



Results: Case Management Satisfaction Report

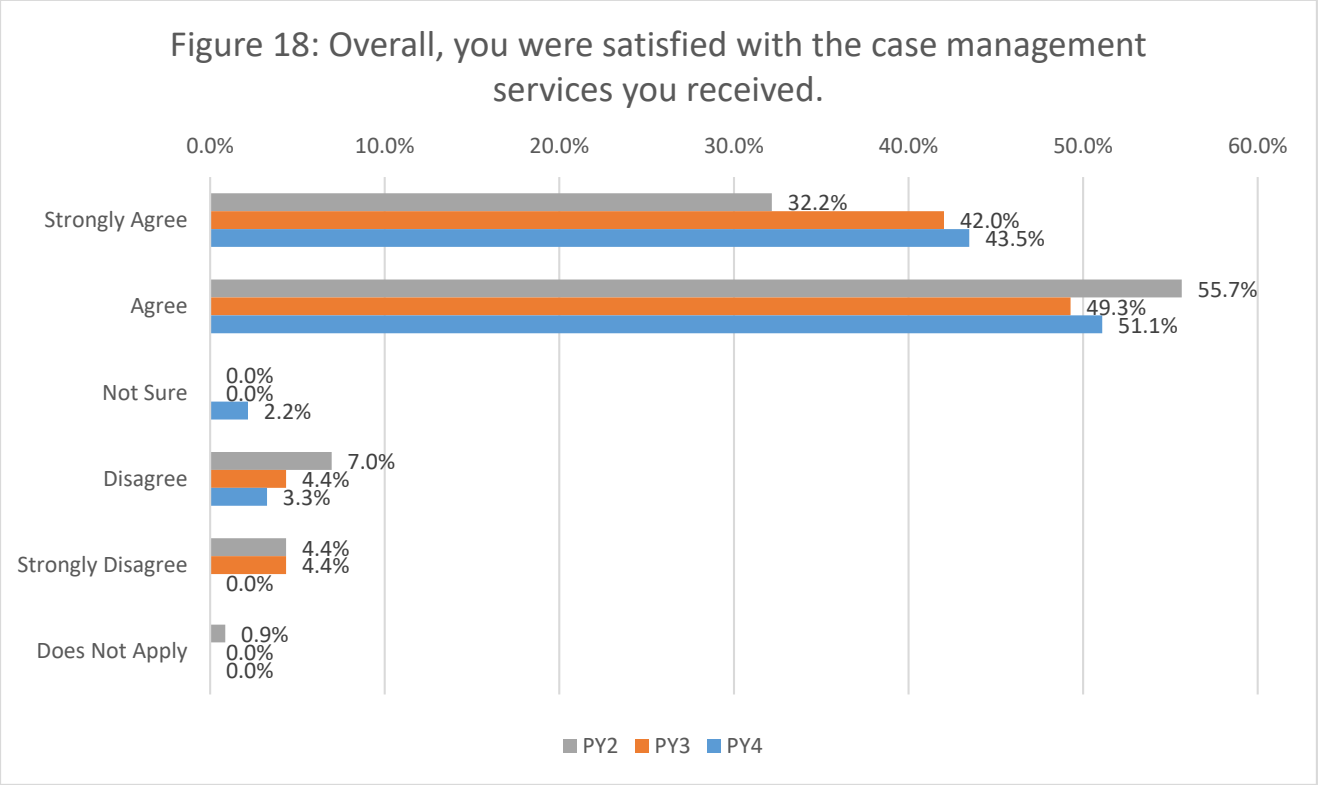
For the case management satisfaction report, participants were asked 16 questions in the form of statement and were given response options of *Does Not Apply, Strongly Disagree, Disagree, Not sure, Agree, or Strongly Agree* for each question.

Overall Satisfaction

Participants were given the statement, "Overall, you were satisfied with the case management services you received." Participants appeared satisfied overall, with satisfaction increasing slightly over time, with 87.8% answering agree or strongly agree in PY2; 91.3% in PY3; and 94.6% in PY4. See Table 26 and Figure 18 for more specific changes over time.

Table 26. Overall, you were satisfied with the case management services you received.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	37	32.2%	29	42.0%	40	43.5%
Agree	64	55.7%	34	49.3%	47	51.1%
Not Sure	0	0.0%	0	0.0%	2	2.2%
Disagree	8	7.0%	3	4.4%	3	3.3%
Strongly Disagree	5	4.4%	3	4.4%	0	0.0%
Does Not Apply	1	0.9%	0	0.0%	0	0.0%
Total	115	100.0%	69	100.0%	92	100.0%

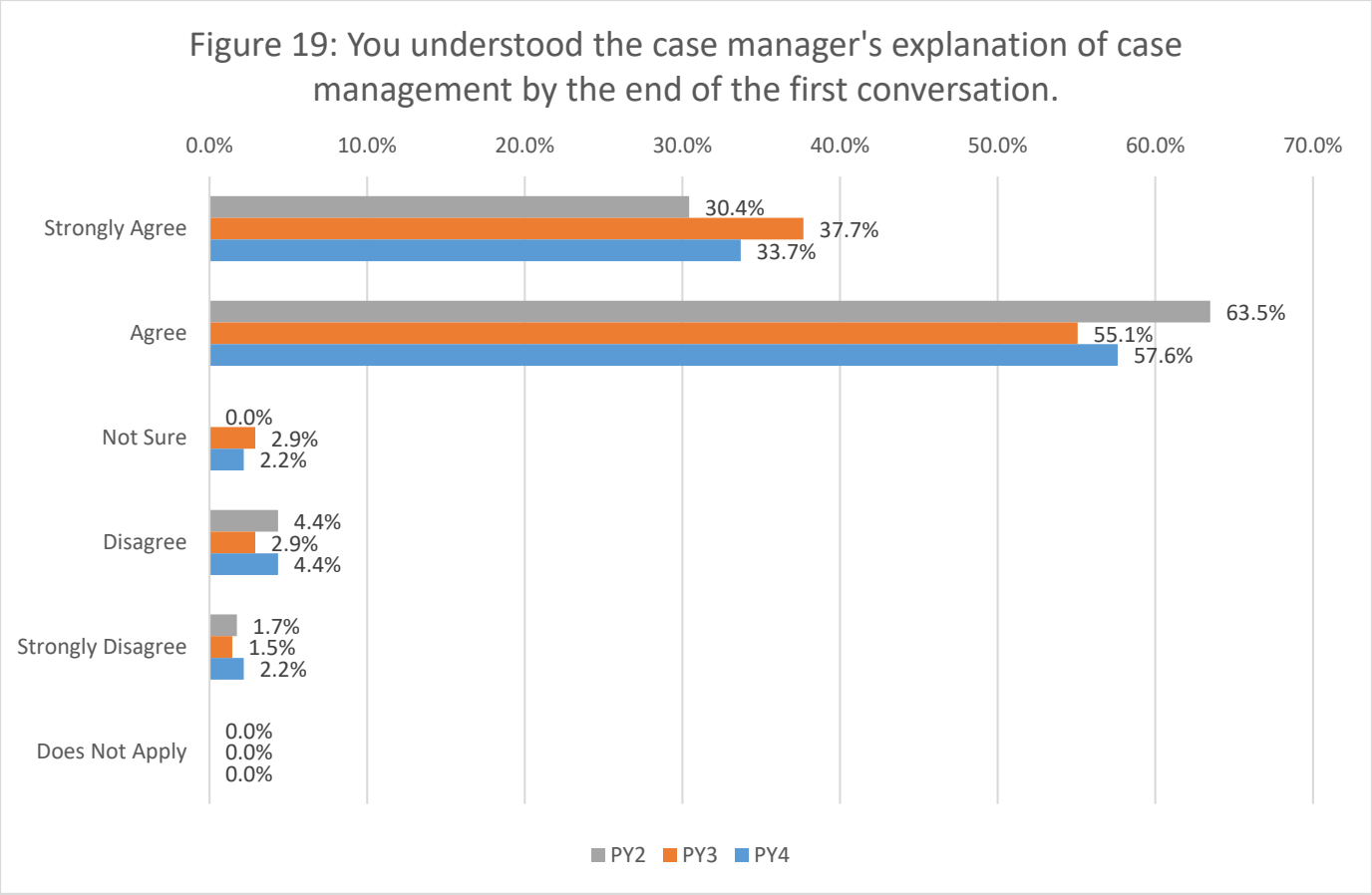


Understanding Explanation

Participants were given the statement, "You understood the case manager's explanation of case management by the end of the first conversation." Participants appeared to agree at a stable rate across the three surveys, with 93.9% answering agree or strongly agree in PY2; 92.8% in PY3; and 91.3% in PY4. See Table 27 and Figure 19 for more specific breakdowns at each timepoint.

Table 27. You understood the case manager's explanation of case management by the end of the first conversation.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	35	30.4%	26	37.7%	31	33.7%
Agree	73	63.5%	38	55.1%	53	57.6%
Not Sure	0	0.0%	2	2.9%	2	2.2%
Disagree	5	4.4%	2	2.9%	4	4.4%
Strongly Disagree	2	1.7%	1	1.5%	2	2.2%
Does Not Apply	0	0.0%	0	0.0%	0	0.0%
Total	115	100.0%	69	100.0%	92	100.0%

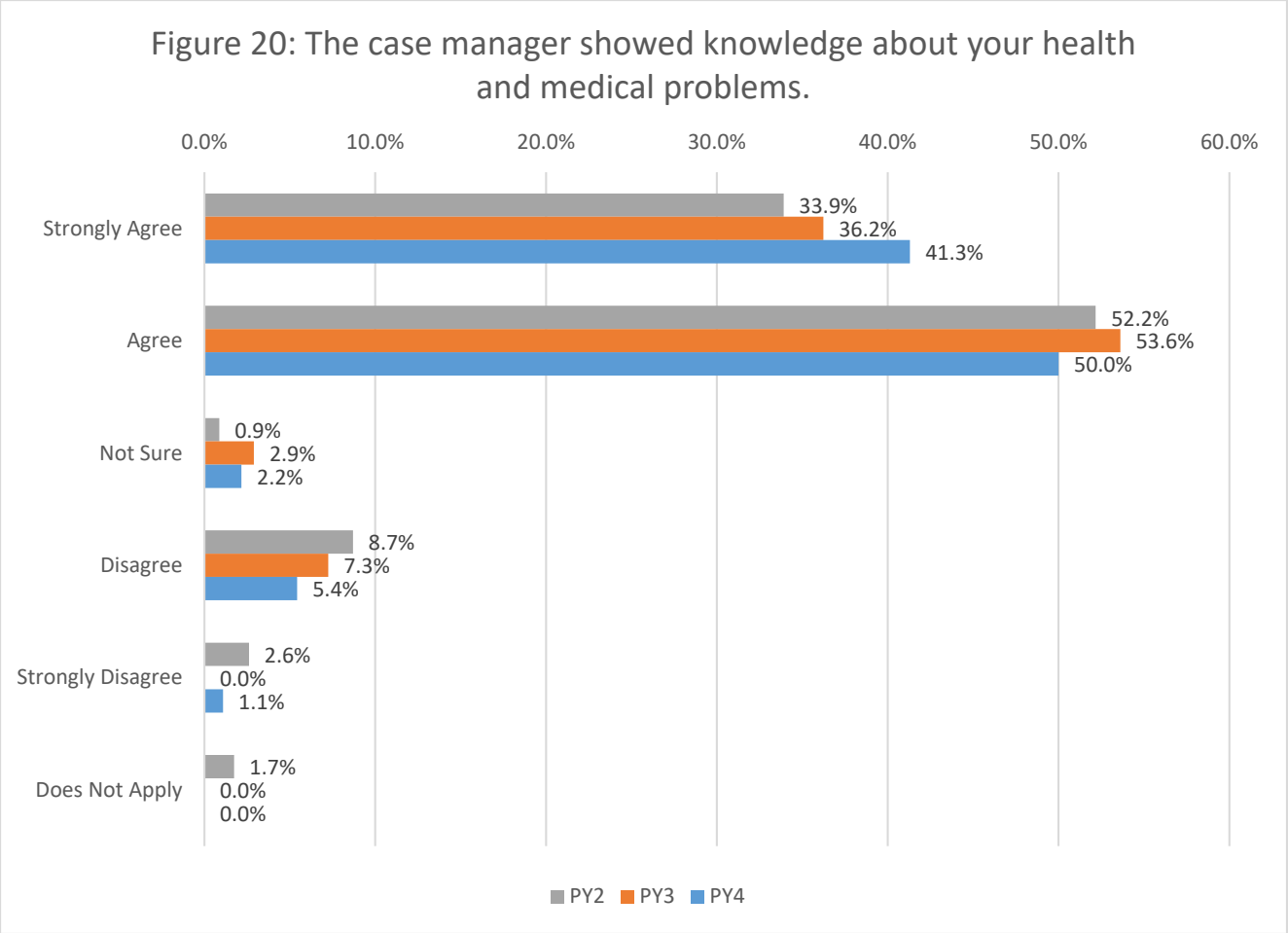


Case Manager Knowledge

Participants were given the statement, "The case manager showed knowledge about your health and medical problems." Participants appeared to agree at a slightly increasing rate over time across the three surveys, with 86.1% answering agree or strongly agree in PY2; 89.9% in PY3; and 91.3% in PY4. See Table 28 and Figure 20 for more specific breakdowns at each timepoint.

Table 28. The case manager showed knowledge about your health and medical problems.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	39	33.9%	25	36.2%	38	41.3%
Agree	60	52.2%	37	53.6%	46	50.0%
Not Sure	1	0.9%	2	2.9%	2	2.2%
Disagree	10	8.7%	5	7.3%	5	5.4%
Strongly Disagree	3	2.6%	0	0.0%	1	1.1%
Does Not Apply	2	1.7%	0	0.0%	0	0.0%
Total	115	100.0%	69	100.0%	92	100.0%

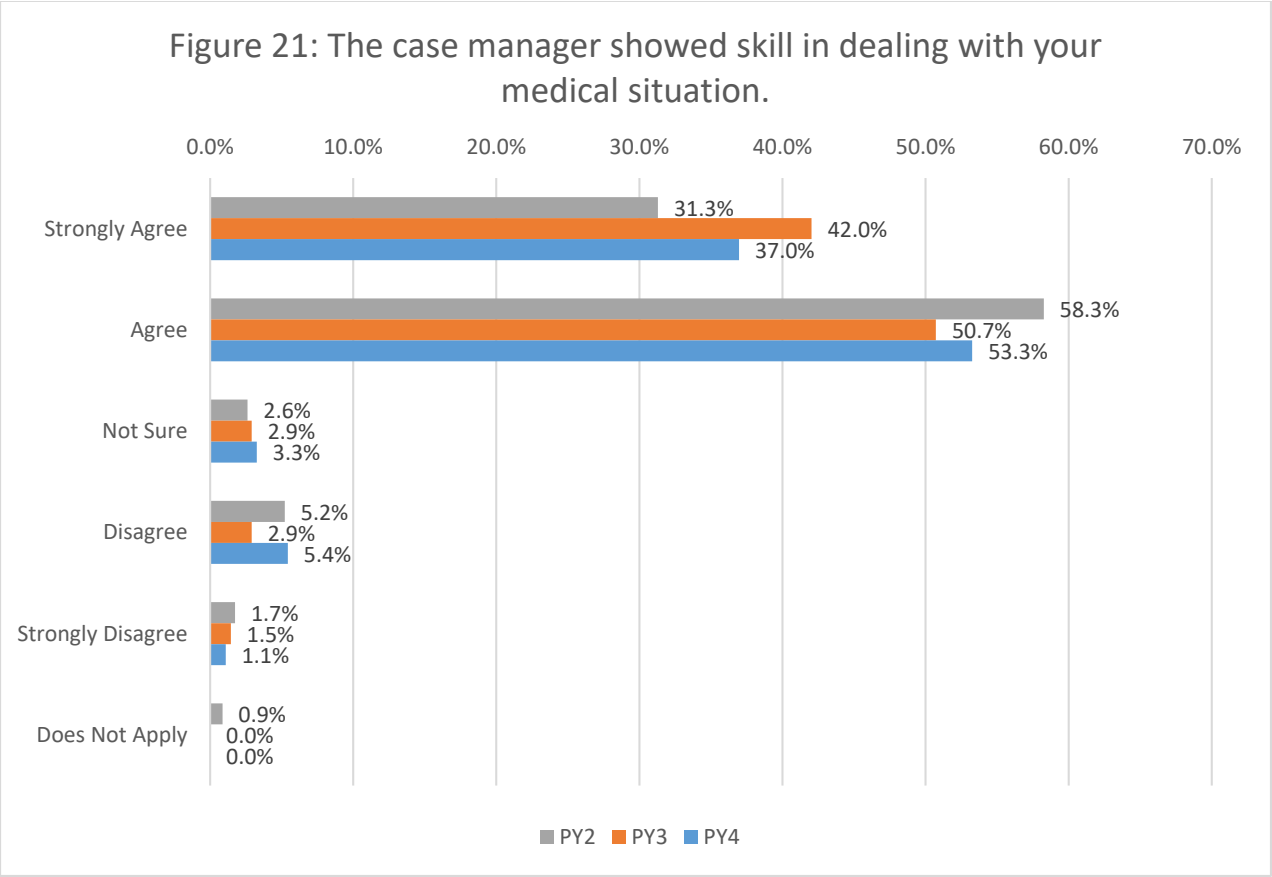


Case Manager Skill

Participants were given the statement, "The case manager showed skill in dealing with your medical situation." Participants appeared to agree at a stable rate across the three surveys, with 89.6% answering agree or strongly agree in PY2; 92.8% in PY3; and 90.2% in PY4. See Table 29 and Figure 21 for more specific breakdowns at each timepoint.

Table 29. The case manager showed skill in dealing with your medical situation.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	36	31.3%	29	42.0%	34	37.0%
Agree	67	58.3%	35	50.7%	49	53.3%
Not Sure	3	2.6%	2	2.9%	3	3.3%
Disagree	6	5.2%	2	2.9%	5	5.4%
Strongly Disagree	2	1.7%	1	1.5%	1	1.1%
Does Not Apply	1	0.9%	0	0.0%	0	0.0%
Total	115	100.0%	69	100.0%	92	100.0%

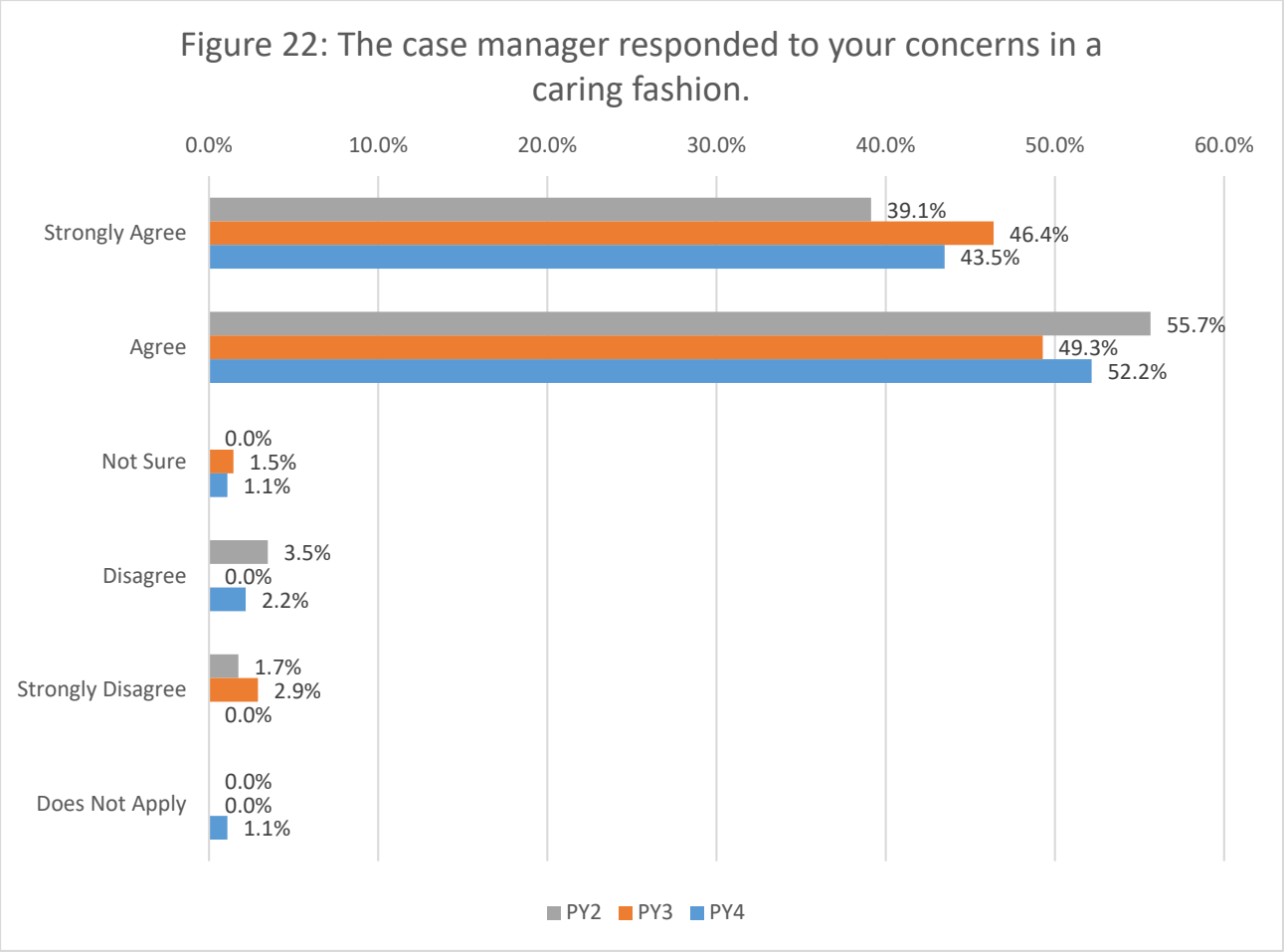


Case Manager Response

Participants were given the statement, "The case manager showed skill in dealing with your medical situation." Participants appeared to agree at a high rate across the three surveys, with 94.8% answering agree or strongly agree in PY2; 95.7% in PY3; and 95.7% in PY4. See Table 30 and Figure 22 for more specific breakdowns at each timepoint.

Table 30. The case manager responded to your concerns in a caring fashion.

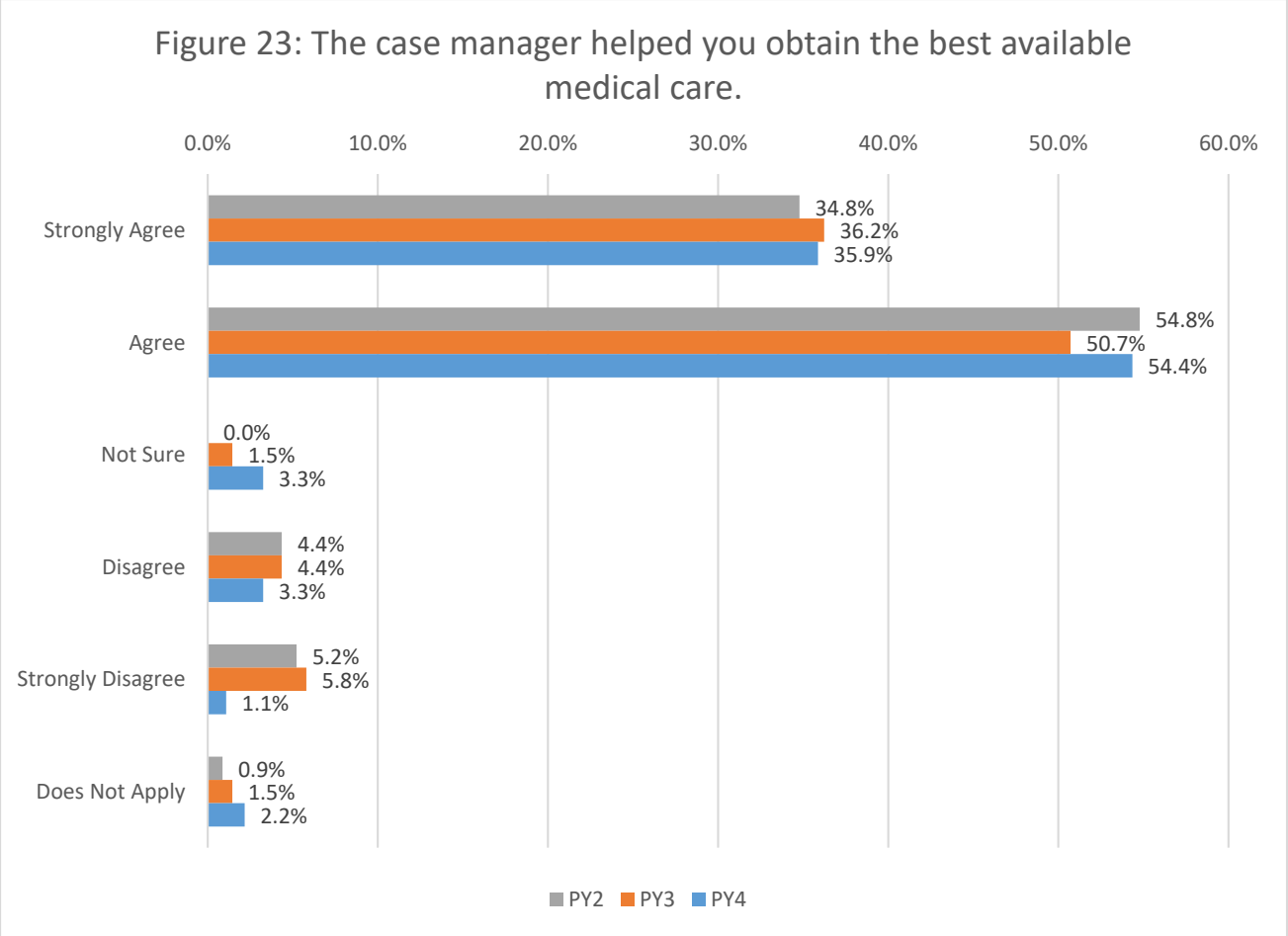
	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	45	39.1%	32	46.4%	40	43.5%
Agree	64	55.7%	34	49.3%	48	52.2%
Not Sure	0	0.0%	1	1.5%	1	1.1%
Disagree	4	3.5%	0	0.0%	2	2.2%
Strongly Disagree	2	1.7%	2	2.9%	0	0.0%
Does Not Apply	0	0.0%	0	0.0%	1	1.1%
Total	115	100.0%	69	100.0%	92	100.0%



Case Manager Help

Participants were given the statement, "The case manager helped you obtain the best available medical care." Participants appeared to agree at a high rate across the three surveys, although there was a slight dip in agreement in PY3, with 89.6% answering agree or strongly agree in PY2; 86.9% in PY3; and 90.2% in PY4. See Table 31 and Figure 23 for more specific breakdowns at each timepoint.

Table 31. The case manager helped you obtain the best available medical care.						
	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	40	34.8%	25	36.2%	33	35.9%
Agree	63	54.8%	35	50.7%	50	54.4%
Not Sure	0	0.0%	1	1.5%	3	3.3%
Disagree	5	4.4%	3	4.4%	3	3.3%
Strongly Disagree	6	5.2%	4	5.8%	1	1.1%
Does Not Apply	1	0.9%	1	1.5%	2	2.2%
Total	115	100.0%	69	100.0%	92	100.0%



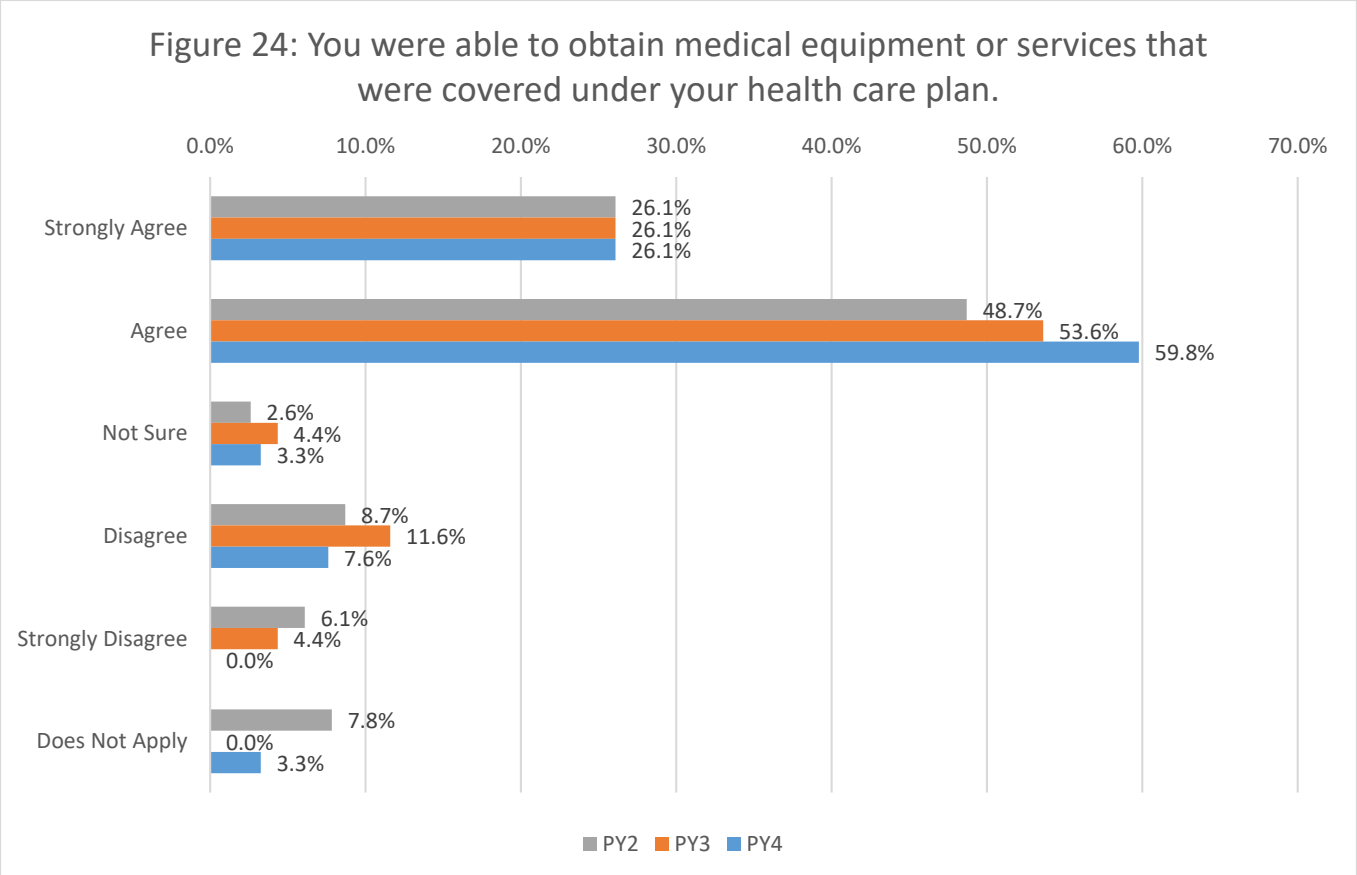
Medical Equipment

Participants were given the statement, "You were able to obtain medical equipment or services that were covered under your health care plan." Participants appeared to agree at a lower rate across the

three surveys compared to previous questions, with 74.9% answering agree or strongly agree in PY2; 79.7% in PY3; and 85.9% in PY4. See Table 32 and Figure 24 for more specific breakdowns at each timepoint.

Table 32. You were able to obtain medical equipment or services that were covered under your health care plan.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	30	26.1%	18	26.1%	24	26.1%
Agree	56	48.7%	37	53.6%	55	59.8%
Not Sure	3	2.6%	3	4.4%	3	3.3%
Disagree	10	8.7%	8	11.6%	7	7.6%
Strongly Disagree	7	6.1%	3	4.4%	0	0.0%
Does Not Apply	9	7.8%	0	0.0%	3	3.3%
Total	115	100.0%	69	100.0%	92	100.0%



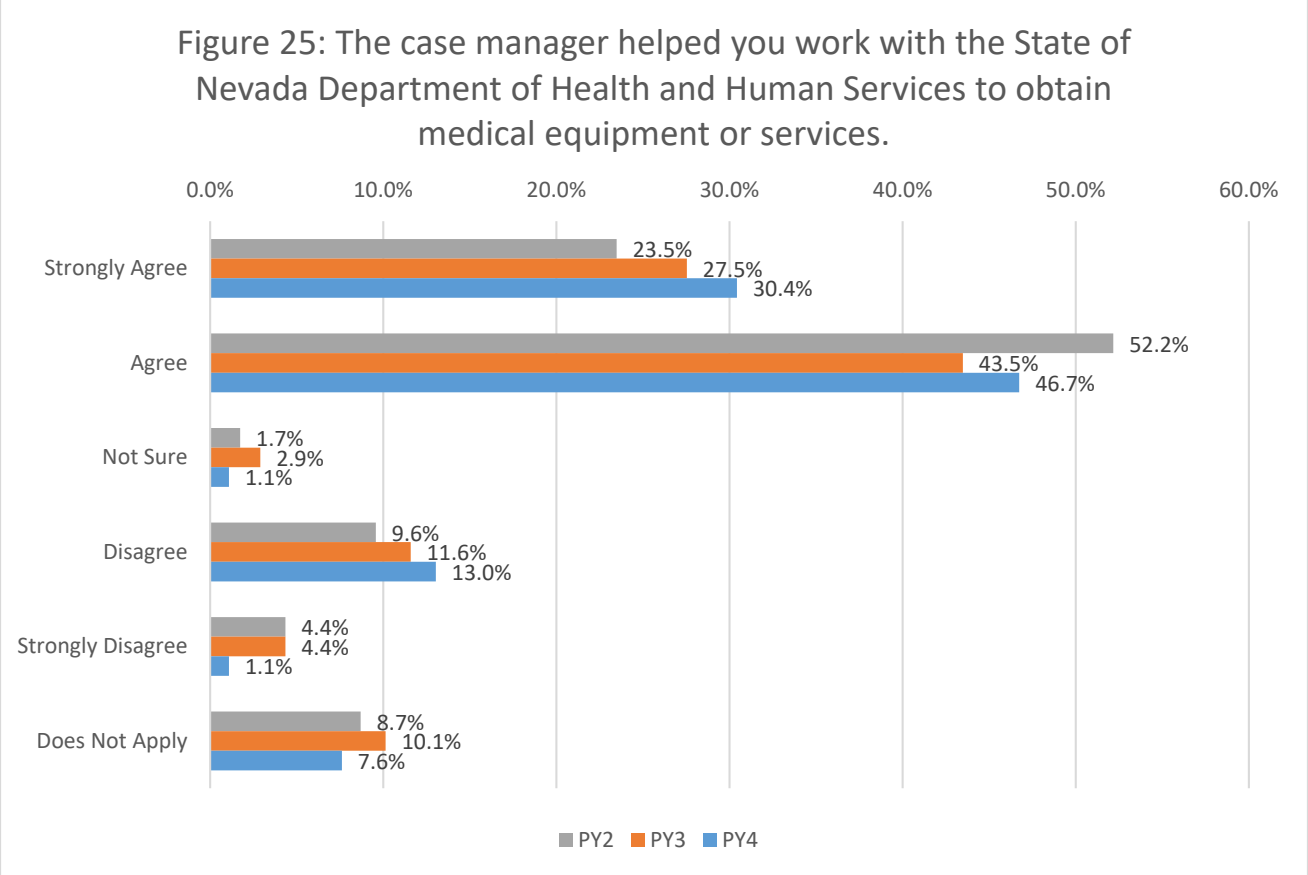
Obtaining Equipment

Participants were given the statement, "The case manager helped you work with the State of Nevada Department of Health and Human Services to obtain medical equipment or services." Participants

appeared to agree at an even lower rate across the three surveys compared to previous questions, with 75.7% answering agree or strongly agree in PY2; 71.0% in PY3; and 77.2% in PY4. See Table 33 and Figure 25 for more specific breakdowns at each timepoint.

Table 33. The case manager helped you work with the State of Nevada Department of Health and Human Services to obtain medical equipment or services.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	27	23.5%	19	27.5%	28	30.4%
Agree	60	52.2%	30	43.5%	43	46.7%
Not Sure	2	1.7%	2	2.9%	1	1.1%
Disagree	11	9.6%	8	11.6%	12	13.0%
Strongly Disagree	5	4.4%	3	4.4%	1	1.1%
Does Not Apply	10	8.7%	7	10.1%	7	7.6%
Total	115	100.0%	69	100.0%	92	100.0%

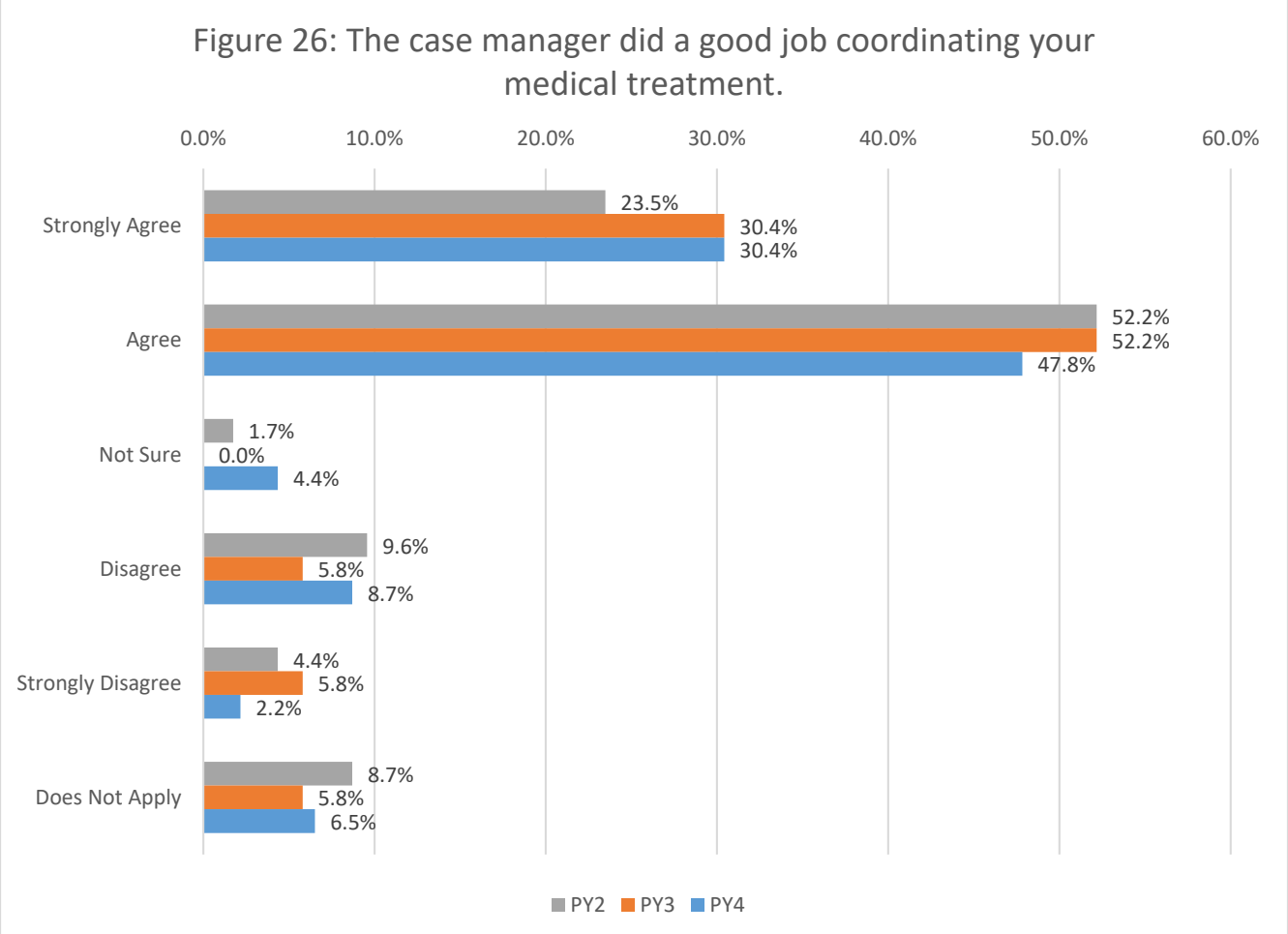


Coordinating Treatment

Participants were given the statement, "The case manager did a good job coordinating your medical treatment." Participants appeared to agree at a consistent rate across the three surveys, with 81.7% answering agree or strongly agree in PY2; 82.6% in PY3; and 78.26% in PY4. See Table 34 and Figure 26 for more specific breakdowns at each timepoint.

Table 34. The case manager did a good job coordinating your medical treatment.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	34	29.6%	21	30.4%	28	30.4%
Agree	60	52.2%	36	52.2%	44	47.8%
Not Sure	0	0.0%	0	0.0%	4	4.4%
Disagree	9	7.8%	4	5.8%	8	8.7%
Strongly Disagree	6	5.2%	4	5.8%	2	2.2%
Does Not Apply	6	5.2%	4	5.8%	6	6.5%
Total	115	100.0%	69	100.0%	92	100.0%

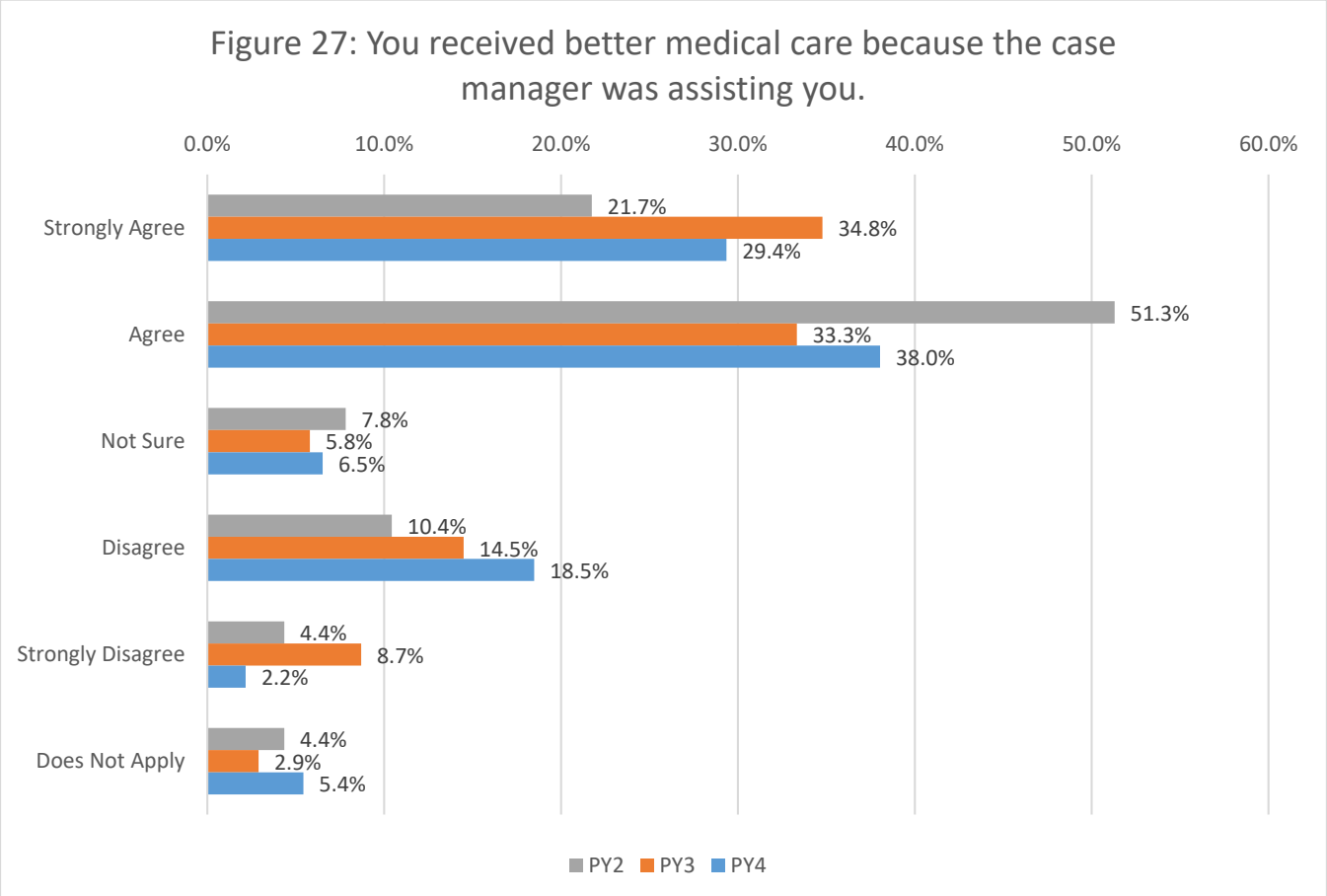


Better Medical Care

Participants were given the statement, "You received better medical care because the case manager was assisting you." Participants appeared to agree at a declining rate across the three surveys, with 73.0% answering agree or strongly agree in PY2; 68.1% in PY3; and 67.4% in PY4. See Table 35 and Figure 27 for more specific breakdowns at each timepoint.

Table 35. You received better medical care because the case manager was assisting you.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	25	21.7%	24	34.8%	27	29.4%
Agree	59	51.3%	23	33.3%	35	38.0%
Not Sure	9	7.8%	4	5.8%	6	6.5%
Disagree	12	10.4%	10	14.5%	17	18.5%
Strongly Disagree	5	4.4%	6	8.7%	2	2.2%
Does Not Apply	5	4.4%	2	2.9%	5	5.4%
Total	115	100.0%	69	100.0%	92	100.0%

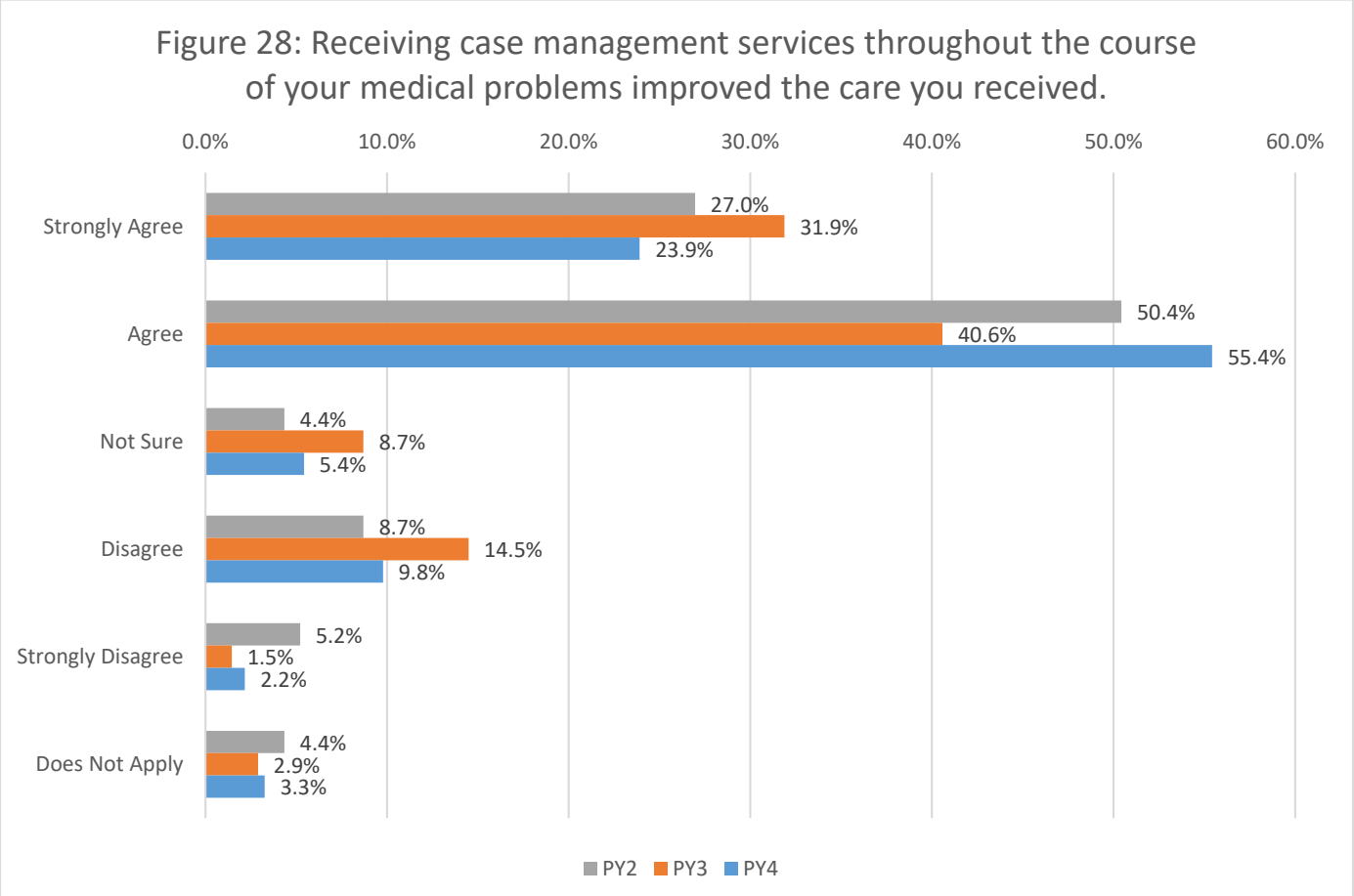


Improving Care

Participants were given the statement, "Receiving case management services throughout the course of your medical problems improved the care you received." Participants appeared to agree more in PY2 and PY4 compared to PY3. In PY2, 77.4% answered agree or strongly agree; 72.46% in PY3; and 79.4% in PY4. See Table 36 and Figure 28 for more specific breakdowns at each timepoint.

Table 36. Receiving case management services throughout the course of your medical problems improved the care you received.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	31	27.0%	22	31.9%	22	23.9%
Agree	58	50.4%	28	40.6%	51	55.4%
Not Sure	5	4.4%	6	8.7%	5	5.4%
Disagree	10	8.7%	10	14.5%	9	9.8%
Strongly Disagree	6	5.2%	1	1.5%	2	2.2%
Does Not Apply	5	4.4%	2	2.9%	3	3.3%
Total	115	100.0%	69	100.0%	92	100.0%

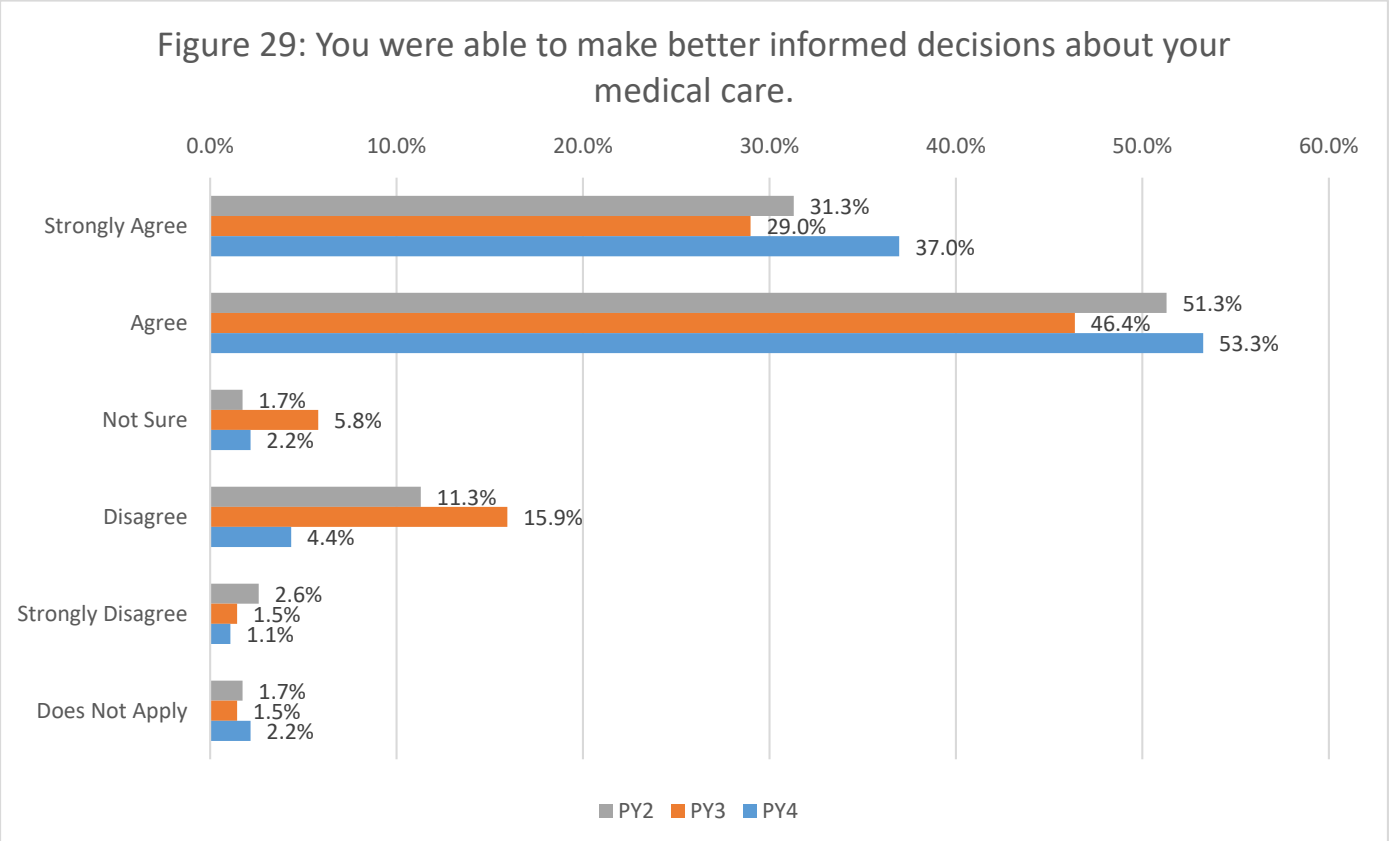


Informed Decisions

Participants were given the statement, "You were able to make better informed decisions about your medical care." Participants appeared to agree at an inconsistent rate across the three surveys, with 82.6% answering agree or strongly agree in PY2; 75.4% in PY3; and 90.2% in PY4. This question best exemplifies the overall pattern in the survey where participants seem less willing to endorse positive aspects of the program in PY3 compared to PY2 and PY4. See Table 37 and Figure 29 for more specific breakdowns at each timepoint.

Table 37. You were able to make better informed decisions about your medical care.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	36	31.3%	20	29.0%	34	37.0%
Agree	59	51.3%	32	46.4%	49	53.3%
Not Sure	2	1.7%	4	5.8%	2	2.2%
Disagree	13	11.3%	11	15.9%	4	4.4%
Strongly Disagree	3	2.6%	1	1.5%	1	1.1%
Does Not Apply	2	1.7%	1	1.5%	2	2.2%
Total	115	100.0%	69	100.0%	92	100.0%

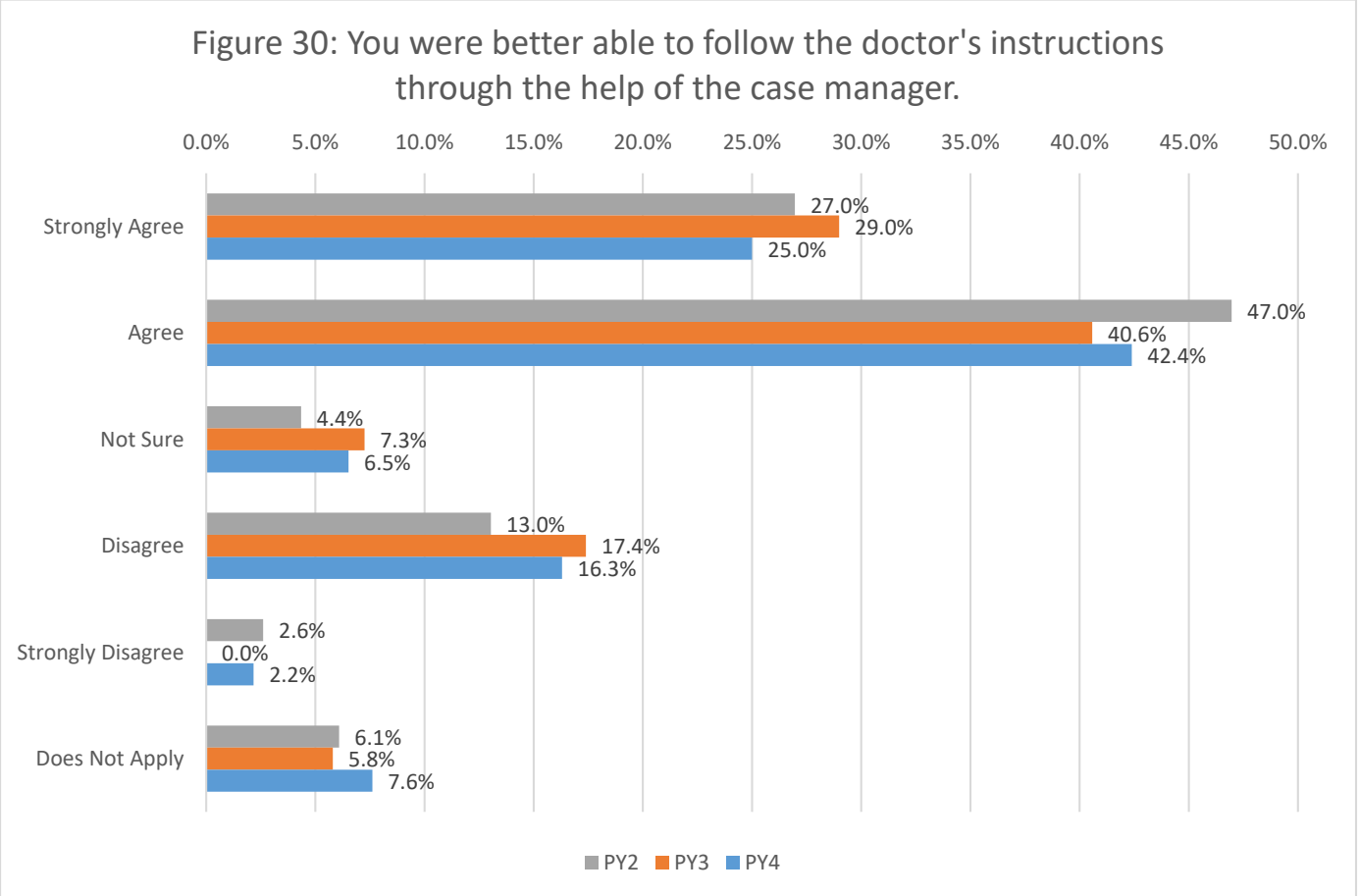


Doctor's Instructions

Participants were given the statement, "You were better able to follow the doctor's instructions through the help of the case manager." Participants appeared to agree at a declining rate across the three surveys, with 73.9% answering agree or strongly agree in PY2; 69.6% in PY3; and 67.4% in PY4. See Table 38 and Figure 30 for more specific breakdowns at each timepoint.

Table 38. You were better able to follow the doctor's instructions through the help of the case manager.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	31	27.0%	20	29.0%	23	25.0%
Agree	54	47.0%	28	40.6%	39	42.4%
Not Sure	5	4.4%	5	7.3%	6	6.5%
Disagree	15	13.0%	12	17.4%	15	16.3%
Strongly Disagree	3	2.6%	0	0.0%	2	2.2%
Does Not Apply	7	6.1%	4	5.8%	7	7.6%
Total	115	100.0%	69	100.0%	92	100.0%

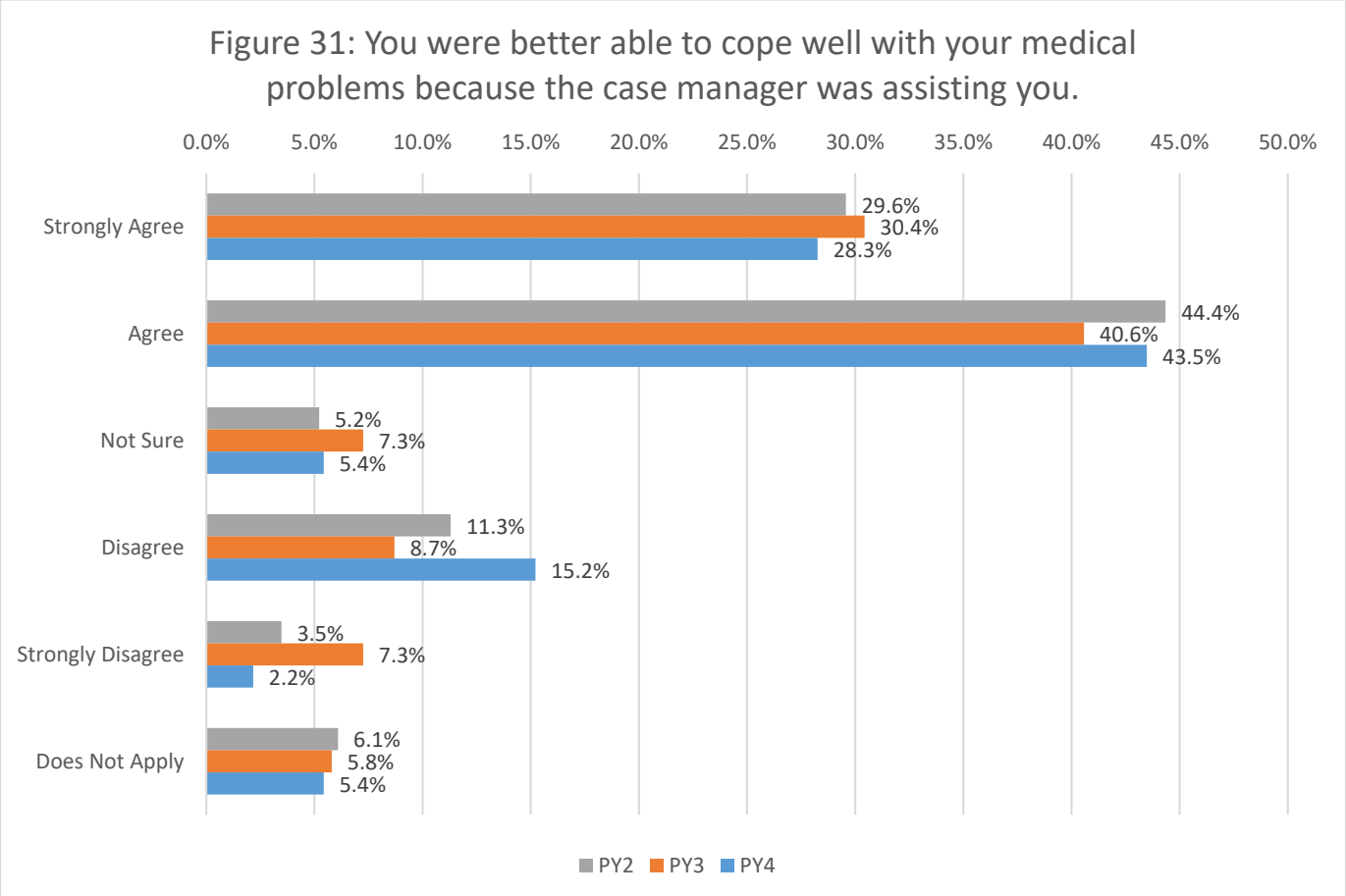


Coping

Participants were given the statement, "You were better able to cope well with your medical problems because the case manager was assisting you." Participants appeared to agree at a stable rate across the three surveys, with 73.9% answering agree or strongly agree in PY2; 71.0% in PY3; and 71.4% in PY4. See Table 39 and Figure 31 for more specific breakdowns at each timepoint.

Table 39. You were better able to cope well with your medical problems because the case manager was assisting you.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	34	29.6%	21	30.4%	26	28.3%
Agree	51	44.4%	28	40.6%	40	43.5%
Not Sure	6	5.2%	5	7.3%	5	5.4%
Disagree	13	11.3%	6	8.7%	14	15.2%
Strongly Disagree	4	3.5%	5	7.3%	2	2.2%
Does Not Apply	7	6.1%	4	5.8%	5	5.4%
Total	115	100.0%	69	100.0%	92	100.0%



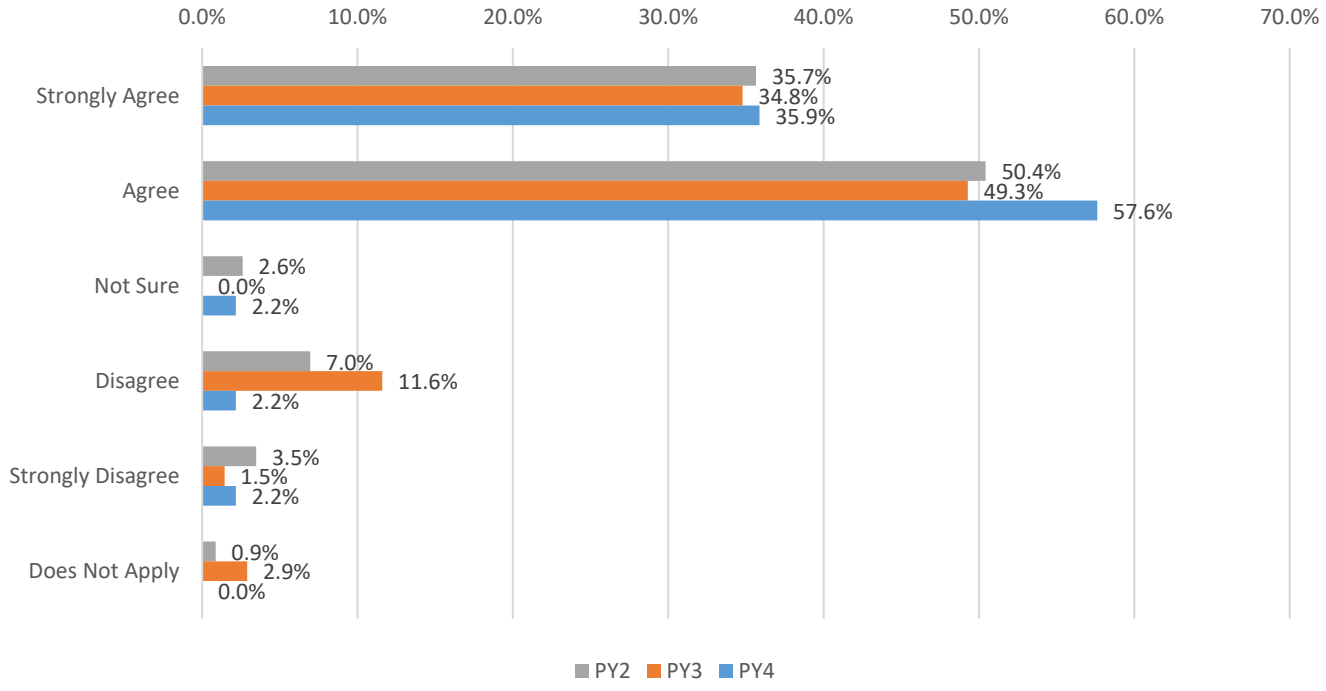
General Satisfaction

Participants were given the statement, "In general, you were satisfied with the quality of the health care you received." Participants appeared to agree at a high rate across the three surveys, with 86.1% answering agree or strongly agree in PY2; 86.9% in PY3; and 91.3% in PY4. See Table 40 and Figure 32 for more specific breakdowns at each timepoint.

Table 40. In general, you were satisfied with the quality of the health care you received.

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	41	35.7%	24	34.8%	33	35.9%
Agree	58	50.4%	34	49.3%	53	57.6%
Not Sure	3	2.6%	0	0.0%	2	2.2%
Disagree	8	7.0%	8	11.6%	2	2.2%
Strongly Disagree	4	3.5%	1	1.5%	2	2.2%
Does Not Apply	1	0.9%	2	2.9%	0	0.0%
Total	115	100.0%	69	100.0%	92	100.0%

Figure 32: In general, you were satisfied with the quality of the health care you received.

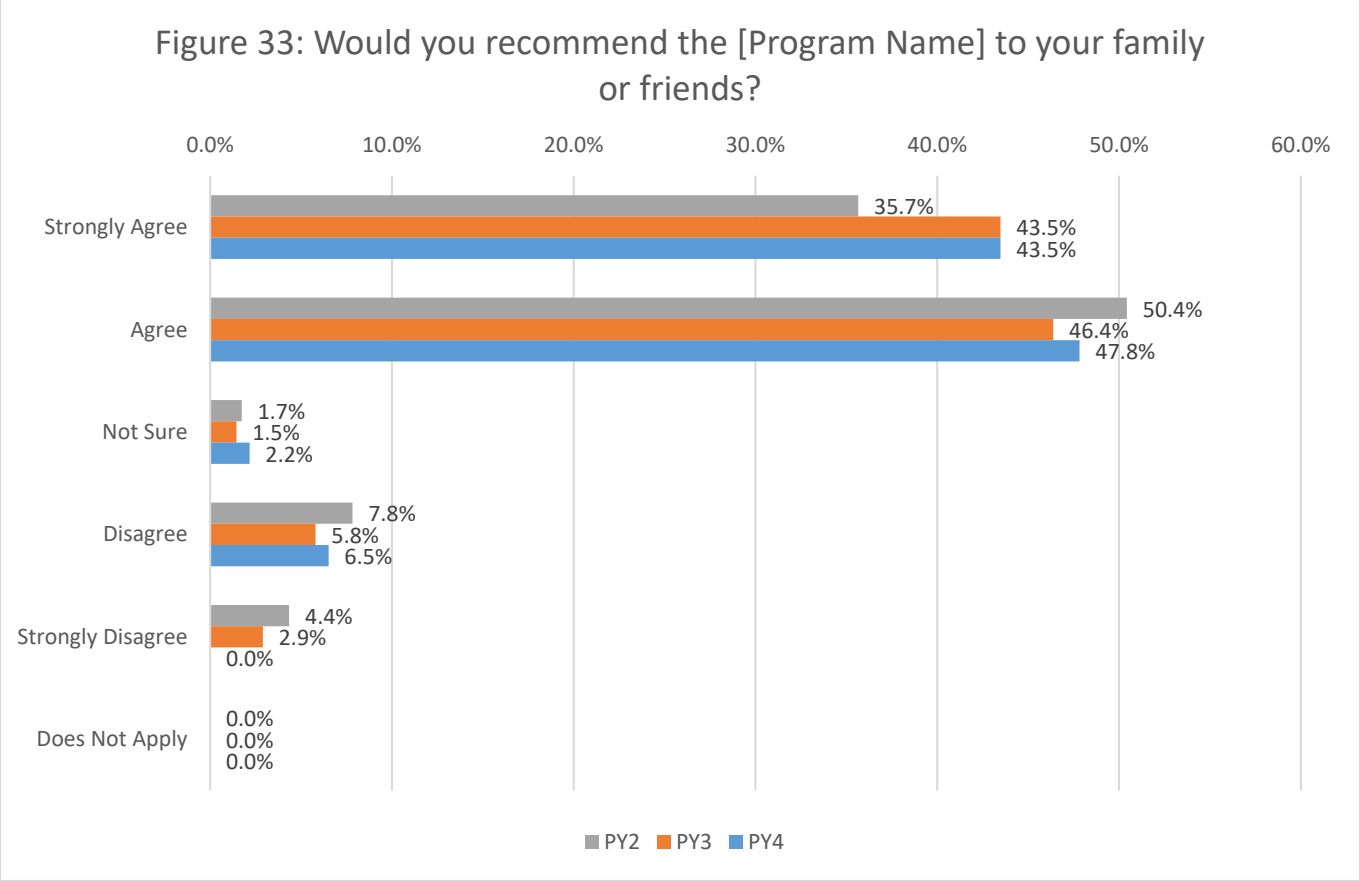


Make a Recommendation

Participants were given the statement, "In general, you were satisfied with the quality of the health care you received." Participants appeared to agree at an increasing rate across the three surveys, with 86.1% answering agree or strongly agree in PY2; 89.9% in PY3; and 91.3% in PY4. See Table 41 and Figure 33 for more specific breakdowns at each timepoint.

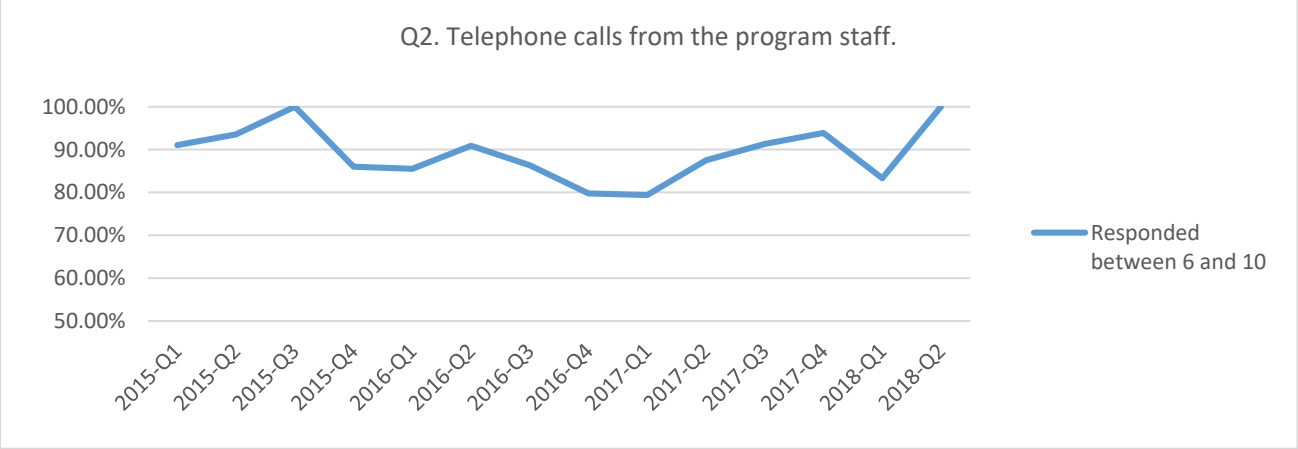
Table 41. Would you recommend the [Program Name] to your family or friends?

	PY2		PY3		PY4	
	n	%	n	%	n	%
Strongly Agree	41	35.7%	30	43.5%	40	43.5%
Agree	58	50.4%	32	46.4%	44	47.8%
Not Sure	2	1.7%	1	1.4%	2	2.2%
Disagree	9	7.8%	4	5.8%	6	6.5%
Strongly Disagree	5	4.4%	2	2.9%	0	0.0%
Does Not Apply	0	0.0%	0	0.0%	0	0.0%
Total	115	100.0%	69	100.0%	92	100.0%



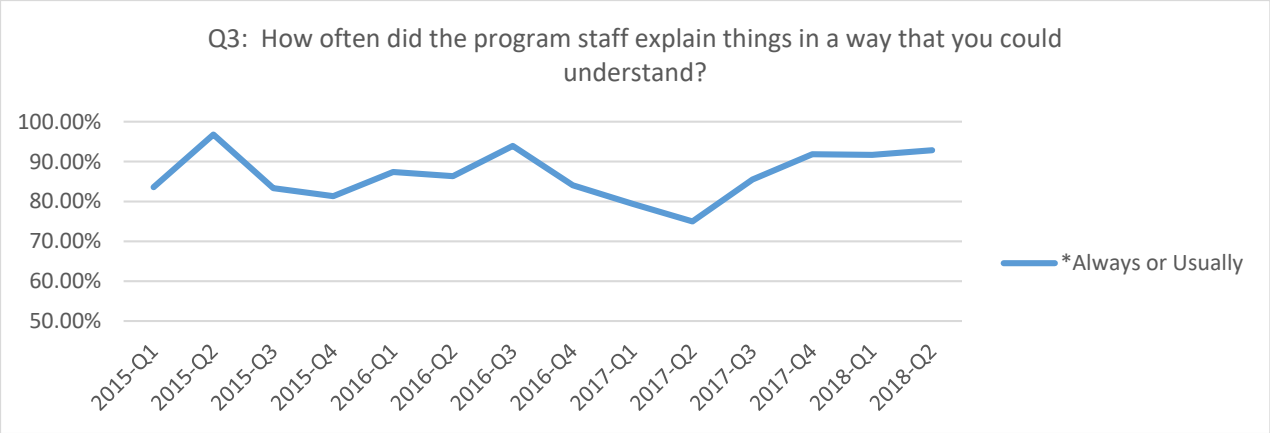
Results: Disease Management Satisfaction Report

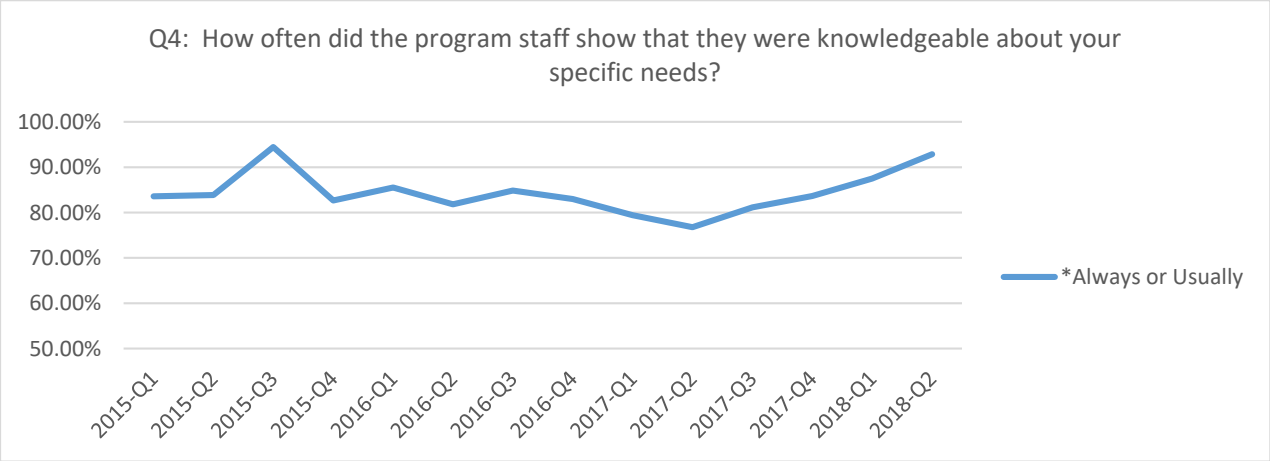
The disease management satisfaction report featured several sections of questions using shared response scales. The first two questions start by asking participants "for the following questions, please think about the type of information and services provided to you by your care management program." Response options ranged from 1 (Not Useful) to 10. The label for 10 was not provided, but higher responses equate to more usefulness. Questions are provided in the titles of each line graph.



These line graphs indicate participants generally found printed educational materials and telephone calls from the program staff very helpful, and this opinion remained relatively stable over time, although the usefulness of printed educational materials seemed to noticeably spike every third quarter.

The next four questions instructed participants, "Thinking about your care management program, during the past six months…", and provided response options of Not Applicable, Never, Sometimes, Usually, or Always. Each question is presented in the title of the line graphs.

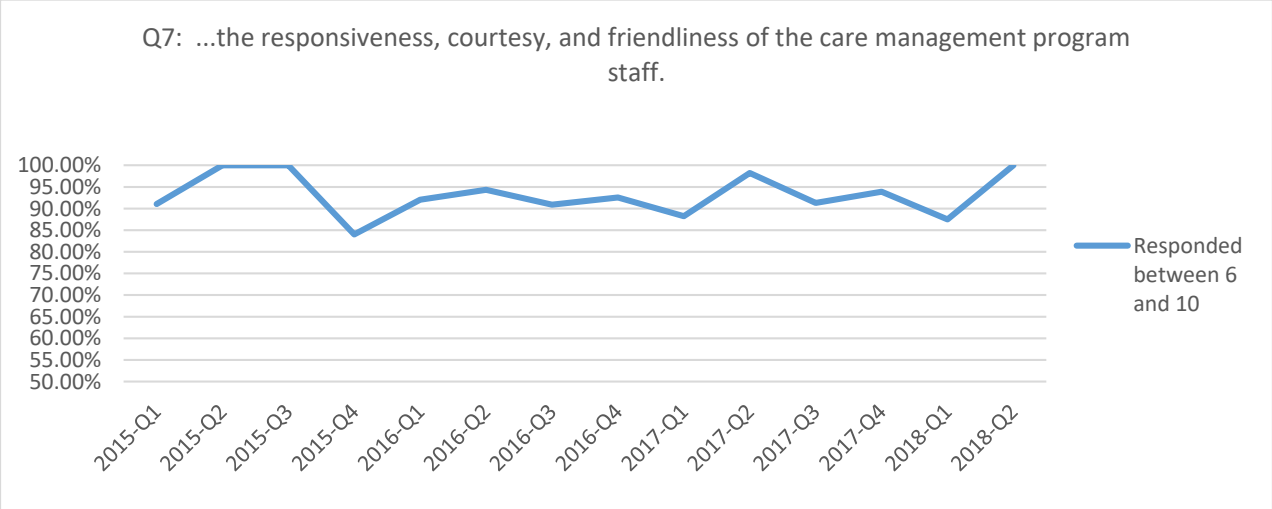

Q3: How often did the program staff explain things in a way that you could understand?
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
*Always or Usually

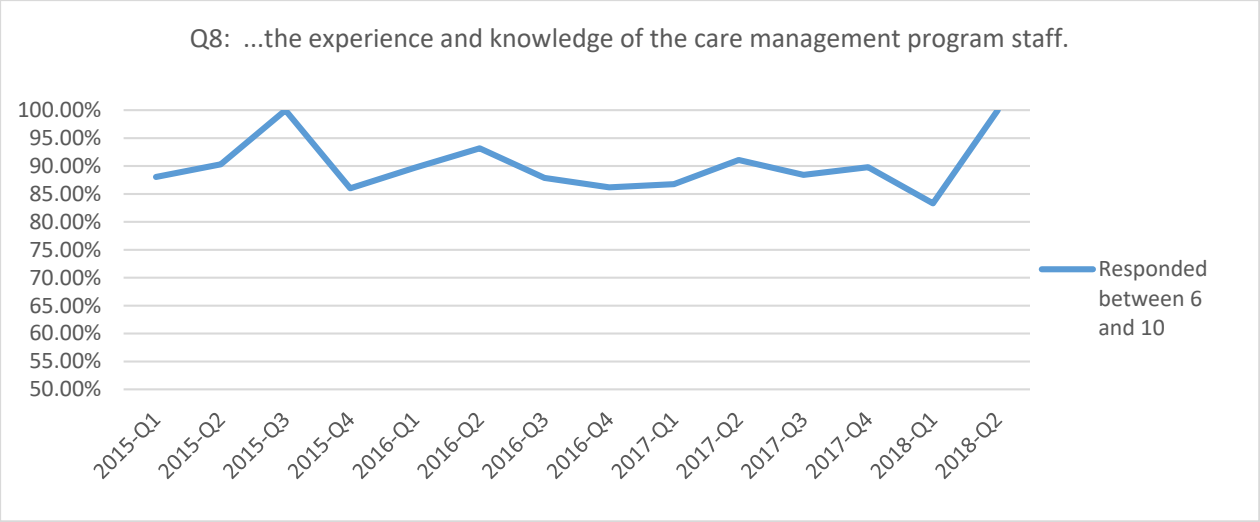

Q4: How often did the program staff show that they were knowledgeable about your specific needs?
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
*Always or Usually

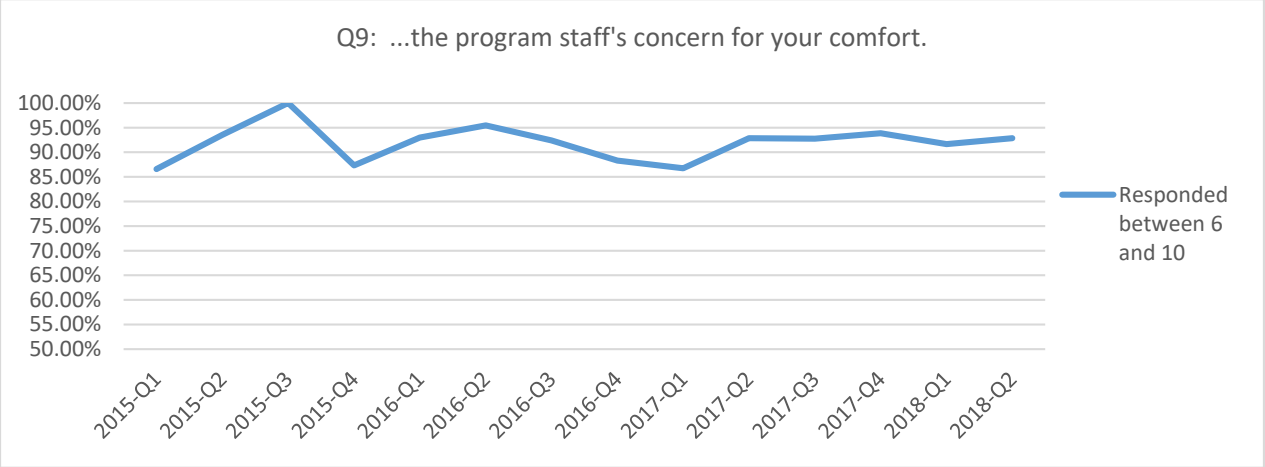

Q5: How often was the program staff as helpful as you thought they should be?
100.00%
95.00%
90.00%
85.00%
80.00%
75.00%
70.00%
65.00%
60.00%
55.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
*Always or Usually

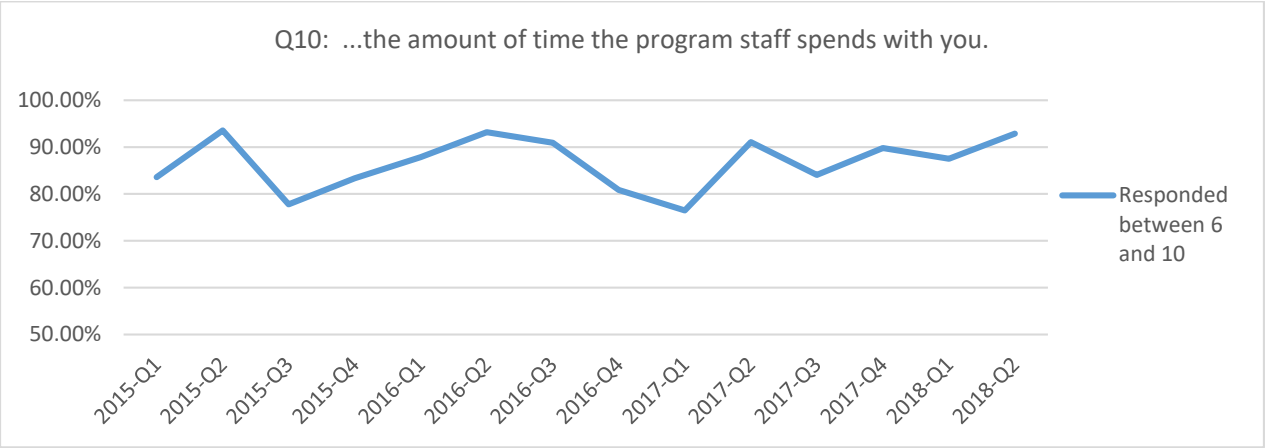
These four graphs indicate that program staff and program teaching were perceived generally positively, but did trend slightly downward until the 2nd half of 2017 and the first half of 2018 where they rebound strongly.

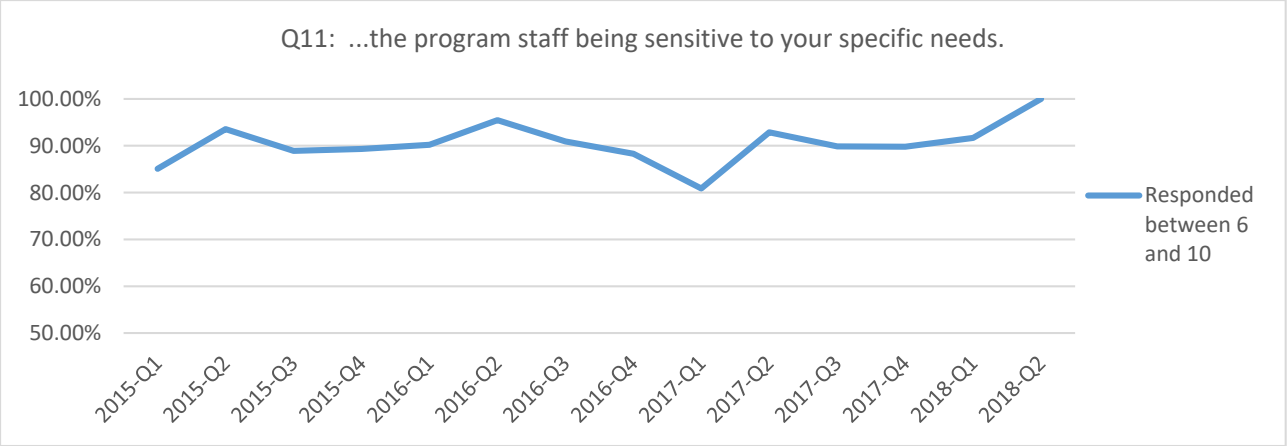
Questions 7 through 14 instructed participants, "Using a scale from 1-10 where 1 Unacceptable, 5 is average, and 10 is outstanding, please rate the experiences you have had with…". Each question completes the preceding sentence. Each question is presented in the title of the following line graphs.



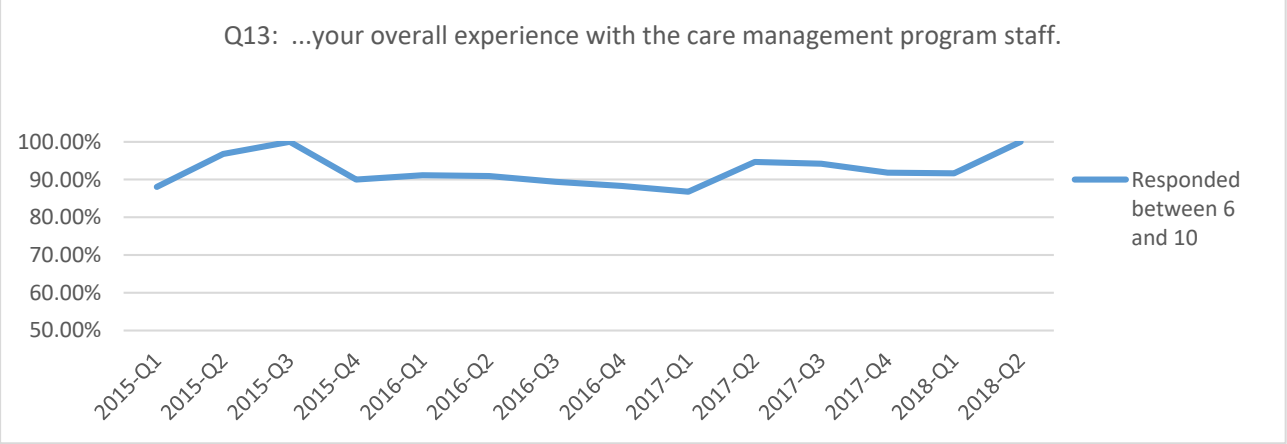

Q8: ...the experience and knowledge of the care management program staff.
100.00%
95.00%
90.00%
85.00%
80.00%
75.00%
70.00%
65.00%
60.00%
55.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
Responded between 6 and 10

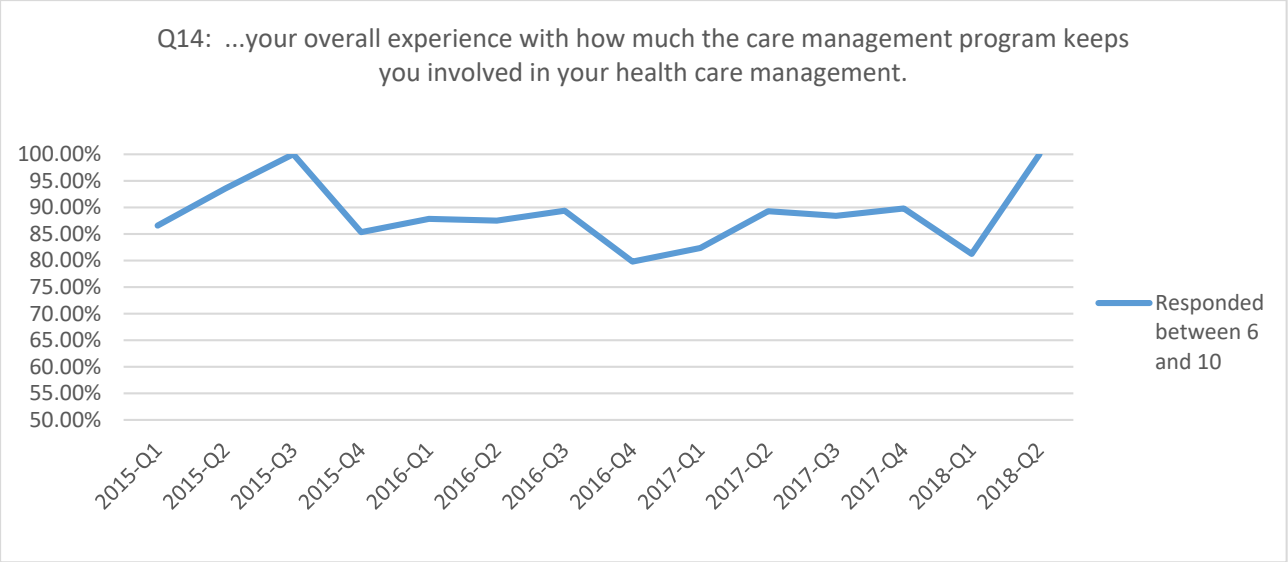

Q9: ...the program staff's concern for your comfort.
100.00%
95.00%
90.00%
85.00%
80.00%
75.00%
70.00%
65.00%
60.00%
55.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
Responded between 6 and 10


Q10: ...the amount of time the program staff spends with you.
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
Responded between 6 and 10


Q11: ...the program staff being sensitive to your specific needs.
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
Responded between 6 and 10

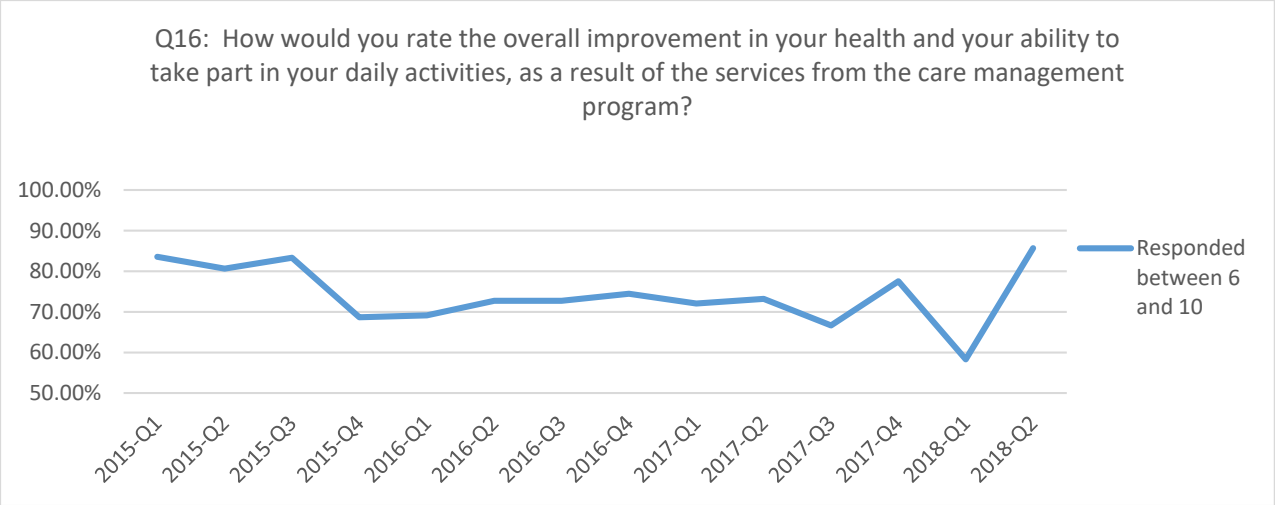

Q12: ...the program staff's ability to get feedback from you about your condition.
100.00%
95.00%
90.00%
85.00%
80.00%
75.00%
70.00%
65.00%
60.00%
55.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
Responded between 6 and 10

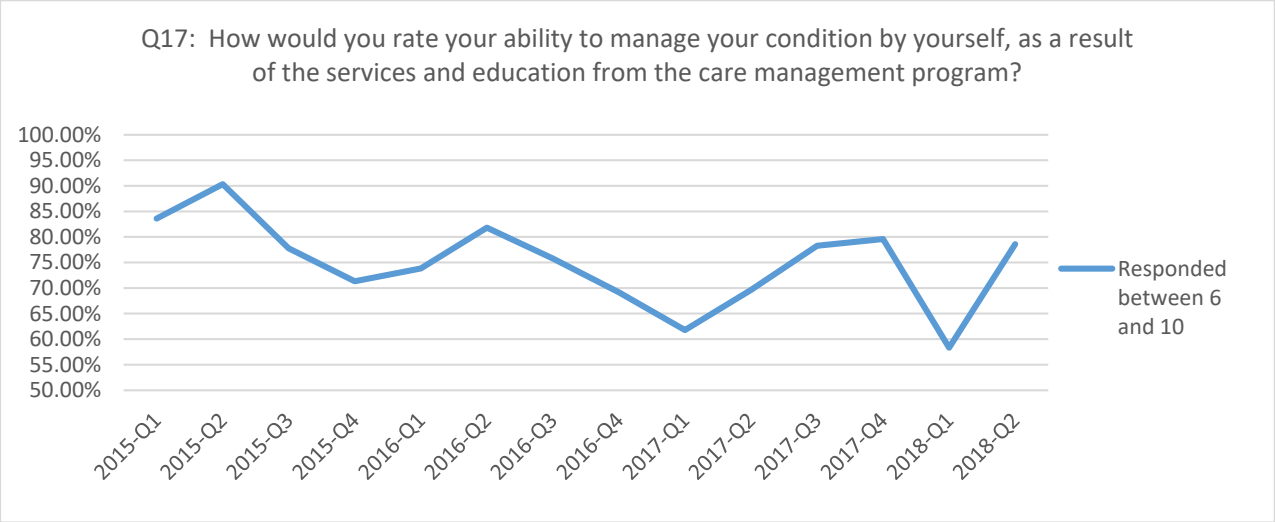

Q13: ...your overall experience with the care management program staff.
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
2015-Q1
2015-Q2
2015-Q3
2015-Q4
2016-Q1
2016-Q2
2016-Q3
2016-Q4
2017-Q1
2017-Q2
2017-Q3
2017-Q4
2018-Q1
2018-Q2
Responded between 6 and 10



All eight questions maintained a rate of approximately 90% positive responses throughout the plotted timepoints. Most graphs show a slight dip towards 80% around the 4th quarter of 2016 and the 1st quarter of 2017, and a sharp increase in positive responses in the 2nd quarter of 2018. Only question 10 had quarters in which less than 80% of participants responded between 6 and 10.

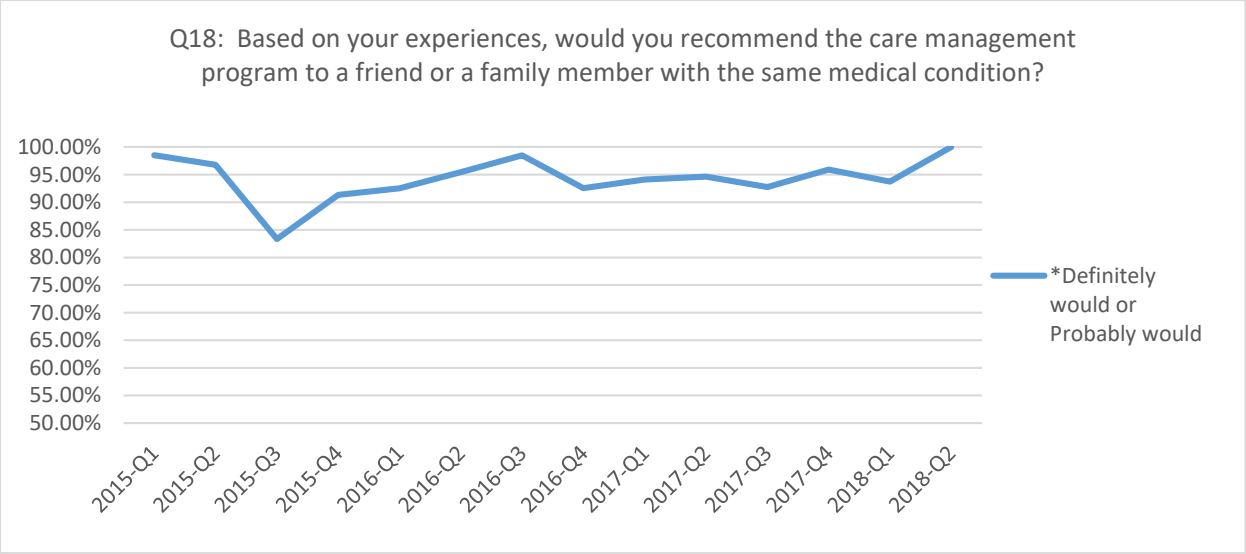
For the next three questions, participants were instructed, "For the following questions, please use the same 1 to 10 scale where 1 is Unacceptable, 5 is Average, and 10 is Outstanding." Each question is presented in the title of each line graph.





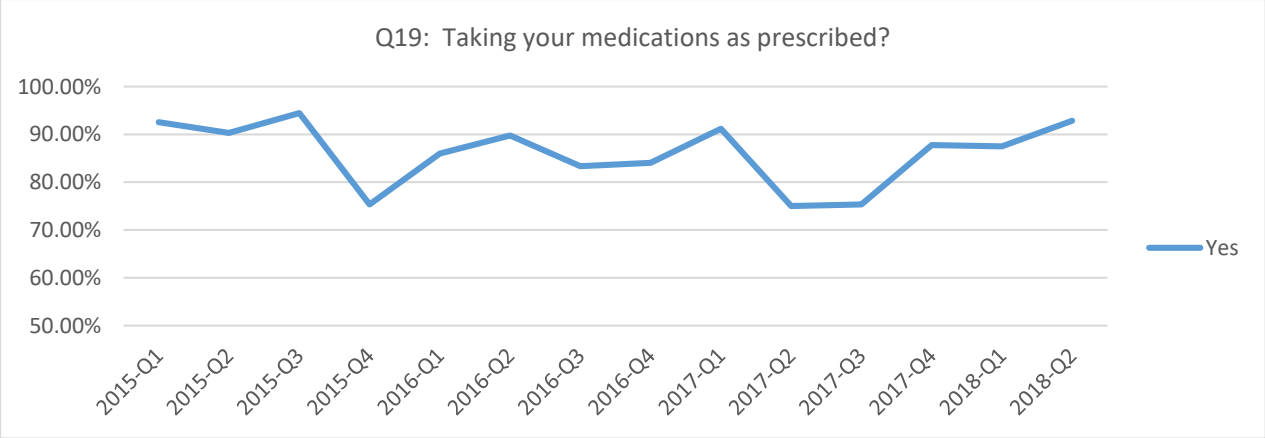
Based on Question 15, people generally reported having very good experiences overall with the care management program, with every quarter having at least 85% of responses at the midpoint or higher. However, Questions 16 and 17, which report on personal health improvement and management, remain between 80% and 60% throughout the majority of the reported time. Participants seemed to give generally high ratings of the program during the last timepoint, the 2nd quarter of 2018.

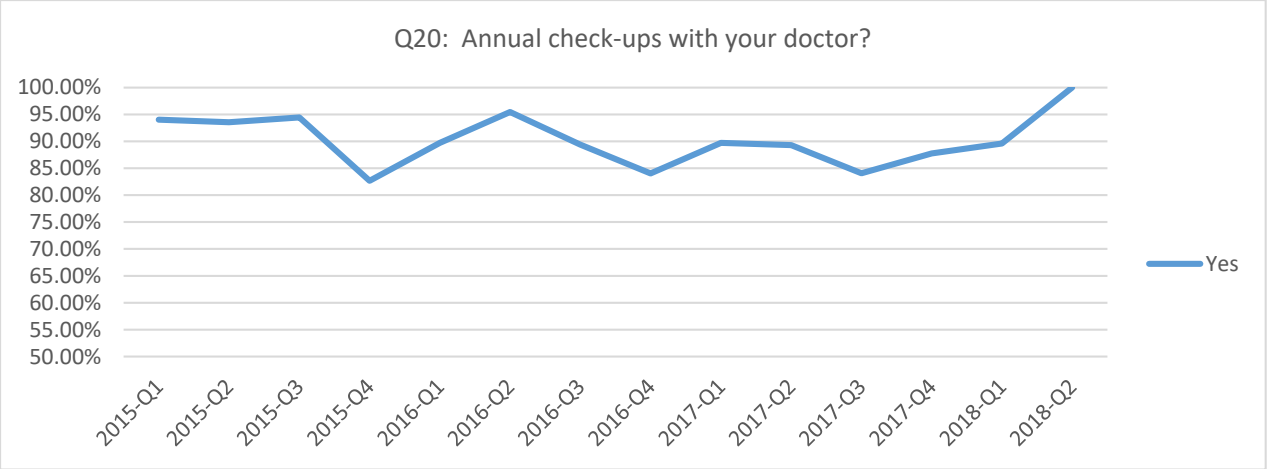
Question 18 asked participants, “Based on your experiences, would you recommend the care management program to a friend or a family member with the same medical condition?”, and gave participants response options of Definitely not, Probably would not, Probably would, and Definitely would.

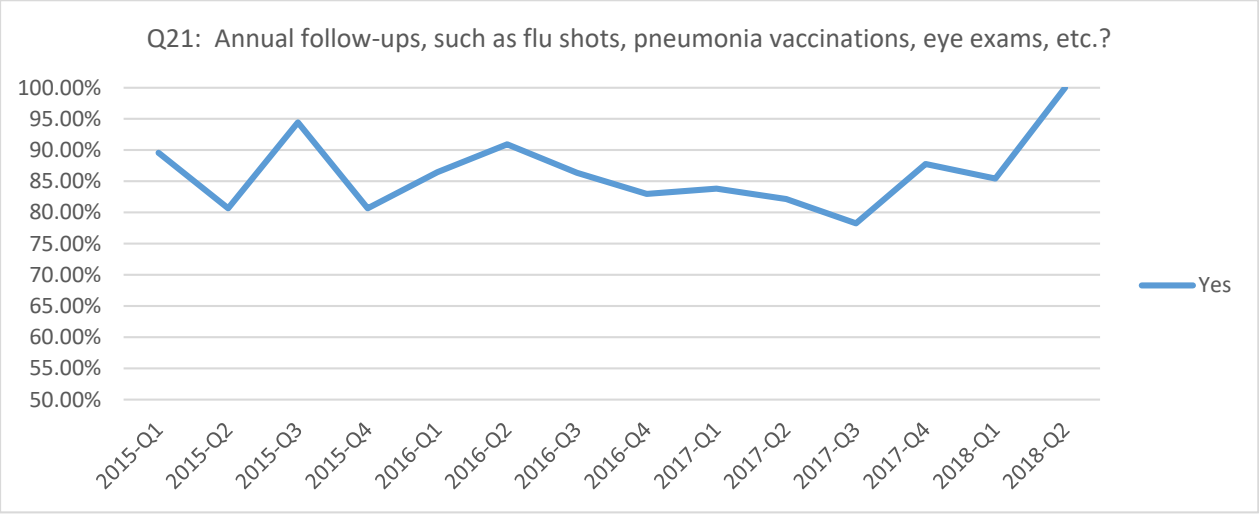


Throughout the time the survey was administered, participants seemed highly willing to recommend the care management program to friends and family with the same medical condition.

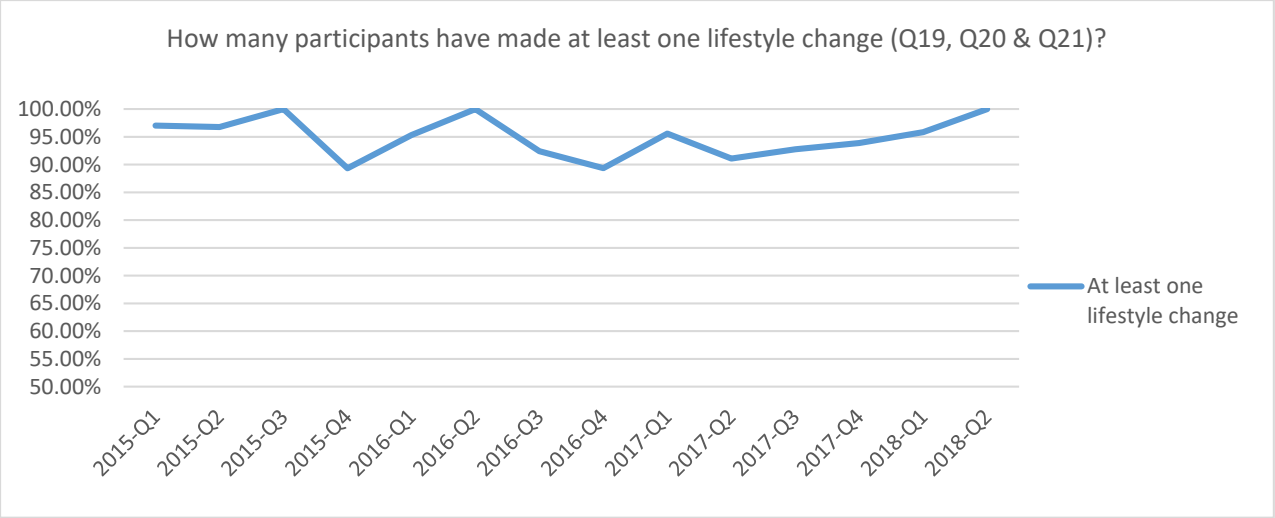
Participants were asked to answer yes or no to questions 19-21, and asked "Which of the following lifestyle changes has your care management program encouraged or helped you to maintain?" Each question is in the title of the following line graphs.







Although yes responses did fluctuate somewhat throughout the years, the program appears to have overwhelmingly encouraged positive lifestyle changes in participants, with yes responses never dipping below 75% for any quarter for any question. The following line graph describes the proportion of participants who made at least one lifestyle change throughout the years the survey was conducted, which remained at 90% or above throughout.



Question 22 details open ended comments participants made throughout the years of the survey. More than 70% of participants in any given quarter recommended no changes and to expand the program to include more people. Question 22 is broken into four tables, one for each year.

Q22: Do you have any suggestions for improving the care management program? (Choose all that apply.)	2015-Q1		2015-Q2		2015-Q3		2015-Q4	
	n	%	n	%	n	%	n	%
No suggestions (program is good) / expand the program / offer program to more people	60	89.5%	24	77.4%	15	83.3%	110	73.3%
Other	6	9.0%	12	38.7%	3	16.7%	17	11.3%
More calls from the nurse	3	4.5%	2	6.5%	0	0.0%	8	5.3%
Nurse should be more knowledgeable	1	1.5%	0	0.0%	0	0.0%	1	0.7%
Fewer calls from the nurse	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Better call scheduling	0	0.0%	0	0.0%	0	0.0%	0	0.0%
More written materials	0	0.0%	0	0.0%	0	0.0%	3	2.0%
Home visits / in-person visits with nurse	1	1.5%	1	3.2%	0	0.0%	3	2.0%
Coverage of prescriptions, medical equipment, office visits, etc. (not related to care management program)	0	0.0%	1	3.2%	0	0.0%	3	2.0%
Ability to talk to the same nurse every time	0	0.0%	1	3.2%	0	0.0%	1	0.7%
Getting in touch with the nurse when calling in	0	0.0%	0	0.0%	0	0.0%	1	0.7%
More prompt follow-up by nurse when calling in	0	0.0%	1	3.2%	0	0.0%	1	0.7%
More coordination with doctor	0	0.0%	1	3.2%	0	0.0%	1	0.7%
Unsure	0	0.0%	0	0.0%	0	0.0%	1	0.7%
Longer calls	1	1.5%	0	0.0%	0	0.0%	0	0.0%
Shorter calls	0	0.0%	0	0.0%	0	0.0%	0	0.0%
More materials by email / internet / website	0	0.0%	0	0.0%	0	0.0%	1	0.7%
Information and questions should be less repetitive	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Nurse should be more friendly	1	1.5%	0	0.0%	0	0.0%	0	0.0%

Q22: Do you have any suggestions for improving the care management program? (Choose all that apply.)	2016-Q1		2016-Q2		2016-Q3		2016-Q4	
	n	%	n	%	n	%	n	%
No suggestions (program is good) / expand the program / offer program to more people	159	74.3%	68	77.3%	51	77.3%	68	72.3%
Other	27	12.6%	12	13.6%	10	15.2%	16	17.0%
More calls from the nurse	9	4.2%	2	2.3%	1	1.5%	5	5.3%
Nurse should be more knowledgeable	5	2.3%	0	0.0%	0	0.0%	1	1.1%
Fewer calls from the nurse	4	1.9%	0	0.0%	1	1.5%	0	0.0%
Better call scheduling	3	1.4%	2	2.3%	1	1.5%	0	0.0%
More written materials	1	0.5%	1	1.1%	0	0.0%	0	0.0%
Home visits / in-person visits with nurse	0	0.0%	0	0.0%	0	0.0%	2	2.1%
Coverage of prescriptions, medical equipment, office visits, etc. (not related to care management program)	3	1.4%	2	2.3%	0	0.0%	1	1.1%
Ability to talk to the same nurse every time	2	0.9%	0	0.0%	0	0.0%	2	2.1%
Getting in touch with the nurse when calling in	2	0.9%	2	2.3%	0	0.0%	0	0.0%
More prompt follow-up by nurse when calling in	1	0.5%	2	2.3%	0	0.0%	2	2.1%
More coordination with doctor	2	0.9%	1	1.1%	1	1.5%	0	0.0%
Unsure	1	0.5%	2	2.3%	1	1.5%	1	1.1%
Longer calls	1	0.5%	0	0.0%	0	0.0%	0	0.0%
Shorter calls	1	0.5%	0	0.0%	0	0.0%	0	0.0%
More materials by email / internet / website	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Information and questions should be less repetitive	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Nurse should be more friendly	1	0.5%	0	0.0%	0	0.0%	0	0.0%

Q22: Do you have any suggestions for improving the care management program? (Choose all that apply.)	2017-Q1		2017-Q2		2017-Q3		2017-Q4	
	n	%	n	%	n	%	n	%
No suggestions (program is good) / expand the program / offer program to more people	48	70.6%	41	73.2%	53	76.8%	36	73.5%
Other	14	20.6%	5	8.9%	7	10.1%	11	22.5%
More calls from the nurse	2	2.9%	4	7.1%	1	1.5%	3	6.1%
Nurse should be more knowledgeable	1	1.5%	1	1.8%	0	0.0%	0	0.0%
Fewer calls from the nurse	2	2.9%	1	1.8%	1	1.5%	0	0.0%
Better call scheduling	0	0.0%	0	0.0%	0	0.0%	0	0.0%
More written materials	1	1.5%	0	0.0%	2	2.9%	0	0.0%
Home visits / in-person visits with nurse	0	0.0%	1	1.8%	1	1.5%	0	0.0%
Coverage of prescriptions, medical equipment, office visits, etc. (not related to care management program)	1	1.5%	1	1.8%	0	0.0%	2	4.1%
Ability to talk to the same nurse every time	1	1.5%	0	0.0%	0	0.0%	0	0.0%
Getting in touch with the nurse when calling in	1	1.5%	0	0.0%	0	0.0%	0	0.0%
More prompt follow-up by nurse when calling in	1	1.5%	2	3.6%	0	0.0%	0	0.0%
More coordination with doctor	1	1.5%	0	0.0%	1	1.5%	0	0.0%
Unsure	0	0.0%	1	1.8%	0	0.0%	0	0.0%
Longer calls	1	1.5%	0	0.0%	0	0.0%	0	0.0%
Shorter calls	0	0.0%	0	0.0%	1	1.5%	0	0.0%
More materials by email / internet / website	0	0.0%	0	0.0%	1	1.5%	0	0.0%
Information and questions should be less repetitive	1	1.5%	0	0.0%	1	1.5%	0	0.0%
Nurse should be more friendly	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Q22: Do you have any suggestions for improving the care management program? (Choose all that apply.)	2018-Q1		2018-Q2	
	n	%	n	%
No suggestions (program is good) / expand the program / offer program to more people	36	75.0%	10	71.4%
Other	6	12.5%	3	21.4%
More calls from the nurse	1	2.1%	0	0.0%
Nurse should be more knowledgeable	1	2.1%	0	0.0%
Fewer calls from the nurse	0	0.0%	0	0.0%
Better call scheduling	0	0.0%	0	0.0%
More written materials	0	0.0%	0	0.0%
Home visits / in-person visits with nurse	0	0.0%	0	0.0%
Coverage of prescriptions, medical equipment, office visits, etc. (not related to care management program)	0	0.0%	0	0.0%
Ability to talk to the same nurse every time	0	0.0%	0	0.0%
Getting in touch with the nurse when calling in	0	0.0%	0	0.0%
More prompt follow-up by nurse when calling in	0	0.0%	0	0.0%
More coordination with doctor	0	0.0%	0	0.0%
Unsure	0	0.0%	0	0.0%
Longer calls	0	0.0%	0	0.0%
Shorter calls	0	0.0%	0	0.0%
More materials by email / internet / website	0	0.0%	0	0.0%
Information and questions should be less repetitive	0	0.0%	0	0.0%
Nurse should be more friendly	0	0.0%	0	0.0%

10. What impact does the use of reserved eligibility slots (per STC 29(a)) have on continuity of care?

This question was not applicable for PY1, PY2, and PY3 as a waitlist was not utilized due to enrollments below 41,500. Enrollment did exceed 41,500 in PY4, however, the DHCFP never exercised rights to use reserved eligibility slots. Therefore, this question is not answerable.

Conclusion

The five-year NCCW demonstration project had three goals: 1) provide care management to high-need, high-cost beneficiaries who received services on a FFS basis; 2) improve the quality of care that high-need, high-cost Nevada Medicaid beneficiaries in FFS received through care management and financial incentives; and, 3) establish long-lasting reforms that sustain the improvements in the quality of health and wellness for Nevada Medicaid beneficiaries and provide care in a more cost-efficient manner. This evaluation report summarized the results of the NCCW PY1, PY2, and PY3 evaluation, using 10 research questions to test four hypotheses related to the goals.

Of the four hypotheses, only one was partially confirmed—H3—in that enrollment in a CMO was found to reduce the per capita costs of providing Medicaid services to Medicaid beneficiaries with a demonstration-qualifying condition compared to the enrollment in the FFS system without the additional care coordination provided by the CMO. Confirmation of a hypothesis means that the evidence found in the data supported or partially supported the hypothesis. H3 was rejected with respect to a reduction in total costs, meaning that the evidence found in the data did not support that aspect of the hypothesis.

Hypothesis 1

H1: "Enrollment in a CMO improves the quality of care for Medicaid beneficiaries with a demonstration-qualifying condition compared to enrollment in the FFS system without the additional care coordination provided by the CMO" was rejected—in other words, the evidence did not support the hypothesis. After evaluation of the first three years of the HCGP, the quality, care, and coordination of care for members enrolled into the program was reduced when compared to the FFS population (Research Questions, 1, 6).

Overall, the HCGP did not improve quality, efficiency, and coordination of care between Baseline and PY1, Baseline and PY2, and Baseline and PY3 in the members enrolled (Research Question 1). There was a statistically significant reduction in members that either received appropriate medication, screenings, immunizations, or other services for their care throughout the first three years of the program. This is a negative result as it would be desirable to increase the number of members receiving appropriate medications and services. Decreases were greatest for neurological, cardiovascular, mental health, and musculoskeletal qualifying conditions. Trends of improvement were observed for neurological and cancer-related qualifying conditions from PY1 to PY3. Increases were seen for respiratory, obesity, substance, and chronic condition/high utilizers from baseline, however were not significant enough when compared to the overall reduction in positive results.

Enrollment in the CMO was seen to reduce the use of primary care and preventive services, which is also an undesirable result (Research Question 6). In particular, the greatest declines were seen in the neurological, musculoskeletal, and general preventative qualifying conditions. Research Question 4 was descriptive in nature and related to how the CMO utilized HIT. There was evidence of a variety of uses of HIT. Perhaps more effective use of HIT in some areas, such as operational structure and reporting could contribute to improved quality of care.

Hypothesis 2

H2: "Enrollment in a CMO improves health outcomes for Medicaid beneficiaries with a demonstration-qualifying condition compared to enrollment in the FFS system without the additional care coordination provided by the CMO" was rejected—such that, the evidence did not support the hypothesis. The CMO was seen to reduce the use of primary care and preventive services (Research Question 6). Overall utilization of primary care/preventive services decreased by at least 10% for cardiovascular-related qualifying conditions and mental health related conditions from Baseline to PY1, Baseline to PY2, and from Baseline to PY3 (Research Question 6). Improvements were seen only in respiratory-related conditions for PY2 and PY3 as well as obesity-related conditions for PY1, PY2, and PY3. As for follow-up after hospitalization, mental health related qualifying conditions decreased by at least 10% from Baseline to PY1, Baseline to PY2, and from Baseline to PY3 (Research Question 5), a negative result. Follow-up for asthma, coronary artery disease, COPD, and heart failure did not change for PY1 and PY2. In PY3 results were similar, but follow-up was increased for COPD and heart failure, indicating improvement trends for those two categories.

From Baseline to PY1, total pre-term births increased by 20.6%, from Baseline to PY2, pre-term births decreased by 5.1%, and from Baseline to PY3 pre-term births increased by 12.8% (Research Question 8). The overall trend in pre-term births from Baseline to PY3 is inconclusive with reductions in PY2 but growths in PY1 and PY3. However, from Baseline to PY1, total low birthweight births increased by 7.1%, from Baseline to PY2, low birthweight births continued to increase by 176.2%, and from Baseline to PY3 increased by 190.5%, which is a negative result.

Hypothesis 3

H3: "Enrollment in a CMO reduces the total and per capita costs of providing Medicaid services to Medicaid beneficiaries with a demonstration-qualifying condition compared to the enrollment in the FFS system without the additional care coordination provided by the CMO" was rejected with respect to total costs (Research Question 1), meaning that the evidence did not support that aspect of the hypothesis; however, it was confirmed for PMPM costs (Research Question 2), meaning that the evidence did support the hypothesis with respect to PMPM costs. Although the costs of the program were seen to increase overall, the PMPM medical costs of enrolled members did decrease over time compared to the FFS population. Total PMPM cost from Baseline to PY3 across all conditions decreased by 23.52%. While PMPM costs did increase slightly from PY2 to PY3, costs still decreased by 18.79% from baseline to PY3. PMPM costs showed a decrease throughout most conditions in PY1 with the greatest reduction in AIDS (-37.14%), Obesity (-45.77%), and Pregnancy (-34.18%) related costs. PMPM costs continued to decrease in PY2 with the greatest reduction in Asthma/COPD (-56.2%), Substance Abuse (-57.69%), and Pregnancy (-75.07%) related costs compared to baseline. PMPM costs in PY3 remained decreased in relation to baseline with the greatest reduction in Asthma/COPD (-41.47%) and Heart Disease (-44.07%) related costs. These decreases in PMPM costs are positive results.

When comparing Baseline enrollment in the CMO to follow-up after hospitalization for persons with certain indicators (ASM.4, CAD.3, SPR.3, HF.4, and MH.4), MH.4 showed statistically significant decreases in percent follow-up from Baseline to PY1-PY3 and SPR.3 showed statistically significant decreases in percent follow-up from Baseline to PY3, while the remaining qualifying conditions showed no significant changes (Research Question 5). Additionally, while the remaining qualifying conditions showed no changes. Based on the cost analyses done by UNR separated by qualifying condition, total per capita costs were reduced for those enrolled in the CMO versus those in the FFS system (Research Question 7).

Hypothesis 4

H4: "Medicaid beneficiaries enrolled in a CMO are more satisfied with the quality of their health care than the beneficiaries in the FFS system without the additional care coordination provided by the CMO" was not able to be confirmed as it was written since there were no data from those in the FFS that did not receive the care coordination by the CMO to compare them to the those that did receive the additional care coordination. Enrollee satisfaction did not improve compared to Baseline since satisfaction percentages appeared mostly stable (Research Question 9). It appears that a majority of participants were satisfied with their care across time periods.

Limitations

This evaluation has a number of limitations. First, we relied on using databases from the State's actuary to calculate costs. Due to the complexity of the SAS programs and databases provided to us, although we were able to separate costs out by qualifying condition, we were unable to separate out costs for an individual with multiple qualifying conditions. An individual with two different qualifying conditions would have his or her costs applied to both qualifying conditions, and not necessarily broken down by specific costs associated with a specific condition. To prevent this from happening, we attributed all costs to the primary diagnosis in the claims entry when calculating costs by diagnosis.

An additional limitation was the transition from ICD 9 to ICD 10 codes starting in PY2. Implementation of the new system could possibly have introduced inconsistencies when categorizing claims by medical condition.

Several data sources were also unavailable for PY4, including the PY4 AQAR, the PY4 P4P, the PY4 claims data, and the PY4 PMV.

SAS code used to calculate Non-P4P performance measures were obtained by the State and created by the CMO vendor (Question 1, 2, 3, 7, and 8). However, due to the complexity of the code, an incomplete data dictionary missing key variables, and not having the appropriate files needed to run the code, we were unable to calculate Non-P4P measures.

Finally, with the quasi-experimental study design, history (external events) and maturation (natural growth and development over time) are threats to the internal validity of the evaluation. There

was a change in policy regarding the Basic Skills Training (BST) that likely impacted cost data. The State of Nevada changed the service limitation for BST to a maximum of two hours per day for all service limitation levels. The policy change impacted five months of PY1 and all of PY2, PY3, and PY4 and disproportionately impacted members with behavioral health conditions who are more likely to use BST and more likely to be enrolled in the reconciliation population than the trend population.

Closing

Quality monitoring of the NCCW consisted of 23 condition-specific Pay for Performance (P4P) Measures and 27 condition-specific and preventive care Non-P4P Measures. The CMO was paid a PMPM fee of $15.35 with the possibility of receiving an incentive payment each year if they met the P4P threshold. After calculating the PY1, PY2, and PY3 Quality Measures and Savings, DCHFP's actuary, Milliman, determined that no incentive payment was due to the CMO based on quality. The results for PY1, PY2, and PY3 Quality and Performance Monitoring efforts were used in this evaluation of the NCCW. Results of the NCCW evaluation indicate that the CMO had room for improvement in many areas in PY1 and PY2, but a positive trend in PY3.

Appendix

Appendix I: Tracked Outcomes for Improvement from "NCCW Waiver Evaluation Design Plan"

Short Name	Measure Steward	Performance Measure Definition
ASM.3 (Asthma)	NQF (1381) AL Medicaid Agency	Percentage of members enrolled during the measurement period with at least one emergency department visit or an urgent care visit for an asthma-related event.
HF.2 (Heart Failure)	NQMC: 001399	Percent of members with heart failure who had at least one ED visit for acute exacerbation.
MH.1 (Mental Health)	State-devised, Actuary-confirmed	Percentage of members with bipolar I disorder treated with mood stabilizers at least 80% of the time during the measurement period.
MH.2 (Mental Health)	NQF-0105 National Committee for Quality Assurance	Percentage of members who were diagnosed with a new episode of major depression, treated with antidepressant medication, and who remained on an antidepressant medication treatment for at least 84 days.
MH.3 (Mental Health)	State-devised, Actuary-confirmed	Percentage of members ages 6 and older with schizophrenia who remained on an antipsychotic medication during the measurement period. Two rates are reported: MH.3.1—rate for 6 months of medication adherence MH.3.2—rate for one year of medication adherence
S.A.1 (Substance Abuse)	NQMC: 007135 NQMC: 007136	Percentage of adolescents and adult members with a new episode of alcohol or other drug (AOD) dependence who received AOD treatment. Two rates are reported: MH.5.1—The percentage of members who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis MH.5.2—The percentage of members who initiated treatment and who had two or more additional services with a diagnosis of AOD within 30 days of the initiation visit.
NEUR (Neurological)	State-specific AMA-PCPI/NCQA-LIKE	Percentage of patients aged 18 years and older with a diagnosis of ischemic stroke or transient ischemic attack (TIA) who were dispensed antithrombotic therapy at discharge.
CAN	AMA-PCPI	Breast Cancer: Hormonal Therapy for Stage IC–IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer: Percentage of female patients aged 18 years and older with Stage IC through IIIC, estrogen receptor (ER) or progesterone receptor (PR) positive breast cancer who were prescribed tamoxifen or aromatase inhibitor (AI) during the 12-month reporting period.
RA (Musculoskeletal/Rheumatoid Arthritis)	HEDIS	Percentage of members 18 years and older who were diagnosed with rheumatoid arthritis and who were dispensed at least one ambulatory prescription for a disease-modifying anti-rheumatic drug (DMARD).
OST	NCQA	Osteoporosis: Pharmacologic Therapy for Men and Women Aged 50 Years and Older: Percentage of patients aged 50 years and older with a diagnosis of osteoporosis who were prescribed pharmacologic therapy within 12 months.
CCHU.1 (Chronic Condition/ High Utilizer)	NQMC: 005387	Ambulatory Care-Sensitive Condition Hospital Admission—Ambulatory care sensitive acute care hospitalization rates for conditions where appropriate ambulatory care prevents or reduces the need for admission to the hospital, per 100,000 population under age 75 years. (This population measured will be adjusted to reflect the actual population, but this number is used for standardization comparison purposes.)
CCHU.2 (Chronic Condition/High Utilizer)	HEDIS	Rate of avoidable Emergency Room (ER) visits that qualify as "avoidable" based on primary diagnosis codes determined to be "avoidable."
CCHU.6 (Chronic Condition/ High Utilizer)	NQMC: 005477	Percentage of patients, regardless of age, discharged from an inpatient facility to home or any other site of care, or their caregiver(s), who received a transition record (and with whom a review of all included information was documented) at the time of discharge including, at a minimum, all of the specified elements.
CCHU.7 (Chronic Condition/ High Utilizer)	NQMC: 005474	Percentage of patients, regardless of age, discharged from an inpatient facility to home or any other site of care, or their caregiver(s), who received a reconciled medication list at the time of discharge including, at a minimum, medications in the specified categories.

Appendix II: Crosswalk of Qualifying Diagnoses for Performance Measure Validation from "NCCW Waiver Evaluation Design Plan"

Table 4-1—Crosswalk of Qualifying Diagnosis for Performance Measure Validation	
Contract	**EQRO Categories**
Asthma/COPD—Combined Two Contract Categories	Respiratory
Cerebrovascular disease, aneurysm, and epilepsy	Neurological
Diabetes mellitus	Diabetes
End stage renal disease (ESRD) and chronic kidney disease	Renal
Heart disease and coronary artery disease (CAD)	Cardiovascular
HIV/AIDS	HIV/AIDS
Mental health	Mental/Behavioral Health/Dementia—as two separate categories
Musculoskeletal system	Musculoskeletal
Neoplasm/tumor	Cancer
Obesity	Obesity
Pregnancy	Pregnancy
Substance use disorder	Substance Abuse
Complex Condition/High Utilizer	Chronic Condition/High Utilizer
	General Preventive Health (Adults & Children)

Source: 2013-2018 Nevada Comprehensive Care Waiver (NCCW) Waiver Evaluation Design Plan

Appendix III: Nevada NCCW Quality Measures and Related Qualifying Conditions from "NCCW Waiver Evaluation Design Plan"

Qualifying Condition	Metric #	Short Name	Measure Steward	Performance Measure Definition	Access	Quality, Efficiency, Coordination of Care	Utilization	Follow-Up After Hospital	Primary Care / Preventive Service
Respiratory	1	ASM.1 (Asthma)	Healthcare Effectiveness Data and Information Set (HEDIS®)[1]	Percentage of members 5-64 years of age during the measurement year who were identified as having persistent asthma who were appropriately prescribed medication during the measurement period.		X			X
	2	ASM.2 (Asthma)	AHRQ/ NQMC: 001614	Percent of patients who have a record of influenza immunization in the past 12 months.		X			X
	3	ASM.3 (Asthma)	NQF (1381) AL Medicaid Agency	Percentage of members enrolled during the measurement period with at least one emergency department visit or an urgent care visit for an asthma-related event.			X		
	4	ASM.4 (Asthma)	State-devised, Actuary-confirmed	Percentage of discharges for members who were hospitalized with a primary discharge diagnosis of asthma and had a follow-up ambulatory care visit within 7 days of discharge.			X	X	
	5	SPR.1 (Chronic Obstructive Pulmonary Disease)	HEDIS	Percentage of members 40 years of age and older with a new diagnosis of COPD or newly active COPD, who received appropriate spirometry testing to confirm the diagnosis.		X			X
	6	SPR.2 (Chronic Obstructive Pulmonary Disease)	NQMC: 002443	Percentage of patients aged 18 years and older with a diagnosis of COPD who received influenza immunization in the past 12 months.		X			X
	7	SPR.3 (Chronic Obstructive Pulmonary Disease)	State-devised, Actuary-confirmed	Percentage of discharges for members who were hospitalized with a primary discharge diagnosis of COPD and who had a follow-up, ambulatory care visit within 7 days of discharge.			X	X	
Diabetes	8	CDC.1 (Diabetes)	HEDIS	Percentage of members 18–75 years of age, with diabetes, who had an HbA1c test performed in the measurement period.		X			X

[1] HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

Qualifying Condition	Metric #	Short Name	Measure Steward	Performance Measure Definition	Access	Quality, Efficiency, Coordination of Care	Utilization	Follow-Up After Hospital	Primary Care / Preventive Service
	9	CDC.2 (Diabetes)	HEDIS	Percentage of members 18 -75 years of age with diabetes mellitus (type 1 and type 2) who had a low-density lipoprotein cholesterol (LDL-C) screening performed in the measurement period.		X			X
	10	CDC.3 (Diabetes)	HEDIS	Percentage of members 18–75 years of age, with diabetes, who had a nephropathy screening test or evidence of nephropathy.		X			X
	11	CDC.4 (Diabetes)	HEDIS	Percentage of members 18–75 years of age, with diabetes, who had an eye screening for diabetic retinal disease in the measurement period.		X			X
	12	CDC.5 (Diabetes)	NQMC: 001605	Percentage of members 18–75 years of age, with diabetes, who received an influenza immunization during the measurement period.		X			X
	13	CDC.6 (Diabetes)	HEDIS-LIKE	Percentage of members 5–17 years of age, with diabetes, who had an HbA1c test performed in the measurement period.		X			X
Cardiovascular	14	CAD.1 (Coronary Artery Disease)	State-devised, Actuary-confirmed	Percentage of members identified with coronary artery disease (CAD) who were prescribed a lipid lowering medication during the measurement period.		X			X
	15	CAD.2 (Coronary Artery Disease)	State-devised, Actuary-confirmed	Percentage of members identified with a coronary artery disease (CAD) who had an LDL-C screen performed during the measurement period.		X			X
	16	CAD.3 (Coronary Artery Disease)	State-devised, Actuary-confirmed	Percentage of discharges for members who were hospitalized with a primary discharge diagnosis of coronary artery disease (CAD) and who had a follow-up, ambulatory care visit within 7 days of discharge.			X	X	
	17	HF.1 (Heart Failure)	NQMC: 007086	Percent of members 18 years and older who were hospitalized in the intake period with a diagnosis of acute myocardial infarction (AMI) and received persistent beta-blocker treatment for six months after being discharged alive.		X			X
	18	HF.2 (Heart Failure)	NQMC: 001399	Percent of members with heart failure who had at least one ED visit for acute exacerbation.			X		
	19	HF.3 (Heart Failure)	HEDIS	Percent of members 18 years of age and older who received at least 180 treatment days of ambulatory medication therapy for ACEIs or ARBs during the measurement period and at least one serum creatinine or blood urea nitrogen therapeutic monitoring test in the measurement period.		X			X

Qualifying Condition	Metric #	Short Name	Measure Steward	Performance Measure Definition	Access	Quality, Efficiency, Coordination of Care	Utilization	Follow-Up After Hospital	Primary Care / Preventive Service
	20	HF.4 (Heart Failure)	JAMA; Pub Med.gov published study	Percentage of discharges for members who were hospitalized with a primary discharge diagnosis of heart failure (HF) and had a follow-up, ambulatory care visit within 7 days of discharge.			X	X	
	21	HPTN.1 (Hypertension)	State-devised, Actuary-confirmed	Percentage of members with hypertension who were on an antihypertension multi-drug therapy regimen, during the measurement period, that included a thiazide diuretic.		X			X
HIV/ AIDS	22	HIV.1 (HIV/AIDS)	NQF-2079 HRSA.-HIV/AIDS Bureau	Percentage of members with a diagnosis of HIV/AIDS with at least one ambulatory care visit in the first half and second half of the measurement period, with a minimum of 60 days between each visit.			X		
Dementia	23	DEM (Dementia)	State	Percentage of patients, regardless of age, with a diagnosis of dementia for whom an assessment of cognition is performed and the results reviewed at least within a 12 month period.		X			X
Mental/Behavioral Health	24	MH.1 (Mental Health)	State-devised, Actuary-confirmed	Percentage of members with bipolar I disorder treated with mood stabilizers at least 80% of the time during the measurement period.		X			X
	25	MH.2 (Mental Health)	NQF-0105 National Committee for Quality Assurance	Percentage of members who were diagnosed with a new episode of major depression, treated with antidepressant medication, and who remained on an antidepressant medication treatment for at least 84 days.		X			X
	26	MH.3 (Mental Health)	State-devised, Actuary-confirmed	Percentage of members ages 6 and older with schizophrenia who remained on an antipsychotic medication during the measurement period. Two rates are reported: MH.3.1—rate for 6 months of medication adherence MH.3.2—rate for one year of medication adherence		X			X
	27	MH.4 (Mental Health)	NQMC: 7104 NQMC: 7105	Percentage of discharges for members 6 years of age and older who were hospitalized for treatment of select mental health disorders and who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner. Two rates are reported: MH.4.1—percentage of discharges for which the member received follow-up within 30 days of			X	X	

Qualifying Condition	Metric #	Short Name	Measure Steward	Performance Measure Definition	Access	Quality, Efficiency, Coordination of Care	Utilization	Follow-Up After Hospital	Primary Care / Preventive Service
				discharge; MH.4.2—the percentage of discharges for which the member received follow-up within 7 days of discharge					
Substance Abuse	28	S.A.1 (Substance Abuse)	NQMC: 007135 NQMC: 007136	Percentage of adolescents and adult members with a new episode of alcohol or other drug (AOD) dependence who received AOD treatment. Two rates are reported: MH.5.1—The percentage of members who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis MH.5.2—The percentage of members who initiated treatment and who had two or more additional services with a diagnosis of AOD within 30 days of the initiation visit.		**X**	**X**		
Neurological	29	NEUR (Neurological)	State-specific AMA-PCPI/NCQA-LIKE	Percentage of patients aged 18 years and older with a diagnosis of ischemic stroke or transient ischemic attack (TIA) who were dispensed antithrombotic therapy at discharge.		**X**			**X**
Renal	30	CKD Lipid Profile	AMA-PCPI	Adult kidney disease: Laboratory Testing (Lipid Profile): Percentage of patients aged 18 years and older with a diagnosis of CKD (stage 3, 4, or 5, not receiving Renal Replacement Therapy [RRT]) who had a fasting lipid profile performed at least once within a 12-month period.		**X**			**X**
Obesity	32	OBS	State-Specific	Percentage of members 2–17 years of age whose BMI calculation is documented, and counseling for nutrition and physical activity is provided during the measurement year. Care managers will perform this activity, and it must be documented in the member's care plan.		**X**	**X**		**X**
Obesity	33	ABA	HEDIS	Percentage of members 17-74 years of age who had an outpatient visit and whose body mass index (BMI) was documented during the measurement year or the year prior to the measurement year.		**X**	**X**		**X**

Qualifying Condition	Metric #	Short Name	Measure Steward	Performance Measure Definition	Access	Quality, Efficiency, Coordination of Care	Utilization	Follow-Up After Hospital	Primary Care / Preventive Service
Musculoskeletal	34	RA (Musculoskeletal /Rheumatoid Arthritis)	HEDIS	Percentage of members 18 years and older who were diagnosed with rheumatoid arthritis and who were dispensed at least one ambulatory prescription for a disease-modifying anti-rheumatic drug (DMARD).		**X**			**X**
	35	OST	NCQA	Osteoporosis: Pharmacologic Therapy for Men and Women Aged 50 Years and Older: Percentage of patients aged 50 years and older with a diagnosis of osteoporosis who were prescribed pharmacologic therapy within 12 months.		**X**			**X**
Pregnancy	36	PPC (Preventative)	HEDIS	Percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year. For these women, the measure assesses the following facets of prenatal and postpartum care: -Timeliness of Prenatal Care. The percentage of deliveries that received a prenatal care visit as a member of the organization in the first trimester or within 42 days of enrollment in the organization. - Postpartum Care. The percentage of deliveries that had a postpartum visit on or between 21 and 56 days after delivery.	**X**				
	37	WOP (Preventative)	HEDIS	Percentage of women who delivered a live birth during the measurement year (by the weeks of pregnancy) at the time of their enrollment in the organization, according to the following periods: - Prior to pregnancy (280 days or more to delivery) -The first 12 weeks of pregnancy, including the end of the 12th week (279–196 days prior to delivery) -The beginning of the 13th week through the end of the 27th week of pregnancy (195–91 days prior to delivery) -The beginning of the 28th week of pregnancy or after (≤ 90 days prior to delivery) -Unknown	**X**				

Qualifying Condition	Metric #	Short Name	Measure Steward	Performance Measure Definition	Access	Quality, Efficiency, Coordination of Care	Utilization	Follow-Up After Hospital	Primary Care / Preventive Service
	38	FPC (Frequency of Ongoing Prenatal Care)	HEDIS	Percentage of Medicaid deliveries between November 6 of the year prior to the measurement year and November 5 of the measurement year that had the following number of expected prenatal visits: - <21 percent of expected visits - 21 percent–40 percent of expected visits - 41 percent–60 percent of expected visits - 61 percent–80 percent of expected visits - ≥81 percent of expected visits			X		
General Preventive Health (adults & children)	39	CAP (Preventative)	HEDIS	Percentage of members 12 months–19 years of age who had a visit with a PCP. The organization reports four separate percentages for each product line: - Children 12–24 months and 25 months–6 years who had a visit with a PCP during the measurement year. - Children 7–11 years and adolescents 12–19 years who had a visit with a PCP during the measurement year or the year prior to the measurement year.			X		X
	40	W15 (Preventative)	HEDIS	Percentage of members who turned 15 months old during the measurement year and who had the following number of well-child visits with a PCP during their first 15 months of life: - No well-child visits–One well-child visit - Two well-child visits–Three well-child visits - Four well-child visits–Five well-child visits - Six or more well-child visits			X		X
	41	W34 (Preventative)	HEDIS	Percentage of members 3–6 years of age who had one or more well-child visits with a PCP during the measurement year.			X		X
	42	AWC (Preventative)	HEDIS	Percentage of enrolled members 12–21 years of age who had at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner during the measurement year.			X		X

Qualifying Condition	Metric #	Short Name	Measure Steward	Performance Measure Definition	Access	Quality, Efficiency, Coordination of Care	Utilization	Follow-Up After Hospital	Primary Care / Preventive Service
	43	CIS (Preventative)	HEDIS	Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV); one measles; mumps and rubella (MMR); three H influenza type B (HiB); three hepatitis B (HepB), one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday. The measure calculates a rate for each vaccine and nine separate combination rates.		X			X
	44	BCS (Preventative)	HEDIS	Percentage of women 40–69 years of age who had a mammogram to screen for breast cancer.		X			X
	45	CCS (Preventative)	HEDIS	Percentage of women 21–64 years of age who received one or more Pap tests to screen for cervical cancer.		X			X
	46	COL (Preventative)	HEDIS	Percentage of members 50–75 years of age who had appropriate screening for colorectal cancer.		X			X
Chronic Condition/High Utilizer	47	CCHU.1 (Chronic Condition/ High Utilizer)	NQMC: 005387	Ambulatory Care-Sensitive Condition Hospital Admission—Ambulatory care sensitive acute care hospitalization rates for conditions where appropriate ambulatory care prevents or reduces the need for admission to the hospital, per 100,000 population under age 75 years. (This population measured will be adjusted to reflect the actual population, but this number is used for standardization comparison purposes.)			X		
	48	CCHU.2 (Chronic Condition/ High Utilizer)	HEDIS	Rate of avoidable Emergency Room (ER) visits that qualify as "avoidable" based on primary diagnosis codes determined to be "avoidable."			X		
	49	FUP	State	Percentage of discharges for members who were hospitalized and who had an ambulatory visit with a PCP. The percentage of discharges for which the member received PCP follow-up care within 30 days of discharge.		X		X	
	50								

Qualifying Condition	Metric #	Short Name	Measure Steward	Performance Measure Definition	Access	Quality, Efficiency, Coordination of Care	Utilization	Follow-Up After Hospital	Primary Care / Preventive Service
	51								
	52	MRP	State	Percentage of discharges from January 1—December 1 of the measurement year for members regardless of age for whom medications were reconciled the date of discharge through 30 days after discharge (31 total days).		**X**		**X**	

Appendix IV. All Performance Measures Values and Significance

	Baseline			PY1			PY2			PY3			P-values		
													BL-PY1	BL-PY2	BL-PY3
Asthma															
ASM.1	369	543	68.0%	320	478	66.90%	296	426	69.50%	342	456	75.0%	0.731	0.611	0.0143*
ASM.2	66	568	11.6%	30	498	6.00%	50	448	11.20%	48	482	10.00%	0.0015*	0.8193	0.3886
ASM.3	105	568	18.5%	125	498	25.10%	116	448	25.90%	112	482	23.20%	0.0044*	0.0045*	0.0582
ASM.4	76	259	29.3%	77	268	28.70%	61	212	28.80%	53	235	22.60%	0.877	0.8922	0.0287*
CAD															
CAD.1	227	1,263	18.0%	185	1,302	14.20%	162	1,338	12.10%	147	1,360	10.80%	0.0094*	<0.0001*	<0.0001*
CAD.2	941	1,446	65.1%	1,010	1,505	67.10%	967	1,533	63.10%	995	1,541	64.60%	0.244	0.2571	0.7716
CAD.3	54	177	30.5%	67	180	37.20%	65	188	34.60%	61	174	35.10%	0.1805	0.4076	0.3639
COPD															
SPR.1	83	272	30.5%	97	294	33.00%	54	153	35.30%	58	138	42.00%	0.527	0.3136	0.0204*
SPR.2	279	2,209	12.6%	251	2,351	10.70%	371	2,109	17.60%	314	1,992	15.80%	0.0397*	<0.0001*	0.0036*
SPR.3	99	312	31.7%	91	302	30.10%	105	319	32.90%	110	317	34.70%	0.6684	0.7504	0.4292
Diabetes															
CDC.1	1,806	2,597	69.5%	1,975	2,793	70.70%	1,793	2,566	69.90%	1,768	2,440	72.50%	0.348	0.7943	0.0227*
CDC.2	1,770	2,597	68.2%	1,909	2,793	68.30%	1,683	2,566	65.60%	1,636	2,440	67.00%	0.8786	0.0501	0.4017
CDC.3	1,916	2,597	73.8%	1,989	2,793	71.20%	1,788	2,566	69.70%	1,665	2,440	68.20%	0.0353*	0.0011*	<0.0001*
CDC.4	738	2,597	28.4%	831	2,793	29.80%	725	2,566	28.30%	713	2,440	29.20%	0.2821	0.8964	0.5289
CDC.5	296	2,597	11.4%	314	2,793	11.20%	407	2,566	15.90%	381	2,440	15.60%	0.8572	<0.0001*	<0.0001*
CDC.6	60	84	71.4%	55	94	58.50%	69	106	65.10%	81	112	72.30%	0.072	<0.0001*	0.8905

	Baseline			PY1			PY2			PY3			P-values		
Heart Failure															
HF.1	26	77	33.8%	34	84	40.50%	17	91	18.70%	28	104	26.90%	0.3791	0.0256*	0.3198
HF.2	668	936	71.4%	725	1,035	70.00%	690	935	73.80%	662	939	70.50%	0.5206	0.2396	0.6793
HF.3	1,693	1,985	85.3%	1,288	1,482	86.90%	1,084	1,274	85.10%	1,070	1,240	86.30%	0.1743	0.8732	0.4301
HF.4	85	245	34.7%	98	279	35.10%	107	318	33.60%	121	324	37.30%	0.9176	0.7952	0.5146
HIV/AIDS															
HIV.1	166	270	61.5%	164	286	57.30%	122	263	46.40%	99	231	42.90%	0.3207	0.0005*	<0.0001*
Hypertension															
HPTN.1	500	2,903	17.2%	430	3,041	14.10%	364	2,806	13.00%	278	2,540	10.90%	0.0011*	<0.0001*	<0.0001*
MH/SA															
MH.1	107	536	20.%	97	559	17.40%	99	637	15.50%	73	616	11.90%	0.2685	0.0474*	0.0122*
MH.2	100	195	51.3%	114	234	48.70%	99	184	53.80%	70	157	44.60%	0.5969	0.6231	0.2118
MH.3.1	380	968	39.3%	382	1,029	37.10%	333	992	33.60%	263	1041	25.30%	0.3268	0.0089*	<0.0001*
MH.3.2	69	968	7.1%	69	1,029	6.70%	72	992	7.30%	48	1041	4.60%	0.7098	0.9114	0.0161*
MH.4.1	383	847	45.2%	381	986	38.60%	491	1,360	36.10%	430	1,260	34.10%	0.0044*	<0.0001*	<0.0001*
MH.4.2	254	847	30.0%	234	986	23.70%	286	1,360	21.00%	250	1,260	19.80%	0.0025*	<0.0001*	<0.0001*
S.A.1.1	331	1,731	19.1%	341	1,834	18.60%	392	1,653	23.70%	385	1,671	23.00%	0.6867	0.0011*	0.0051*
S.A.1.2	131	1,731	7.6%	128	1,834	7.00%	178	1,653	10.80%	169	1,671	10.10%	0.4986	0.0012*	0.0088*
***Non-P4P Measures															
Chronic Condition/High Utilizer															
CCHU.1	5563	28188	19.7%	2017	55405	3.60%	2713	60781	4.50%	2794	39333	7.1%	<0.0001*	<0.0001*	<0.0001*
CCHU.2	15043	46157	32.6%	15863	59066	26.90%	20332	62881	32.30%	16800	55891	30.1%	<0.0001*	0.3748	<0.0001*

	Baseline			PY1			PY2			PY3			P-values		
Follow-up Dare Post-discharge															
FUP.1	1332	5433	24.5%	1646	5991	27.5%	1706	5337	32.0%	3326	5630	59.1%	0.0003*	<0.0001*	<0.0001*
FUP.2	2860	5433	52.6%	3094	5991	51.6%	3017	5337	56.5%	1887	5630	33.5%	0.2881	0.0001*	<0.0001*
Members Prescriptions Reconciled															
MRP	36	5780	0.6%	57	5991	1.0%	54	5337	1.0%	61	5617	1.1%	0.0441*	0.0222*	0.0071*
Dementia															
DEM	4	161	2.5%	3	184	1.6%	8	349	2.3%	6	280	2.1%	0.5746	0.8941	0.8165
Ischemic Stroke or ITA Diagnosis															
NEUR	192	495	38.8%	23	183	12.6%	8	83	9.6%	24	229	10.5%	<0.0001*	<0.0001*	<0.0001*
CKD Diagnosis															
CKD	0	634	0.0%	0	733	0.0%	0	549	0.0%	507	894	56.7%	N/A	N/A	N/A
Rheumatoid Arthritis															
RA	103	177	58.2%	142	213	66.7%	142	208	68.3%	120	179	67.0%	0.0847	0.0405*	0.0845
Osteoporosis															
OST	145	302	48.0%	21	376	5.6%	19	436	4.4%	N/A	N/A	N/A	<0.0001	<0.0001	N/A
Obesity															
OBS.1	3	4519	0.1%	0	9707	0.00%	0	9927	0.0%	262	3551	7.4%	0.0111*	0.0103*	<0.0001*
OBS.2	2	3697	0.1%	74	5828	1.30%	114	6255	1.8%	240	3151	7.6%	<0.0001*	<0.0001*	<0.0001*
OBS.3	43	4519	1.0%	184	9707	1.90%	237	9927	2.4%	112	3551	3.2%	<0.0001*	<0.0001*	<0.0001*

	Baseline			PY1			PY2			PY3			P-values		
OBS.4	61	3697	1.6%	113	5828	1.90%	151	6255	2.40%	98	3151	3.1%	0.3067	0.0108*	<0.0001*
OBS.5	9	4519	0.2%	109	9707	1.10%	54	9927	0.50%	23	3551	0.6%	<0.0001*	0.0035*	0.0015*
OBS.6	11	3697	0.3%	64	5828	1.10%	44	6255	0.70%	26	3151	0.8%	<0.0001*	0.0083	0.0030*
ABA	0	0	N/A	2389	20866	11.40%	2859	23466	12.20%	1431	9362	15.3%	N/A	N/A	N/A
PCP Visit															
CAP.1	118	134	88.10%	887	1001	88.60%	958	1081	88.60%	93	97	95.9%	0.8506	0.8471	0.0371*
CAP.2	1220	1541	79.20%	5146	6732	76.40%	5193	6951	74.70%	1177	1314	89.6%	0.02178*	0.0002*	<0.0001*
CAP.3	1934	2293	84.30%	6647	7764	85.60%	7051	8374	84.20%	2167	2319	93.4%	0.1313	0.8682	<0.0001*
CAP.4	2876	3471	82.90%	9196	10837	84.90%	10065	12140	82.90%	3442	3690	93.3%	0.0048*	0.9452	<0.0001*
Well-child Visits															
W15.1	69	197	35.00%	172	996	17.30%	186	1067	17.40%	2	68	2.9%	<0.0001*	<0.0001*	<0.0001*
W15.2	51	197	25.90%	112	996	11.20%	112	1067	10.50%	4	68	5.9%	<0.0001*	<0.0001*	<0.0001*
W15.3	31	197	15.70%	125	996	12.60%	111	1067	10.40%	3	68	4.4%	0.2261	0.0294*	0.0161*
W15.4	15	197	7.60%	121	996	12.10%	108	1067	10.10%	6	68	8.8%	0.0673	0.2764	0.7503
W15.5	19	197	9.60%	123	996	12.30%	120	1067	11.20%	9	68	13.2%	0.2854	0.5091	0.4063
W15.6	6	197	3.00%	113	996	11.30%	119	1067	11.20%	12	68	17.6%	0.0004*	0.0005*	<0.0001*
W15.7	6	197	3.00%	230	996	23.10%	311	1067	29.10%	32	68	47.1%	<0.0001*	<0.0001*	<0.0001*
W34	537	1360	39.50%	2348	5707	41.10%	2398	5902	40.60%	662	1197	55.3%	0.2648	0.4379	<0.0001*
Well Care Visit															
AWC	1289	5300	24.30%	2878	12519	23.00%	3227	13868	23.30%	1778	5145	34.6%	0.0549	0.1251	<0.0001*
Child Immunization															
CIS.1	102	183	55.70%	616	1105	55.70%	612	1139	53.70%	63	122	51.6%	0.9982	0.6132	0.4816
CIS.2	83	183	45.40%	787	1105	71.20%	832	1139	73.00%	97	122	79.5%	<0.0001*	<0.0001*	<0.0001*

	Baseline			PY1			PY2			PY3			P-values		
CIS.3	131	183	71.60%	801	1105	72.50%	815	1139	71.60%	91	122	74.6%	0.8001	0.9932	0.5634
CIS.4	124	183	67.80%	773	1105	70.00%	799	1139	70.10%	91	122	74.6%	0.5497	0.5133	0.2004
CIS.5	133	183	72.70%	806	1105	72.90%	829	1139	72.80%	95	122	77.9%	0.9408	0.9762	0.3085
CIS.6	130	183	71.00%	804	1105	72.80%	807	1139	70.90%	92	122	75.4%	0.6289	0.9589	0.4007
CIS.7	104	183	56.80%	632	1105	57.20%	622	1139	54.60%	72	122	59.0%	0.9266	0.5751	0.7050
CIS.8	130	183	71.00%	798	1105	72.20%	817	1139	71.70%	96	122	78.7%	0.742	0.8473	0.1352
CIS.9	77	183	42.10%	748	1105	67.70%	771	1139	67.70%	55	122	45.1%	<0.0001*	<0.0001*	0.6038
CIS.10	71	183	38.80%	403	1105	36.50%	333	1139	29.20%	45	122	36.9%	0.5454	0.0092*	0.7361
CIS.11	70	183	38.30%	547	1105	49.50%	583	1139	51.20%	60	122	49.2%	0.0048*	0.0012*	0.0587
CIS.12	65	183	35.50%	531	1105	48.10%	531	1139	46.60%	59	122	48.4%	0.0016*	0.0051*	0.0253*
CIS.13	65	183	35.50%	526	1105	47.60%	531	1139	46.60%	59	122	48.4%	0.0024*	0.0051*	0.0253*
CIS.14	41	183	22.40%	481	1105	43.50%	477	1139	41.90%	32	122	26.2%	<0.0001*	<0.0001*	0.4431
CIS.15	37	183	20.20%	293	1105	26.50%	241	1139	21.20%	33	122	27.0%	0.0707	0.772	0.1648
CIS.16	41	183	22.40%	477	1105	43.20%	477	1139	41.90%	32	122	26.2%	<0.0001*	<0.0001*	0.4431
CIS.17	37	183	20.20%	290	1105	26.20%	241	1139	21.20%	33	122	27.0%	0.0828	0.772	0.1648
CIS.18	26	183	14.20%	261	1105	23.60%	211	1139	18.50%	18	122	14.8%	0.0046*	0.1577	0.8941
CIS.19	26	183	14.20%	258	1105	23.30%	211	1139	18.50%	18	122	14.8%	0.0057*	0.1577	0.8941
Prenatal Care															
PPC.1	162	880	18.40%	219	931	23.50%	234	856	27.30%	50	210	23.8%	0.0076*	<0.0001*	<0.0001*
PPC.2	50	880	5.70%	119	931	12.80%	116	856	13.60%	31	210	14.8%	<0.0001*	<0.0001*	0.0076*
Frequency of Ongoing Care															
FPC.1	328	880	37.30%	576	931	61.90%	541	856	63.20%	147	210	70.0%	<0.0001*	<0.0001*	<0.0001*
FPC.2	102	880	11.60%	231	931	24.80%	181	856	21.10%	45	210	21.4%	<0.0001*	<0.0001*	<0.0001*
FPC.3	39	880	4.40%	70	931	7.50%	91	856	10.60%	11	210	5.2%	0.0058*	<0.0001*	0.6158
FPC.4	24	880	2.70%	34	931	3.70%	23	856	2.70%	3	210	1.4%	0.265	0.9587	0.2778

	Baseline			PY1			PY2			PY3			P-values		
FPC.5	387	880	44.00%	20	931	2.10%	20	856	2.30%	4	210	1.9%	<0.0001*	<0.0001*	<0.0001*
Breast Cancer Screening															
BCS	1617	4442	36.40%	2912	9052	32.20%	3138	9980	31.40%	1175	2632	44.6%	<0.0001*	<0.0001*	<0.0001*
Cervical Cancer Screening															
CCS	2587	8492	30.50%	5542	17224	32.20%	5579	18409	30.30%	2536	6850	37.0%	0.0055*	0.7932	<0.0001*
Colorectal Cancer Screening															
COL	955	5020	19.00%	1890	10037	18.80%	2444	11765	20.80%	1406	5003	28.1%	0.7748	0.0098*	<0.0001*
Women Preventative Health															
WOP.1	0	0	N/A	180	1522	11.80%	140	1321	10.60%	31	265	11.7%	N/A	N/A	N/A
WOP.2	0	0	N/A	507	1522	33.30%	424	1321	32.10%	43	265	16.2%	N/A	N/A	N/A
WOP.3	0	0	N/A	667	1522	43.80%	610	1321	46.10%	48	265	18.1%	N/A	N/A	N/A
WOP.4	0	0	N/A	93	1522	6.10%	83	1321	6.30%	133	265	50.2%	N/A	N/A	N/A
WOP.5	0	0	N/A	75	1522	4.90%	64	1321	4.80%	10	265	3.8%	N/A	N/A	N/A