State Fiscal Year 2015

ANNUAL REPORT

SoonerCare Chronic Care Unit Evaluation

Prepared for:

State of Oklahoma
Oklahoma Health Care Authority

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PHPG

SoonerCare
Oklahoma Health Care Authority

READER NOTE

The Pacific Health Policy Group (PHPG) has been retained to conduct a multi-year independent evaluation of the SoonerCare Health Management Program (HMP) and SoonerCare Chronic Care Unit (CCU). This report contains SFY 2015 evaluation findings for the SoonerCare CCU evaluation; HMP evaluation findings have been issued in a companion report.

PHPG wishes to acknowledge the cooperation of the Oklahoma Health Care Authority (OHCA) in providing the information necessary for the evaluation.

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TABLE OF CONTENTS

Executive Summary 1

Chapter 1 – Introduction 9

Chapter 2 – SoonerCare CCU Participant Satisfaction 24

Chapter 3 – SoonerCare CCU Quality of Care Analysis 47

Chapter 4 – SoonerCare CCU Utilization, Expenditure & Cost Effectiveness Analysis .. 64

Chapter 5 – SoonerCare CCU Return on Investment 104

Appendices 105

Appendix A – Participant Self-Management & Satisfaction Survey Instrument ... 105
Appendix B – Detailed Participant Survey Results 117
Appendix C – Detailed Participant Expenditure Data 140

Report Exhibits

Exhibit	***Description***	***Page***
Chapter 1	**Introduction**	
1-1	Chronic Disease Mortality Rates, 2013 – OK and US (Selected Conditions)	9
1-2	Estimated/Projected Chronic Disease Expenditures (Millions)	10
1-3	The Chronic Care Model	11
1-4	Gender Mix for SoonerCare CCU Participants	17
1-5	Age Distribution for SoonerCare CCU Participants	17
1-6	SoonerCare CCU Participants by Location: Urban/Rural Mix	18
1-7	Most Common Diagnostic Categories for CCU Participants	19
1-8	Most Expensive Diagnostic Categories for CCU Participants	20
1-9	Number of Physical Health Chronic Conditions (Six Priority Conditions)	21
1-10	Behavioral Health Co-Morbidity Rate	22
Chapter 2	**CCU Participant Satisfaction**	
2-1	Survey Sample Size and Margin of Error	25
2-2	Respondent Tenure in SoonerCare CCU – Initial Survey	26
2-3	Respondent Tenure in SoonerCare CCU – Follow-up Survey	27
2-4	Primary Reason for Enrolling in SoonerCare CCU – Initial Survey (Aggregate)	28
2-5	Primary Reason for Enrolling in SoonerCare CCU – Initial Survey (Longitudinal)	29
2-6	Most Recent Contact with CCU Nurse – Initial Survey (Aggregate)	30
2-7	Most Recent Contact with CCU Nurse – Initial Survey (Longitudinal) & Follow-up	31
2-8	Able to Name CCU Nurse – Initial Survey (Aggregate)	32
2-9	Able to Name CCU Nurse – Initial Survey (Longitudinal) & Follow-up	32
2-10	Tried to Call CCU Nurse – Initial Survey (Aggregate)	33
2-11	Tried to Call CCU Nurse – Initial Survey (Longitudinal) & Follow-up	33
2-12	Reason for Most Recent Call – Initial Survey (Aggregate)	34
2-13	Reason for Most Recent Call – Initial Survey (Longitudinal) & Follow-up	34
2-14	CCU Nurse Call-Back Time – Initial Survey (Aggregate)	35
2-15	CCU Nurse Call-Back Time – Initial Survey (Longitudinal) & Follow-up	35
2-16	CCU Nurse Activity – Initial Survey (Aggregate)	36
2-17	CCU Nurse Activity – Initial Survey (Longitudinal) & Follow-up	37
2-18	Satisfaction with CCU Nurse Activity – Initial Survey (Longitudinal) & Follow-up	38
2-19	Satisfaction with CCU Nurse – Initial Survey (Aggregate)	39
2-20	Satisfaction with CCU Nurse – Initial Survey (Longitudinal) & Follow-up	39
2-21	Current Health Status – Initial Survey (Aggregate)	40
2-22	Current Health Status – Initial Survey (Longitudinal) & Follow-up	40
2-23	Health Status as Compared to Pre-CCU Enrollment – Initial Survey (Aggregate)	41
2-24	Health Status as Compared to Pre-CCU Enrollment – Follow-up Survey	41
2-25	Changes in Behavior – Initial Survey (Aggregate) & Follow-up	42
2-26	Overall Satisfaction with SoonerCare CCU – Initial Survey (Aggregate)	44
2-27	Overall Satisfaction with SoonerCare CCU – Initial Survey (Longitudinal) & Follow-up	44

Exhibit	***Description***	***Page***

Chapter 3 CCU Quality of Care Analysis

3-1	Asthma Clinical Measures – CCU Participants vs. Comparison Group	49
3-2	Asthma Clinical Measures - 2014 - 2015	50
3-3	Cardiovascular Disease Clinical Measures – CCU Participants vs. Comparison Group	51
3-4	Cardiovascular Disease Clinical Measures - 2014 - 2015	52
3-5	COPD Clinical Measures – CCU Participants vs. Comparison Group	53
3-6	COPD Clinical Measures - 2014 - 2015	54
3-7	Diabetes Clinical Measures – CCU Participants vs. Comparison Group	55
3-8	Diabetes Clinical Measures - 2014 - 2015	56
3-9	Hypertension Clinical Measures – CCU Participants vs. Comparison Group	57
3-10	Hypertension Clinical Measures - 2014 - 2015	58
3-11	Mental Health Measures – CCU Participants vs. Comparison Group	59
3-12	Mental Health Clinical Measures - 2014 - 2015	60
3-13	Preventive Measures – CCU Participants vs. Comparison Group	61
3-14	Preventive Clinical Measures - 2014 - 2015	62

Chapter 4 CCU Utilization and Expenditure Analysis

4-1	Participants with Asthma as Most Expensive Diagnosis	67
4-2	Participants with Asthma – Co-morbidity with Chronic Impact Conditions	67
4-3	Participants with Asthma – Inpatient Utilization	68
4-4	Participants with Asthma – Emergency Department Utilization	69
4-5	Participants with Asthma – Total PMPM Expenditures	70
4-6	Participants with Asthma – PMPM Expenditures by COS	71
4-7	Participants with Asthma – Aggregate SFY 2014 Savings	71
4-8	Participants with CAD as Most Expensive Diagnosis	72
4-9	Participants with CAD – Co-morbidity with Chronic Impact Conditions	72
4-10	Participants with CAD – Inpatient Utilization	73
4-11	Participants with CAD – Emergency Department Utilization	74
4-12	Participants with CAD – Total PMPM Expenditures	75
4-13	Participants with CAD – PMPM Expenditures by COS	76
4-14	Participants with CAD – Aggregate SFY 2014 Deficit	76
4-15	Participants with COPD as Most Expensive Diagnosis	77
4-16	Participants with COPD – Co-morbidity with Chronic Impact Conditions	77
4-17	Participants with COPD – Inpatient Utilization	78
4-18	Participants with COPD – Emergency Department Utilization	79
4-19	Participants with COPD – Total PMPM Expenditures	80
4-20	Participants with COPD – PMPM Expenditures by COS	81
4-21	Participants with COPD – Aggregate SFY 2014 Savings	81
4-22	Participants with Diabetes as Most Expensive Diagnosis	82
4-23	Participants with Diabetes – Co-morbidity with Chronic Impact Conditions	82
4-24	Participants with Diabetes – Inpatient Utilization	83
4-25	Participants with Diabetes – Emergency Department Utilization	84
4-26	Participants with Diabetes – Total PMPM Expenditures	85

Exhibit	***Description***	***Page***
4-27	Participants with Diabetes – PMPM Expenditures by COS	86
4-28	Participants with Diabetes – Aggregate SFY 2014 Deficit	86
4-29	Participants with Heart Failure as Most Expensive Diagnosis	87
4-30	Participants with Heart Failure – Co-morbidity with Chronic Impact Conditions	87
4-31	Participants with Heart Failure – Inpatient Utilization	88
4-32	Participants with Heart Failure – Emergency Department Utilization	89
4-33	Participants with Heart Failure – Total PMPM Expenditures	90
4-34	Participants with Heart Failure – PMPM Expenditures by COS	91
4-35	Participants with Heart Failure – Aggregate SFY 2014 Savings	91
4-36	Participants with Hypertension as Most Expensive Diagnosis	92
4-37	Participants with Hypertension – Co-morbidity with Chronic Impact Conditions	92
4-38	Participants with Hypertension – Inpatient Utilization	93
4-39	Participants with Hypertension – Emergency Department Utilization	94
4-40	Participants with Hypertension – Total PMPM Expenditures	95
4-41	Participants with Hypertension – PMPM Expenditures by COS	96
4-42	Participants with Hypertension – Aggregate SFY 2014 Savings	96
4-43	All SoonerCare CCU Participants – Inpatient Utilization	97
4-44	All SoonerCare CCU Participants – Emergency Department Utilization	98
4-45	All SoonerCare CCU Participants – Total PMPM Expenditures	99
4-46	All SoonerCare CCU Participants – PMPM Expenditures by COS	100
4-47	All SoonerCare CCU Participants – Aggregate SFY 2014 Savings	100
4-48	SoonerCare CCU Administrative Expense	102
4-49	SoonerCare CCU PMPM Deficit	102
4-50	Aggregate Savings – Net of Administrative Expenses	103

Chapter 5 Summary Findings and Return on Investment

5-1	SoonerCare CCU ROI (State and Federal Dollars)	104

EXECUTIVE SUMMARY

Introduction

Chronic diseases are the leading causes of death and disability in the United States. According to the Centers for Disease Control and Prevention, in 2012 about half of all adults—117 million people—had one or more chronic health conditions such as diabetes or heart disease. More than one in four Americans has multiple chronic conditions, those that last a year or more and require ongoing medical attention or that limit activities of daily living.

The per capita impact of chronic disease is even greater in Oklahoma than for the nation as a whole. In 2013, 1,269 Oklahomans died due to complications from diabetes. This equated to a diabetes-related mortality rate of 29.9 persons per 100,000 residents, versus the national rate of 21.2. The mortality rate for other chronic conditions, such as heart disease and hypertension, is similarly higher in Oklahoma than in the nation overall.

Under the Oklahoma Medicaid Reform Act of 2006 (HB2842), the Legislature directed the Oklahoma Health Care Authority (OHCA) to develop and implement a management program for chronic diseases, including, but not limited to, asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure and diabetes. The program would address the health needs of chronically ill SoonerCare members while reducing unnecessary medical expenditures at a time of significant fiscal constraints.

In response, the OHCA developed the SoonerCare Health Management Program (HMP), which offered nurse care management to qualifying members with one or more chronic conditions. The program also offered practice facilitation and education to primary care providers treating the chronically ill.

First Generation SoonerCare HMP

The OHCA contracted with a vendor through a competitive bid process to implement and operate the SoonerCare HMP. Telligen was selected to administer the SoonerCare HMP in accordance with the OHCA's specifications. Telligen is a national quality improvement and medical management firm specializing in care, quality and information management services. Telligen staff members provided nurse care management to SoonerCare HMP participants and practice facilitation to OHCA-designated primary care providers.

Medical Artificial Intelligence (MEDai) was already serving as a subcontractor to Hewlett Packard Enterprise (HPE), the OHCA's Medicaid fiscal agent, at the time of the SoonerCare HMP's development. The OHCA capitalized on this existing relationship by utilizing MEDai to assist in identifying candidates for enrollment in the SoonerCare HMP based on historical and

predicted service utilization, as well as their potential for improvement through care management[1].

The first generation model of the SoonerCare HMP operated from February 2008 through June 2013. PHPG conducted a five-year evaluation of the first generation program, focusing on the program's impact on member behavior (e.g., self-management of chronic conditions), quality of care, service utilization and cost. PHPG documented significant positive outcomes attributable to both program components.

Second Generation SoonerCare HMP

As the contractual period for the first generation SoonerCare HMP was nearing its end, the OHCA began the process of examining how the program could be enhanced for the benefit of both members and providers. To improve member identification and participation, as well as coordination with primary care providers, the OHCA elected to replace centralized nurse care management services with health coaches embedded at primary care practice sites.

The health coaches would work closely with practice staff and provide coaching services to participating members. Practice facilitation would continue in the second generation HMP but would become more diverse, encompassing both traditional full practice facilitation and more targeted services such as academic detailing focused on specific topics and preparing practices for health coaches. In order to participate in the second SoonerCare HMP at its outset, members would have to be receiving primary care from a practice with an embedded health coach.

Transition from First Generation HMP

At the time of the transition from the first to second generation HMP, participants in nurse care management receiving care in a qualifying practice were offered the opportunity to transition to a health coach. Participants not aligned with a qualifying practice were given the opportunity to work with a new telephonic Chronic Care Unit (CCU) operated directly by the OHCA.

Post-Transition HMP and CCU Enrollment

Post-transition, Telligen continues to identify HMP candidates from the SoonerCare Choice population through analysis of MEDai data. Providers also refer patients to Telligen, for review and possible enrollment into the SoonerCare HMP.

SoonerCare Choice and SoonerCare Traditional members both are eligible for participation in the SoonerCare CCU. The SoonerCare CCU works with members who self-refer or are referred by a provider or another area within the OHCA, such as care management, member services or

[1] MEDai calculates "chronic impact" scores that quantify the likelihood that a member's projected utilization/expenditures can be influenced through care management, based on his/her profile.

provider services.

The CCU also is responsible for:

- Members with hemophilia or sickle cell anemia, even if the member otherwise would be enrolled in the SoonerCare HMP.
- Members identified as high utilizers of the emergency department.
- Members undergoing bariatric surgery.
- Members with Hepatitis-C receiving treatment and whose treating provider has referred for case management[2].
- Members identified through a Health Risk Assessment (HRA), which SoonerCare applicants are given the option of completing as part of the online enrollment process. Based on responses to the HRA, members can be referred to different programs for assistance or case management, including the SoonerCare CCU.

The OHCA sends weekly updates of newly-opened CCU cases to Telligen. This ensures that there is no duplication in enrollment.

SoonerCare Chronic Care Unit

Under the SoonerCare CCU, OHCA registered nurses provide telephonic case management to participating members. CCU RNs use motivational interviewing with program participants to assess their needs and develop an action plan for improving self-management skills and health.

The RNs work to address the health status, health literacy, behavioral health and prescription drug utilization of participants through care coordination, self-management principles and behavior modification techniques. The ongoing case management typically includes one or two monthly telephone contacts, depending on the member's level of need.

The CCU consists of six full time employees. Four front-line nurses (Exceptional Needs Coordinators, or ENCs) provide telephonic case management. The unit also includes a supervisor and a senior ENC. The senior ENC is responsible for training new staff, assisting other ENCs with complex cases and managing a partial caseload. The unit manages 575 – 600 members at any given time.

[2] Added to the program in SFY 2015.

SoonerCare CCU Independent Evaluation

The OHCA has retained the Pacific Health Policy Group (PHPG) to conduct an independent evaluation of the SoonerCare CCU. PHPG is evaluating the program's impact on participants and the health care system as a whole with respect to:

1. Participant satisfaction and perceived health status;

2. Participant self-management of chronic conditions;

3. Quality of care, as measured by participant utilization of preventive and chronic care management services and adherence to national, evidence-based disease management practice guidelines; and

4. Cost effectiveness, as measured by avoidance of unnecessary service utilization (e.g., inpatient days, emergency department visits) and associated expenditures, while taking into account program administrative costs.

PHPG is presenting evaluation findings in a series of annual reports issued over a five-year period. This is the second Annual Evaluation report addressing progress toward achievement of program objectives. (PHPG also is evaluating the second generation SoonerCare HMP; findings have been issued in a separate report[3].)

Evaluation Findings

Participant Satisfaction and Perceived Health Status

Member satisfaction is a key component of SoonerCare CCU performance. If members are satisfied with their experience and value its worth, they are likely to remain engaged and focused on improving their self-management skills and adopting a healthier lifestyle. Conversely, if members do not see a lasting value to the experience, they are likely to lose interest and lack the necessary motivation to follow their CCU nurse's recommendations. PHPG completed 517 initial surveys with CCU participants, as well as 112 six-month follow-up surveys with participants who previously completed an initial survey. The purpose of the follow-up survey was to identify changes in attitudes and health status over time.

CCU nurses are expected to help participants build their self-management skills and improve their health through a variety of activities. Respondents were read a list of activities and asked, for each, whether it had occurred and, if so, how satisfied they were with the interaction or help they received.

[3] See SoonerCare HMP SFY 2015 Evaluation Report, June 2016.

Nearly all of the initial survey respondents (99 percent) indicated that their nurse asked questions about health problems or concerns, and the great majority also stated their nurse also provided answers and instructions for taking care of their health problems or concerns (91 percent); answered questions about their health (87 percent); and reviewed and helped with management of medications (85 percent). Over 40 percent stated that their nurse helped to identify changes in health that might be an early sign of a problem and helped them to talk to and work with their regular doctor and his/her staff.

Respondents were asked to rate their satisfaction with each "yes" activity. Except for one activity[4], the overwhelming majority reported being very satisfied with the help they received, with the portion ranging from 92 to 97 percent, depending on the item. This attitude carried over to the members' overall satisfaction with their nurses; 91 percent reported being very satisfied. Results for the follow-up survey were closely aligned to the initial survey.

Members also were asked whether the CCU nurse had tried to help them improve their health by changing behaviors and, if so, whether they had in fact made a change. Respondents were asked whether their nurse discussed behavior changes with respect to: smoking, exercise, diet, medication management, water intake and alcohol/substance consumption. If yes, respondents were asked about the impact of the nurse's intervention on their behavior (no change, temporary change or continuing change).

A majority of respondents reported discussing each of the activities with their CCU nurse. A significant percentage also reported continuing to make changes with respect to exercise, diet, water intake and medication management. A smaller percentage reported working to reduce tobacco use.

Survey respondents reported very high levels of satisfaction with the SoonerCare CCU overall, consistent with their opinion of the CCU nurse, who serves as their point of contact with the program (91 percent very satisfied). The percent of respondents describing themselves as very satisfied was identical between the initial and follow-up survey populations.

The ultimate objectives of the CCU are to assist members in adopting healthier lifestyles and improving their overall health. When asked to rate their current health status, the largest segment of initial survey respondents (43 percent) said "fair", while 34 percent said "good" and 21 percent said "poor".

When next asked if their health status had changed since enrolling in the SoonerCare CCU, 45 percent said it was "better" and 44 percent said it was "about the same"; only 11 percent said it was "worse". Among those members who reported a positive change, nearly all (96 percent) credited the SoonerCare CCU with contributing to their improved health.

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[4] The outlier activity was helping to make and keep health care appointments for mental health or substance abuse problems. Sixty-nine percent of "yes" respondents reported they were very satisfied with the help they received; the other 31 percent reported they were somewhat satisfied.

The results were even more encouraging among follow-up survey respondents. A larger segment (40 percent) reported their current health status as "good", nearly equal to the 41 percent who said "fair". Fifty-four percent of respondents reported that their health had improved, with 95 percent crediting this improvement to the program.

Quality of Care

SoonerCare CCU nurses devote much of their time to improving the quality of care for program participants. This includes educating participants about adherence to clinical guidelines for preventive care and for treatment of chronic conditions.

PHPG evaluated the impact of the SoonerCare CCU on quality of care through calculation of Healthcare Effectiveness Data and Information Set (HEDIS®) measures applicable to the SoonerCare CCU population. The evaluation included 19 diagnosis-specific measures and three population-wide preventive measures (22 in total). For example, the quality of care for participants with asthma was analyzed with respect to their use of appropriate medications and their overall medication management.

PHPG determined the total number of participants in each measurement category, the number meeting the clinical standard and the resultant "percent compliant". The findings were evaluated against two comparison data sets. The first data set contained compliance rates for the general SoonerCare population. The second data set contained national compliance rates for Medicaid MCOs. The national rates were used when data for the general SoonerCare population was not available but a national rate was.

The CCU participant compliance rate exceeded the comparison group rate on 10 of 17 measures for which there was a comparison group percentage. The difference was statistically significant for five of the ten.

Conversely, the comparison group achieved a higher rate on seven of the 17 measures, including two for which the difference was statistically significant.

While it is still early in the evaluation process, the SFY 2015 results were an improvement on the SFY 2014 results, when the CCU participant rate exceeded the comparison group rate on eight measures. This suggests that the Chronic Care Unit is having a positive impact on the quality of care for program participants.

PHPG also compared SFY 2015 compliance rates for CCU participants to SFY 2014 compliance rates to document year-over-year trends. The compliance rate improved for nine measures and declined for 10, but the movement up or down generally was very slight. (Three measures that registered 100 percent compliance in SFY 2014 achieved the same result in SFY 2015.)

It is too early in the evaluation process to draw strong inferences from these results. The impact of care management on quality of care for CCU participants should become clearer as more data is collected.

Utilization, Expenditures and Cost Effectiveness

CCU nurse care management, if effective, should have an observable impact on participant service utilization and expenditures. Improvement in quality of care should yield better outcomes in the form of fewer emergency department visits and hospitalizations, and lower acute care costs.

PHPG obtained MEDai data for SoonerCare CCU participants, excluding a small number of Medicare/Medicaid dual eligible members; the data includes a twelve-month forecast of emergency department visits, hospitalizations and total expenditures. MEDai's advanced predictive modeling, as opposed to extrapolating historical trends, accounts for participants' risk factors and recent clinical experience.

PHPG conducted the utilization and expenditure evaluation by comparing participants' actual claims experience to MEDai forecasts absent nurse care management. PHPG performed the analysis for selected chronic conditions[5] and for the participant population as a whole.

MEDai forecasted that SoonerCare CCU participants as a group would incur 10,815 inpatient days per 1,000 participants in the first 12 months of engagement. The actual rate was 5,622, or 52 percent of forecast.

MEDai forecasted that SoonerCare CCU participants as a group would incur 5,291 emergency department visits per 1,000 participants in the first 12 months of engagement. The actual rate was 4,179, or 79 percent of forecast.

PHPG documented total per member per month (PMPM) medical expenditures for all SoonerCare CCU participants as a group and compared actual medical expenditures to forecast for the first 24 months of engagement. MEDai forecasts for the first 12 months were trended in months 13 to 24 based on the PMPM trend rate of a comparison group comprised of SoonerCare members found eligible for the SoonerCare HMP who declined to enroll ("eligible but not engaged population")[6].

The trended MEDai forecast projected that the participant population would incur an average of $1,987.17 in PMPM expenditures in the first 24 months of engagement. The actual amount was $1,447.70, or 73 percent of forecast.

[5] The conditions evaluated were asthma, coronary artery disease, chronic obstructive pulmonary disease, diabetes, heart failure and hypertension. Condition-specific findings are presented in chapter four.

[6] MEDai forecasts extend only 12 months. The SoonerCare HMP "eligible but not engaged" population served as a proxy for the SoonerCare CCU, which has no equivalent cohort. The methodology is described in more detail in chapter 4.

PHPG calculated an aggregate dollar impact for all SoonerCare CCU participants by multiplying total months of engagement through SFY 2015 by average PMPM savings. The resultant medical savings were approximately $4.1 million.

PHPG then performed a net cost effectiveness test by comparing forecasted costs to actual costs through SFY 2015, inclusive of SoonerCare CCU administrative expenses. SoonerCare CCU administrative expenses include salary, benefit and overhead costs for persons working in the SoonerCare CCU unit. Aggregate administrative expenses for the SoonerCare CCU were approximately $1.4 million

The SoonerCare CCU registered net savings of nearly $2.7 million, reversing a small deficit of ($337,000) incurred in its first 12 months that was largely attributable to fixed administrative expenses coupled with low enrollment (the program achieved medical savings in its first year, prior to application of administrative costs).

The SoonerCare CCU achieved a positive ROI through SFY 2015 of 195.4 percent. Put another way, **the SoonerCare CCU generated nearly $2.00 in net medical savings for every dollar in administrative expenditures**.

CHAPTER 1 – INTRODUCTION

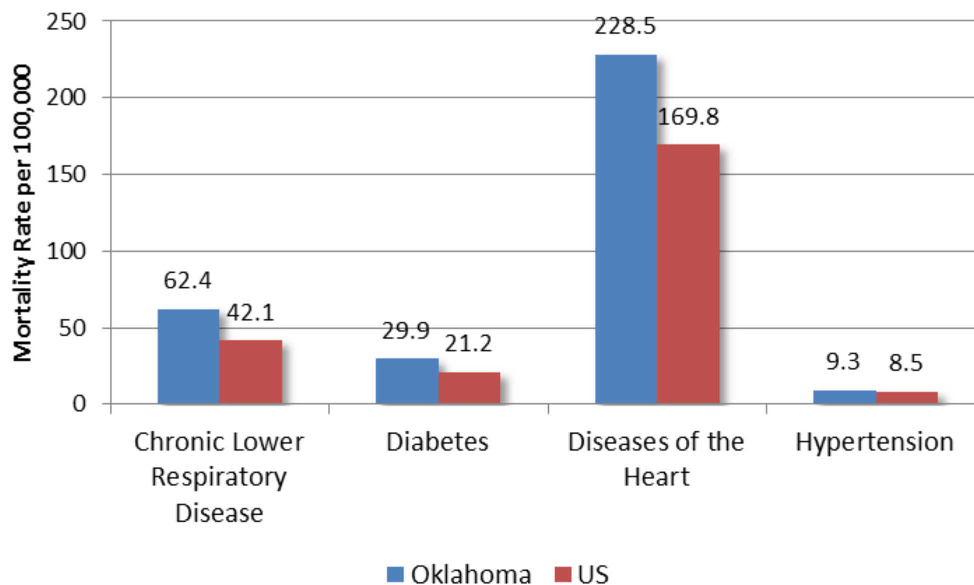
Chronic Disease Management

Chronic diseases are the leading causes of death and disability in the United States. According to the Centers for Disease Control and Prevention, in 2012 about half of all adults—117 million people—had one or more chronic health conditions such as diabetes or heart disease. More than one in four Americans has multiple chronic conditions, those that last a year or more and require ongoing medical attention or that limit activities of daily living[7].

The per capita impact of chronic disease is even greater in Oklahoma than for the nation as a whole. In 2013, 1,269 Oklahomans died due to complications from diabetes. This equated to a diabetes-related mortality rate of 29.9 persons per 100,000 residents, versus the national rate of 21.2[8].

The mortality rate for other chronic conditions, such as heart disease and hypertension, is similarly higher in Oklahoma than in the nation overall (Exhibit 1-1).

Exhibit 1-1 **– Chronic Disease Mortality Rates, 2013 – OK and US (Selected Conditions)[9]**



[7] http://www.hhs.gov/ash/initiatives/mcc/mcc_framework.pdf.
[8] http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf. Age adjusted rates.
[9] Ibid. Rate for chronic lower respiratory disease, also known as chronic obstructive pulmonary disease, includes asthma, chronic bronchitis and emphysema. Hypertension rate includes essential hypertension and hypertensive renal disease.

Chronic diseases also are among the most costly of all health problems. Persons with multiple chronic conditions account for over 70 percent of health spending nationally[10]. Providing care to individuals with chronic diseases, many of whom meet the federal disability standard, has placed a significant burden on state Medicaid budgets.

In Oklahoma, the CDC estimates that total expenditures related to treating selected major chronic conditions will surpass $8.6 billion in 2016 and will reach nearly $10.5 billion in 2020. The estimated portion attributable to SoonerCare members will be approximately $1.0 billion (state and federal) in 2016 and more than $1.2 billion in 2020[11] (Exhibit 1-2).

***Exhibit 1-2* – Estimated/Projected Chronic Disease Expenditures (Millions)**

Chronic Condition	OK All Payers		SoonerCare	
	2016	2020	2016	2020
Asthma	$452	$538	$153	$182
Cardiovascular Diseases (heart diseases, stroke and hypertension)	$5,793	$7,076	$622	$760
Diabetes	$2,359	$2,869	$263	$319
TOTAL FOR SELECTED CONDITIONS	**$8,604**	**$10,483**	**$1,038**	**$1,260**

The costs associated with chronic conditions are typically calculated by individual disease, as shown in the above exhibit. Traditional case and disease management programs similarly target single episodes of care or disease systems, but do not take into account the entire social, educational, behavioral and physical health needs of persons with chronic conditions. Research into holistic models has shown that sustained improvement requires the engagement of the member, provider, the member's support system and community resources to address total needs.

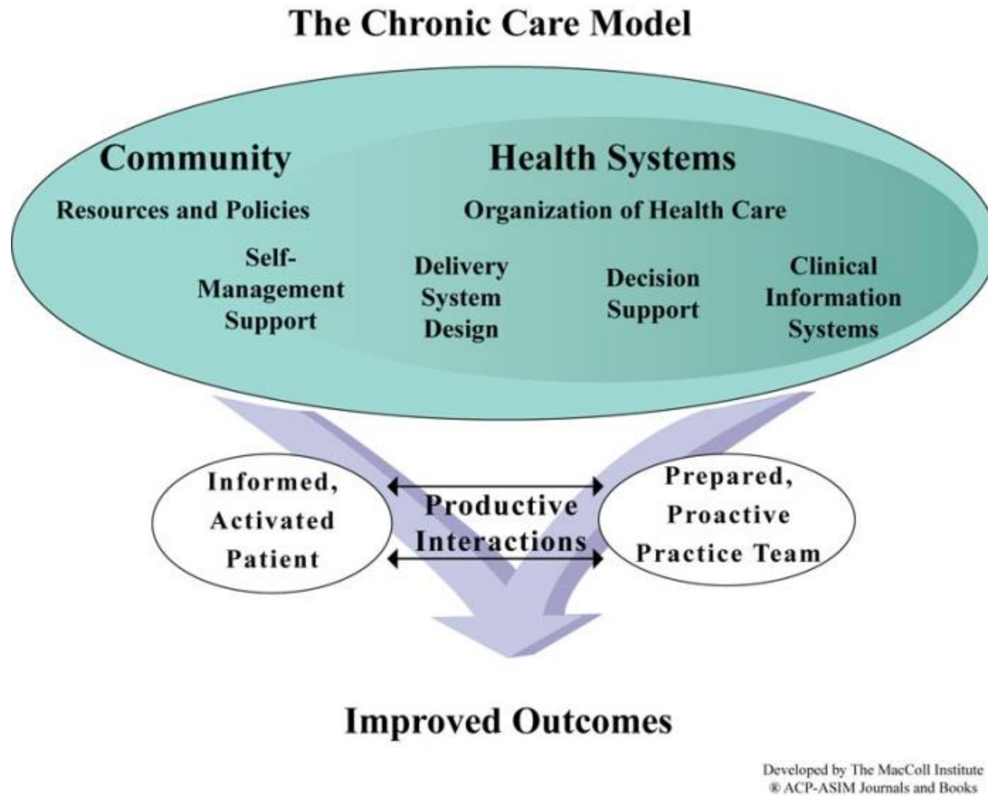
Holistic programs seek to address proactively the individual needs of patients through planned, ongoing follow-up, assessment and education.[12] Under the Chronic Care Model, as first developed by Dr. Edward H. Wagner, community providers collaborate to effect positive changes for health care recipients with chronic diseases.

[10] http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/prevention-chronic-care/decision/mcc/mccchartbook.pdf
[11] Expenditure estimates developed using CDC Chronic Disease Cost Calculator
[12] Wagner, E.H., "Chronic Disease Management: What Will It Take to Improve Care for Chronic Illness?," *Effective Clinical Practice*, 1:2-4 (1998).

These interactions include systematic assessments, attention to treatment guidelines and support to empower patients to become self-managers of their own care. Continuous follow-up care and the establishment of clinical information systems to track patient care are also components vital to improving chronic illness management.

Exhibit 1-3 illustrates the basic components and interrelationships of the Chronic Care Model.

***Exhibit 1-3* – The Chronic Care Model**



Development of a Strategy for Holistic Chronic Care

Under the Oklahoma Medicaid Reform Act of 2006 (HB2842), the Oklahoma Legislature directed the Oklahoma Health Care Authority (OHCA) to develop and implement a management program for persons with chronic diseases, including, but not limited to, asthma, chronic obstructive pulmonary disease, congestive heart failure and diabetes. The program would address the health needs of chronically ill SoonerCare members while reducing unnecessary medical expenditures at a time of significant fiscal constraints.

In response, the OHCA developed the SoonerCare Health Management Program, with the stated goals of:

- Evaluating and managing participants with chronic conditions;
- Improving participants' health status and medical adherence;
- Increasing participant disease literacy and self-management skills;
- Coordinating and reducing unnecessary or inappropriate medication usage by participants;
- Reducing hospital admissions and emergency department use by participants;
- Improving primary care provider adherence to evidence-based guidelines and best practices measures;
- Coordinating participant care, including the establishment of coordination between providers, participants and community resources;
- Regularly reporting clinical performance and outcome measures;
- Regularly reporting SoonerCare health care expenditures of participants; and
- Measuring provider and participant satisfaction with the program.

"First Generation" SoonerCare HMP

The OHCA moved from concept to reality by creating a program that offered nurse care management to qualifying members with one or more chronic conditions. The program also offered practice facilitation and education to primary care providers treating the chronically ill.

The OHCA contracted with a vendor through a competitive bid process to implement and operate the SoonerCare HMP. Telligen[13] was selected to administer the SoonerCare HMP in accordance with the OHCA's specifications. Telligen is a national quality improvement and medical management firm specializing in care, quality and information management services. Telligen staff members provided nurse care management to SoonerCare HMP participants and practice facilitation to OHCA-designated primary care providers.

Medical Artificial Intelligence (MEDai), was already serving as a subcontractor to Hewlett Packard Enterprises (HPE), the OHCA's Medicaid fiscal agent, at the time of the SoonerCare HMP's development. The OHCA capitalized on this existing relationship by utilizing MEDai to assist in identifying candidates for enrollment in the SoonerCare HMP based on historical and predicted service utilization, as well as their potential for improvement through care management.

[13] Prior to August 2011, Telligen was known as the Iowa Foundation for Medical Care.

Nurse Care Management

Nurse care management targeted SoonerCare members with chronic conditions identified as being at high risk for both adverse outcomes and significant future medical costs. The members were stratified into two levels of care, with the highest-risk segment placed in "Tier 1" and the remainder in "Tier 2."

Prospective participants were contacted and "enrolled" in their appropriate tier. After enrollment, participants were "engaged" through initiation of care management activities.

Tier 1 participants received face-to-face nurse care management while Tier 2 participants received telephonic nurse care management. The OHCA sought to provide services at any given time to about 1,000 members in Tier 1 and about 4,000 members in Tier 2.

Practice Facilitation and Provider Education

Selected participating providers received practice facilitation through the SoonerCare HMP. Practice facilitators collaborated with providers and office staff to improve the quality of care through implementation of enhanced disease management and improved patient tracking and reporting systems.

The provider education component targeted primary care providers throughout the State who were treating patients with chronic illnesses. The program incorporated elements of the Chronic Care Model by inviting primary care practices to engage in collaboratives focused on health management and evidence-based guidelines.

Program Performance

The first generation model of the SoonerCare HMP operated from February 2008 through June 2013. PHPG conducted a five-year evaluation of the first generation program, focusing on the program's impact on member behavior (e.g., self-management of chronic conditions), quality of care, service utilization and cost. PHPG documented significant positive outcomes attributable to both program components.

In the final evaluation report issued in 2014, PHPG concluded that the program had achieved high levels of satisfaction among participants, both members and providers; had improved quality of care; reduced inpatient and emergency department utilization versus what would have occurred absent the program; and saved $182 million over five years, even after accounting for program administrative costs. PHPG also concluded that, "the OHCA has laid a strong foundation for the program's second generation model, which is designed to further enhance care for members with complex/chronic conditions and to generate additional savings in the form of avoided hospital days, emergency department visits and other chronic care service costs."

"Second Generation" SoonerCare HMP & OHCA Chronic Care Unit (CCU)

As the contractual period for the first generation SoonerCare HMP was nearing its end, the OHCA began the process of examining how the program could be enhanced for the benefit of both members and providers. The OHCA and Telligen observed that a significant amount of the nurse care managers' time was being spent on outreach and scheduling activities, particularly for Tier 1 participants. The OHCA also observed that nurse care managers tended to work in isolation from primary care providers, although coordination did improve somewhat in the program's later years, as documented in provider survey results.

Health Coaching Model

To enhance member identification and participation, as well as coordination with primary care providers, the OHCA elected to replace centralized nurse care management services with registered nurse health coaches embedded at primary care practice sites. The health coaches would work closely with practice staff and provide coaching services to participating members. Health coaches could either be dedicated to a single practice with one or more providers or shared between multiple practice sites within a geographic area[14].

Health coaches would use evidence-based concepts such as motivational interviewing and member-driven action planning principles to impart changes in behaviors that impact chronic disease care.

Practice facilitation would continue in the second generation HMP but would become more diverse, encompassing both traditional full practice facilitation and more targeted services such as academic detailing focused on specific topics and preparing practices for health coaches.

Health coaches would only be embedded at practices that had first undergone practice facilitation. In order to participate in the second generation SoonerCare HMP at its outset, members would have to be receiving primary care from a practice with an embedded health coach[15].

Transition from First Generation HMP

At the time of the transition from the first to second generation HMP, participants in nurse care management receiving care in a qualifying practice were offered the opportunity to transition to a health coach. Participants not aligned with a qualifying practice were given the opportunity

[14] The description of Health Coaching and second generation Practice Facilitation are taken from the OHCA's October 2012 RFP for a second generation Health Management Program contractor.

[15] The health coaching model has undergone some changes in recent months, including introduction of telephonic coaching for members in areas with insufficient caseloads to support practice-based coaching and a resumption of home visits for members found to be more receptive to coaching in their home environment. These modifications began in SFY 2015 and will be addressed in detail in next year's report.

to work with a new telephonic Chronic Care Unit (CCU) operated directly by the OHCA.

Post-Transition HMP and CCU Enrollment

Post-transition, Telligen continues to identify HMP candidates from the SoonerCare Choice population through analysis of MEDai data. Providers also refer patients to Telligen, for review and possible enrollment into the SoonerCare HMP.

SoonerCare Choice and SoonerCare Traditional members both are eligible for participation in the SoonerCare CCU. The SoonerCare CCU works with members who self-refer or are referred by a provider or another area within the OHCA, such as care management, member services or provider services.

The CCU also is responsible for:

- Members with hemophilia or sickle cell anemia, even if the member otherwise would be enrolled in the SoonerCare HMP[16].
- Members identified as high utilizers of the emergency department[17].
- Members undergoing bariatric surgery[18].
- Members with Hepatitis-C receiving treatment and whose treating provider has referred for case management [19].
- Members identified through a Health Risk Assessment (HRA), which SoonerCare applicants are given the option of completing as part of the online enrollment process. Based on responses to the HRA, members can be referred to different programs for assistance or case management, including the SoonerCare CCU.

The OHCA sends weekly updates of newly-opened CCU cases to Telligen. This ensures that there is no duplication in enrollment.

SoonerCare Chronic Care Unit

Under the SoonerCare CCU, OHCA registered nurses provide telephonic case management to participating members. Similar to the health coaching model, CCU RNs use motivational interviewing with program participants to assess their needs and develop an action plan for improving self-management skills and health.

[16] Although small in numbers, the health needs and costs of these populations are substantial. For example, in SFY 2014, CCU participants with hemophilia incurred average PMPM costs of $16,700, primarily to cover the cost of anti-coagulant drugs.

[17] The CCU evaluation includes ED visit rate data across all participants.

[18] The average CCU caseload for this population is approximately 10 patients.

[19] As previously noted, Hepatitis-C was added to the program in SFY 2015, and 227 members were actively engaged in case management for some portion of the year. Ninety-eight of the 227 successfully completed treatment, defined as completing the course of medication and registering negative lab values for three or more months post-treatment. Thirteen were approved for treatment but either failed to start medication or failed to complete treatment. The remaining cases were open at the end of the year. PHPG will undertake a more detailed evaluation of utilization and expenditures among members with Hepatitis-C in the SFY 2016 evaluation.

The RNs work to address the health status, health literacy, behavioral health and prescription drug utilization of participants through care coordination, self-management principles and behavior modification techniques. The ongoing case management typically includes one or two monthly telephone contacts, depending on the member's level of need.

SoonerCare CCU Operations

The CCU in SFY 2015 consisted of six employees, four of whom were devoted full time to the program for the entire year. Four front-line nurses (Exceptional Needs Coordinators, or ENCs) provide telephonic case management. The unit also includes a supervisor and a senior ENC responsible for training new staff, assisting other ENCs with complex cases and managing a partial caseload. The unit manages 575 - 600 members at any given time.

Characteristics of CCU Participants

During SFY 2015, a total of 1,117 members were enrolled in the SoonerCare CCU for at least part of one month. PHPG, in consultation with the OHCA, removed certain groups from the utilization, expenditure and quality of care portions of the evaluation, to improve the integrity of the results. Specifically:

- Members who were enrolled for fewer than three months in SFY 2015.
- Members who were enrolled for three months or longer, but who also were enrolled in the SoonerCare HMP for a portion of SFY 2015, if their HMP tenure exceeded their CCU tenure.
- Members receiving disease management through Oklahoma University's Harold Hamm Diabetes Center, to isolate the impact of the SoonerCare CCU from activities occurring at the center [20].
- Members enrolled in a Health Access Network for three months or longer, to isolate the impact of the SoonerCare CCU from HAN care management activities[21].

The revised evaluation dataset included 529 SoonerCare CCU participants, up from 328 in the SFY 2014 evaluation. Demographic and health data for these members is presented next.

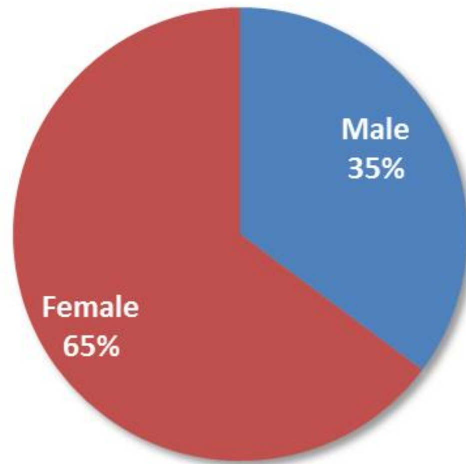
Participants by Gender and Age

Most CCU participants are women, with females outnumbering males by nearly two-to-one (Exhibit 1-4 on the following page).

[20] There were 16 members who received services from the center and who also were enrolled in either the SoonerCare HMP or CCU.

[21] There were 344 members aligned with a HAN PCMH provider for three months or longer who also were enrolled in either the SoonerCare HMP or CCU at some point during the year.

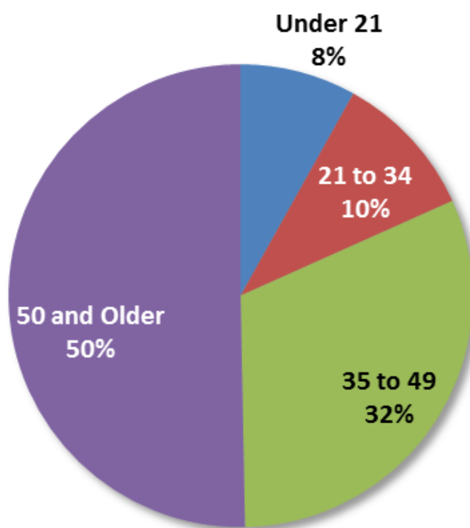
Exhibit 1-4 – Gender Mix for SoonerCare CCU Participants



Not surprisingly, SoonerCare CCU participants are older than the general Medicaid population. Only eight percent of SoonerCare CCU participants in SFY 2015 were under the age of 21, compared to approximately 62 percent of the general SoonerCare population (Exhibit 1-5).[22]

The percentage of SoonerCare CCU participants under age 21 was lower in SFY 2015 than SFY 2014, when 23 percent were in the youngest age cohort. All of the other age cohort percentages increased from SFY 2014 to SFY 2015, with the greatest increase occurring for participants in the 35 – 49 cohort, which rose from 23 percent to 32 percent.

Exhibit 1-5 – Age Distribution for SoonerCare CCU Participants



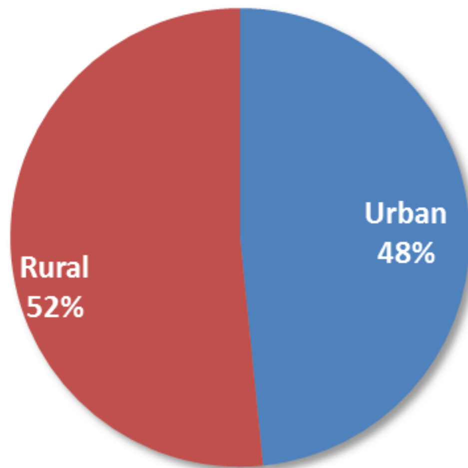
[22] Source for total SoonerCare percentage: OHCA SFY 2015 Annual Report.

Participants by Place of Residence

Fifty-two percent of SoonerCare CCU participants resided in rural Oklahoma in SFY 2015, while 48 percent resided in urban counties comprising the greater Oklahoma City, Tulsa and Lawton metropolitan areas (Exhibit 1-6). The rural/urban split was much closer in SFY 2015 than SFY 2014, when rural participants made-up 61 percent of the SoonerCare CCU population and urban participants only 39 percent.

The SFY 2015 mix was still more rural than the general SoonerCare population, approximately 47 percent of whom resided in rural counties and 52 percent in urban counties in SFY 2015[23].

Exhibit 1-6 – SoonerCare CCU Participants by Location: Urban/Rural Mix



[23] Source: OHCA SFY 2015 Annual Report. Urban counties include Canadian, Cleveland, Comanche, Creek, Logan, McClain, Oklahoma, Osage, Rogers, Tulsa and Wagoner. Slightly under one percent was classified as “out-of-state” or “other” (e.g., in state custody).

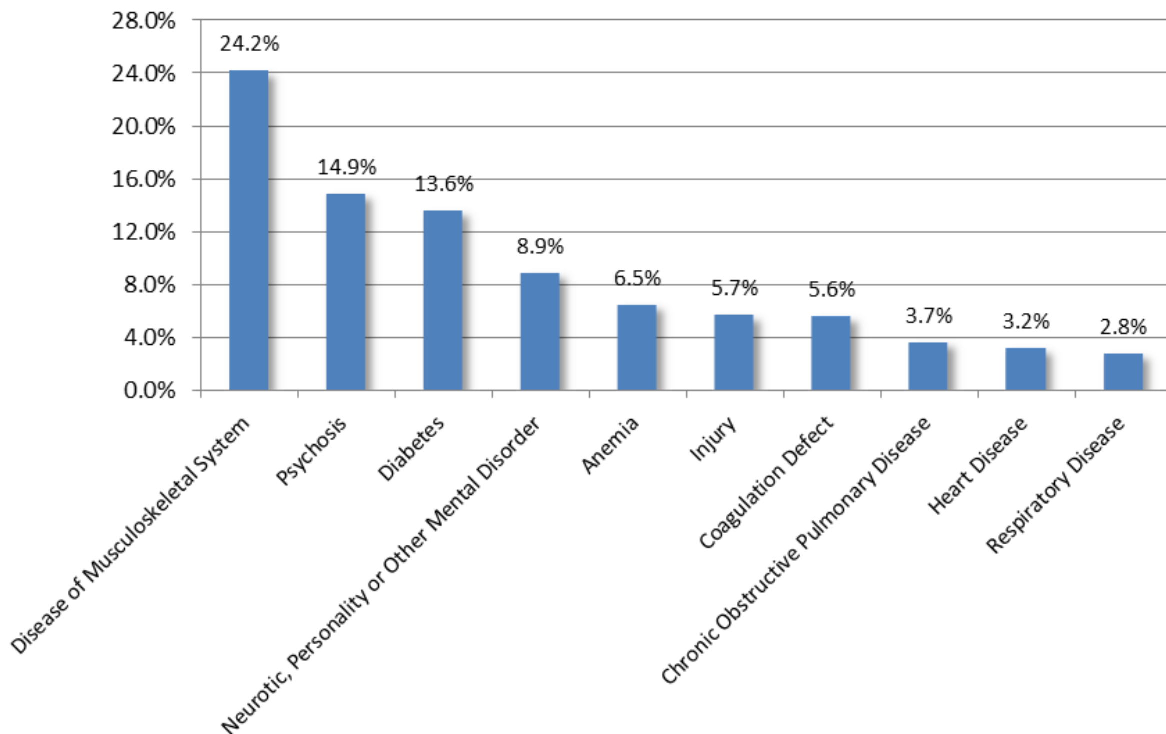
Participants by Most Common Diagnostic Categories[24]

CCU participants are treated for numerous chronic and acute physical conditions. The most common diagnostic category among participants in SFY 2015 was disease of the musculoskeletal system, which includes osteoarthritis, other types of arthritis, backbone disease, rheumatism and other bone and cartilage diseases and deformities (Exhibit 1-7).

Two behavioral health categories also were included among the top five, along with diabetes and anemia. Coagulation defect was the sixth most common diagnostic category, reflecting the enrollment of members with hemophilia into the CCU. The remaining four categories included a mix of one acute and three chronic conditions. The top ten categories accounted for 89 percent of the SoonerCare CCU population.

The composition of the top 10 categories was unchanged from SFY 2014. The percentages also were nearly identical, with conditions shifting in most cases by no more than one-tenth of a percentage point.

Exhibit 1-7 – Most Common Diagnostic Categories for CCU Participants

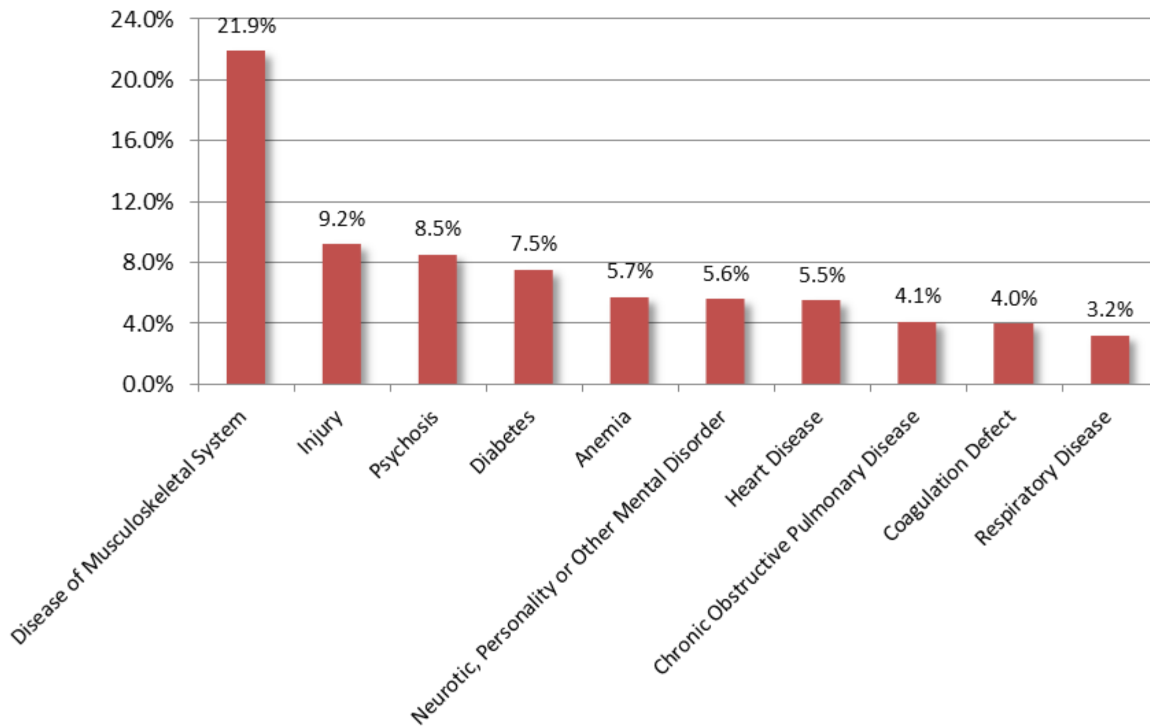


[24] Ranking of most common diagnoses calculated using primary diagnosis code from paid claims.

Participants by Most Expensive Diagnostic Categories[25]

Disease of the musculoskeletal system also was the most expensive diagnostic category in SFY 2015 based on paid claim amounts, followed by eight of the same nine categories from the prior exhibit, although in slightly different order (Exhibit 1-8). The top ten most expensive disease categories accounted for 75 percent of the population. The ranking and percentages were again nearly identical to those reported for SFY 2014.

Exhibit 1-8 – Most Expensive Diagnostic Categories for CCU Participants



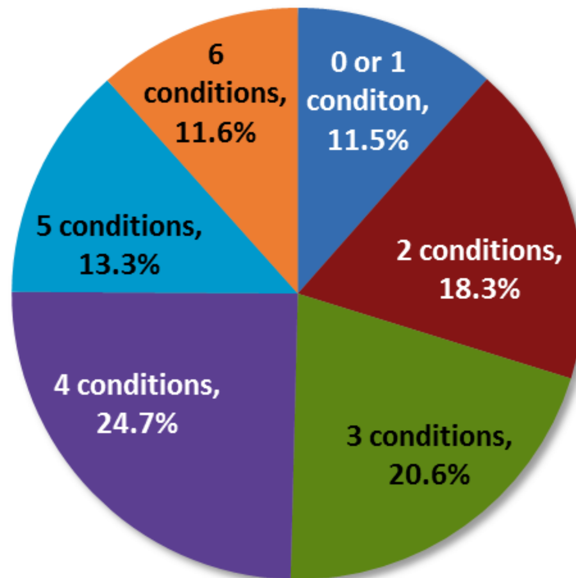
[25] Ranking of most costly diagnoses calculated using primary diagnosis code from paid claims.

Co-morbidities among Participants

The SoonerCare CCU's focus on holistic care rather than management of a single disease is appropriate given the prevalence of co-morbidities in the participating population.

PHPG examined the number of physical chronic conditions per participant and found that nearly 89 percent in SFY 2015 had at least two of six high priority chronic physical conditions[26] (asthma, COPD, coronary artery disease, diabetes, heart failure and hypertension) (Exhibit 1-9). The SFY 2015 distribution was very similar to the distribution in SFY 2014.

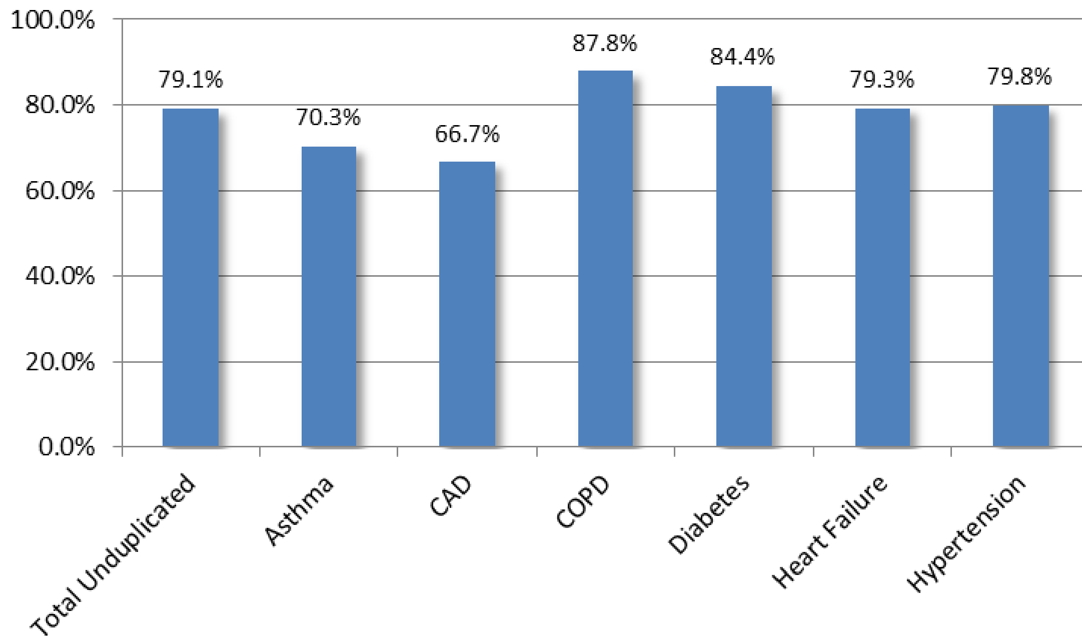
Exhibit 1-9 – Number of Physical Health Chronic Conditions



[26] These conditions are used by MEDai as part of its calculation of chronic impact scores.

Nearly 80 percent of the participant population also has both a physical and behavioral health condition. Among the six priority physical health conditions, the co-morbidity prevalence ranged in SFY 2015 from approximately 88 percent in the case of persons with COPD to 67 percent among persons with coronary artery disease (Exhibit 1-10).[27] The percentages once again were almost unchanged from SFY 2014.

Exhibit 1-10 – Behavioral Health Co-morbidity Rate



Conclusion

Overall, CCU participants demonstrate the characteristics expected of a population that could benefit from care management. Most have two or more chronic physical health conditions, often coupled with serious acute conditions. The population also has significant behavioral health needs that can complicate adherence to guidelines for self-management of physical health conditions and maintaining a healthy lifestyle.

[27] Behavioral health comorbidity defined as diagnosis codes 290-319 being one of the participant's top three most common or most expensive diagnosis, by claim count and paid amount, respectively.

SoonerCare CCU Independent Evaluation

The OHCA has retained the Pacific Health Policy Group (PHPG) to conduct an independent evaluation of the SoonerCare CCU. PHPG is evaluating the program's impact on participants and the health care system as a whole with respect to:

1. Participant satisfaction and perceived health status;

2. Participant self-management of chronic conditions;

3. Quality of care, as measured by participant utilization of preventive and chronic care management services and adherence to national, evidence-based disease management practice guidelines; and

4. Cost effectiveness, as measured by avoidance of unnecessary service utilization (e.g., inpatient days, emergency department visits) and associated expenditures, while taking into account program administrative costs.

PHPG is presenting evaluation findings in a series of annual reports to be issued over a five-year period. This is the second Annual Evaluation report addressing progress toward achievement of program objectives.

The specific methodologies employed and time periods addressed are described within each chapter of the evaluation. In general, utilization and expenditure findings are for years one and two of the program, covering July 2013 to June 2015 (State Fiscal Years 2014 and 2015).

Member survey data is being collected on a continuous basis. Findings in this report are for surveys conducted from February 2015 to April 2016.

CHAPTER 2 – SOONERCARE CCU PARTICIPANT SATISFACTION

Introduction

Participant satisfaction is a key component of SoonerCare CCU performance. If participants are satisfied with their experience and value its worth, they are likely to remain engaged and focused on improving their self-management skills and adopting a healthier lifestyle. Conversely, if participants do not see a lasting value to the experience, they are likely to lose interest and lack the necessary motivation to follow coaching recommendations.

Satisfaction is measured through participant telephone surveys. PHPG attempts to conduct an initial survey with all SoonerCare CCU participants and attempts to re-survey all participants who complete an initial survey after six months, to identify any changes in perceptions over time.

Initial Survey

Initial survey data collection began in late February 2015. At that time, the OHCA provided a roster of all participants dating back to the start of the program in July 2013. The OHCA periodically updates the roster and, as of April 2016, has provided contact information for 2,058 individuals.

PHPG mails introductory letters to all CCU participants, informing them that they will be contacted by telephone to complete a survey asking their opinions of the CCU program. Surveyors make multiple call attempts at different times of the day and different days of the week before closing a case.

The survey is written at a sixth-grade reading level and includes questions designed to garner meaningful information on member perceptions and satisfaction. The areas explored include:

- Program awareness and engagement status
- Decision to enroll in the SoonerCare CCU
- Experience with CCU nurse and satisfaction
- Overall satisfaction with the SoonerCare CCU
- Health status and lifestyle

Six-month Follow-up Survey

Six-month follow-up survey data collection activities began in early September 2015. The follow-up survey covers the same areas as the initial survey, to allow for comparison of participant responses across the two surveys.

The survey also includes questions for respondents who report having voluntarily disenrolled from the SoonerCare CCU since their initial survey. Respondents are asked to discuss the reason(s) for their decision to disenroll.

Survey Population Size, Margin of Error and Confidence Levels

The SFY 2014 evaluation report included data from 130 initial surveys conducted during a ten week period, from late February through April 2015. The SFY 2015 evaluation includes data from an additional 387 initial surveys conducted from May 2015 through April 2016, for a total of 517 responses. The SFY 2015 evaluation also includes data from 112 six-month follow-up surveys.

The survey results are based on a subset of the total SoonerCare CCU population and therefore contain a margin of error. The margin of error (or confidence interval), is usually expressed as a "plus or minus" percentage range (e.g., "+/- 10 percent"). The margin of error for any survey is a factor of the absolute sample size, its relationship to the total population and the desired confidence level for survey results.

The confidence level for the survey was set at 95 percent, the most commonly used standard. The confidence level represents the degree of certainty that a statistical prediction (i.e., survey result) is accurate. That is, it quantifies the probability that a confidence interval (margin of error) will include the true population value.

The 95 percent confidence level means that, if repeated 100 times, the survey results will fall within the margin of error 95 out of 100 times. The other five times the results will be outside of the range.

Exhibit 2-1 presents the sample size and margin of error for each of the surveys. The margin of error is for the total survey population, based on the average distribution of responses to individual questions. The margin can vary by question to some degree, upward or downward, depending on the number of respondents and distribution of responses.

Exhibit 2-1 – Survey Sample Size and Margin of Error

Survey	Sample Size	Confidence Level	Margin of Error
Initial	517	95%	+/- 3.73%
Six-month Follow-up	112	95%	+/- 9.01%

SoonerCare CCU Participant Survey Findings

Respondent Demographics

Initial Survey Respondents

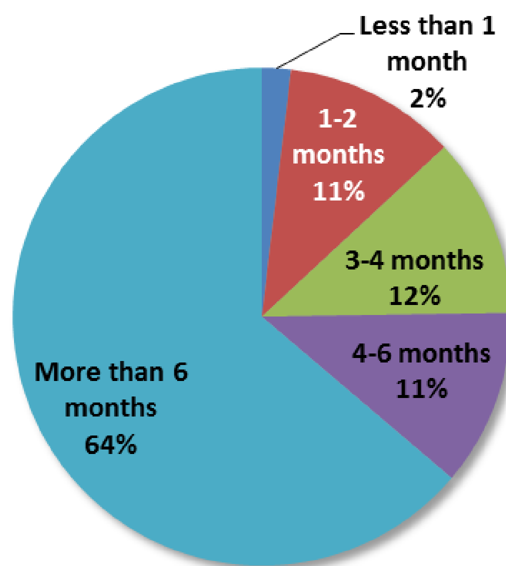
The SoonerCare CCU initial survey respondents in aggregate included 322 females (62 percent) and 195 males (38 percent).

The majority of surveys (435 out of 517, or 84 percent) were conducted with the actual SoonerCare CCU participant. The remaining surveys were conducted with a relative of the participant, primarily parents/guardians of minors, but also a small number of spouses, siblings and adult children of members.

The initial survey targeted members who were still active participants in the SoonerCare CCU. After screening out persons no longer participating in the program, the initial survey respondent sample included 431 persons.

Respondent tenure in the program among the 431 active participants ranged from less than one month to more than six months (Exhibit 2-2).

Exhibit 2-2 – Respondent Tenure in SoonerCare CCU – Initial Survey



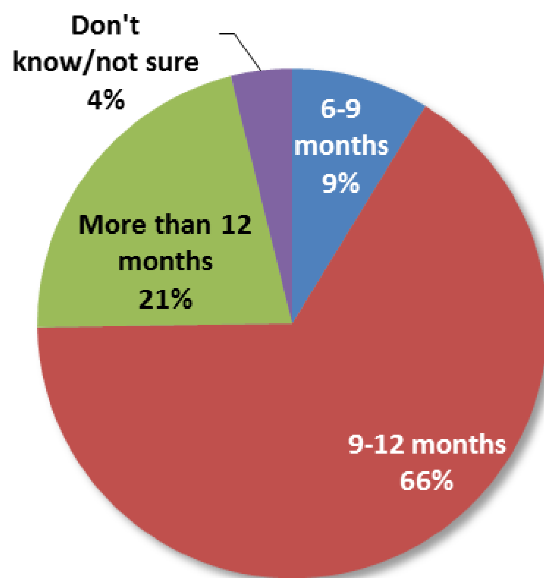
Follow-up Survey Respondents

The demographics of the follow-up survey population were similar to the initial survey group. The SoonerCare CCU follow-up survey respondents included 61 females (56 percent) and 48 males (44 percent).

The follow-up survey included both 103 active participants and six persons who reported having disenrolled and who were asked about their disenrollment decision.

Respondent tenure in the program among the 103 active participants was at least six months and in a majority of cases was nine to twelve months in duration (Exhibit 2-3).

Exhibit 2-3 – Respondent Tenure in SoonerCare CCU – Follow-up Survey



Key findings for the initial and follow-up surveys are discussed below. Findings are presented in aggregate for the 431 initial survey respondents interviewed since February 2015. The aggregate initial survey results also are broken-out into two subgroups: February 2015 – April 2015 respondents, data for which was originally included in the SFY 2014 evaluation report, and May 2015 – April 2016 respondents. This segmentation allows for identification of any emerging trends with respect to new participant perceptions.

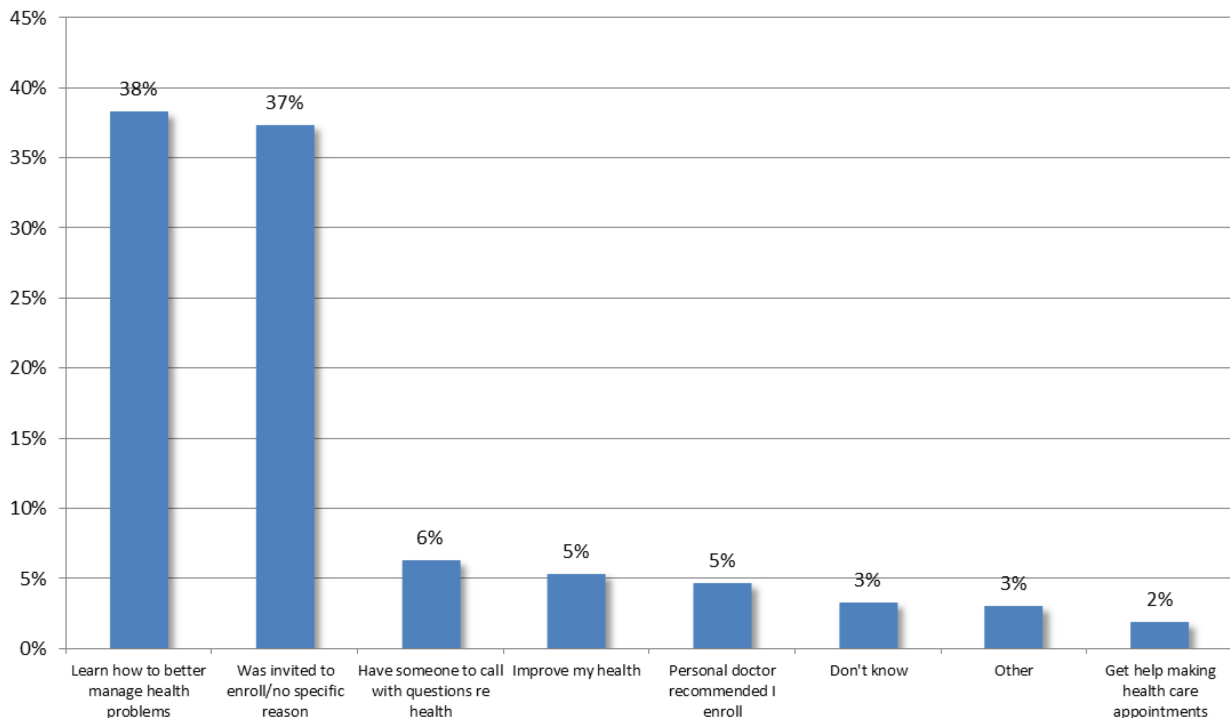
Follow-up survey data is presented alongside initial survey data as applicable. This allows for comparison of program perceptions between participants based on their tenure.

Copies of the survey instruments are included in Appendix A. The full set of responses is presented in Appendix B.

Primary Reason for Enrolling

The SoonerCare CCU seeks to teach participants how to better manage their chronic conditions and improve their health. These were two of the primary reasons cited by participants who had a goal in mind when enrolling; another reason was to have someone to call regarding health-related questions. However, 37 percent of the respondents enrolled simply because they were asked (Exhibit 2-4).

Exhibit 2-4 – Primary Reason for Enrolling in SoonerCare CCU – Initial Survey (Aggregate)[28]



Although the percentages varied somewhat, the top four reasons given for enrolling were generally consistent across time periods and accounted for approximately 86 percent of the responses. The fifth most cited reason – personal doctor recommended I enroll – declined in frequency from 12 percent to two percent between the two survey time periods (Exhibit 2-5 on the following page).

[28] This question was not asked on the follow-up survey.

Exhibit 2-5 – Primary Reason for Enrolling in SoonerCare CCU – Initial Survey (Longitudinal)

	Primary Reason for Enrolling (Percent Naming) February 2015 – April 2016		
Reason	**Feb – Apr 2015**	**May 2015 – Apr 2016**	**Aggregate**
1. Learn how to better manage health problems	34.9%	39.4%	***38.3%***
2. Was invited to enroll/no specific reason	34.9%	38.2%	***37.4%***
3. Have someone to call with questions regarding health	9.4%	5.2%	***6.3%***
4. Improve my health	3.8%	5.8%	***5.3%***
5. Personal doctor recommended I enroll	12.3%	2.2%	***4.6%***
6. Don't know/not sure	1.9%	3.7%	***3.2%***
7. Other	0.9%	3.7%	***3.2%***
8. Get help making personal health care appointments	1.9%	1.8%	***1.9%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

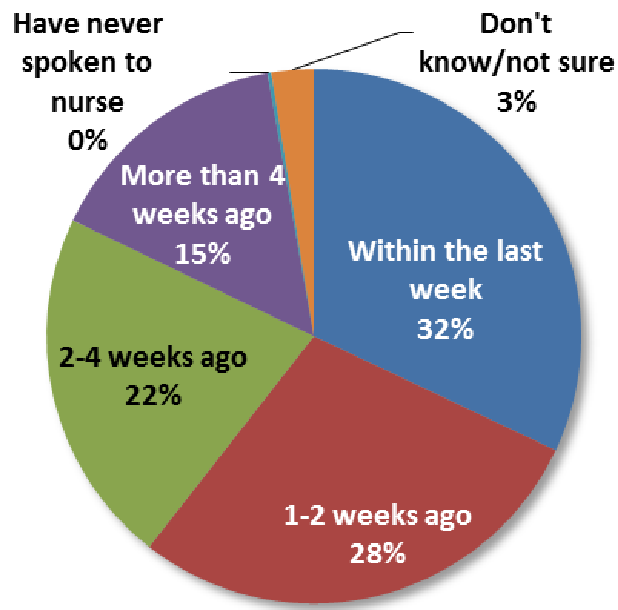
The seventh category, "other", included getting help managing hepatitis C medication, preparing for gastric bypass surgery and making lifestyle changes (e.g., stopping tobacco use).

CCU Nurse Contact

The CCU nurse is synonymous with the SoonerCare CCU for most participants. Survey respondents were asked a series of questions about their interaction with the CCU nurse, starting with their most recent contact.

Sixty percent of initial survey respondents reported speaking to their CCU nurse within the previous two weeks (Exhibit 2-6).

Exhibit 2-6 – Most Recent Contact with CCU Nurse – Initial Survey (Aggregate)[29]



[29] "Have never spoken to health coach" segment is 0.2% (rounded down to 0% in exhibit).

The percentage reporting contact within the past two weeks was consistent across time periods for the initial survey. However, follow-up survey respondents were more likely to report that their most recent contact occurred more than four weeks ago. The longer interval may reflect a reduced need for very frequent contacts with participants who have been enrolled for a significant period of time (Exhibit 2-7).

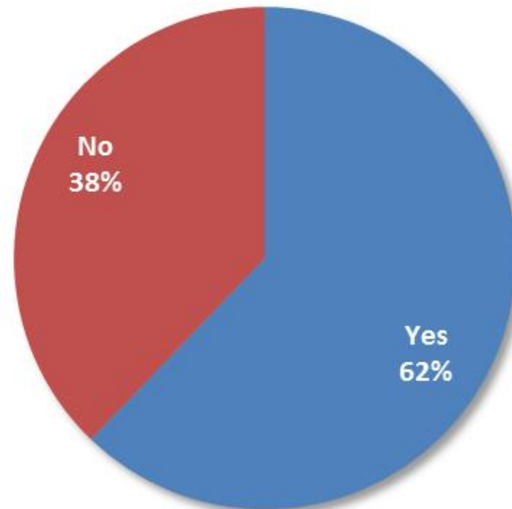
Exhibit 2-7 – Most Recent Contact with CCU Nurse – Initial Survey (Longitudinal) & Follow-up

	Last Time Spoke with CCU Nurse			
	Initial Survey			Follow-up Survey
Time Elapsed	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate	
Within last week	33.7%	31.5%	***32.0%***	***29.1%***
1 to 2 weeks ago	28.7%	28.5%	***28.5%***	***8.7%***
2 to 4 weeks ago	23.8%	20.9%	***21.6%***	***18.4%***
More than 4 weeks ago	12.9%	15.8%	***15.1%***	***39.8%***
Have never spoken to CCU nurse	0.0%	0.3%	***0.2%***	***1.0%***
Don't know/not sure/no response	1.0%	3.0%	***2.6%***	***2.9%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

Over 60 percent of respondents were able to name their CCU nurse, suggesting that participants have formed a strong connection with the program[30] (Exhibit 2-8).

Exhibit 2-8 – Able to Name CCU Nurse – Initial Survey (Aggregate)



The portion able to name their CCU nurse was consistent across initial survey time periods and between the initial survey and follow-up survey (Exhibit 2-9).

Exhibit 2-9 – Able to Name CCU Nurse – Initial Survey (Longitudinal) & Follow-up

Response	Able to Name CCU Nurse: Initial Survey: Feb – Apr 2015	Able to Name CCU Nurse: Initial Survey: May 2015 – Apr 2016	Able to Name CCU Nurse: Initial Survey: Aggregate		Able to Name CCU Nurse: Follow-up Survey
Yes	61.5%	62.4%	***62.2%***		***67.0%***
No	38.5%	37.6%	***37.8%***		***33.0%***

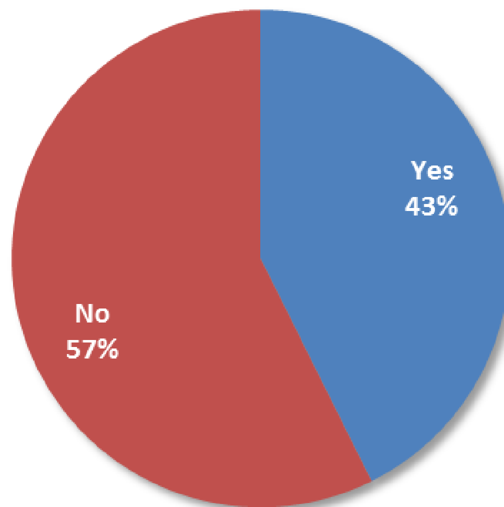
Note: Percentages on this and other tables may not total to 100 percent due to rounding.

30 Respondents were asked for a name but PHPG did not verify the accuracy of the information.

CCU nurses are required to provide a contact telephone number to their members. Approximately 95 percent of respondents, both initial and follow-up, confirmed that they were given a number.

Forty-three percent of the initial survey respondents who remembered being given a number stated they had tried to call their CCU nurse at least once (Exhibit 2-10).

Exhibit 2-10 – Tried to Call CCU Nurse – Initial Survey (Aggregate)



The percentage increased slightly from the first to second initial survey groups. The follow-up survey group percentage was close to the initial survey aggregate rate (Exhibit 2-11).

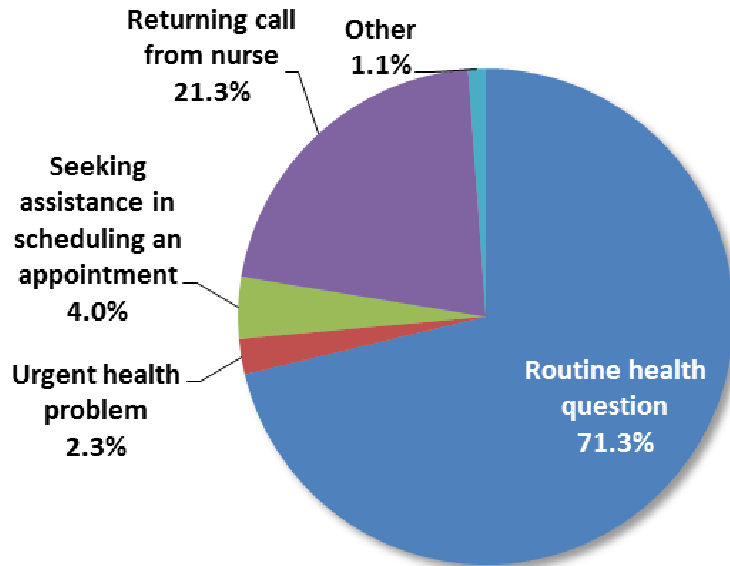
Exhibit 2-11 – Tried to Call CCU Nurse –
Initial Survey (Longitudinal) & Follow-up

	Tried to Call CCU Nurse				
	Initial Survey				Follow-up Survey
Response	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate		
Yes	38.5%	43.9%	***42.6%***		***41.2%***
No	61.5%	56.1%	***57.4%***		***58.8%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

Among those who had tried calling, a majority (71 percent of initial survey respondents) reported their most recent call concerned a routine health question (Exhibit 2-12).

Exhibit 2-12 – Reason for Most Recent Call – Initial Survey (Aggregate)



A majority of follow-up survey respondents also called with a routine health question, although a larger percentage reported calling for help in scheduling an appointment (Exhibit 2-13).

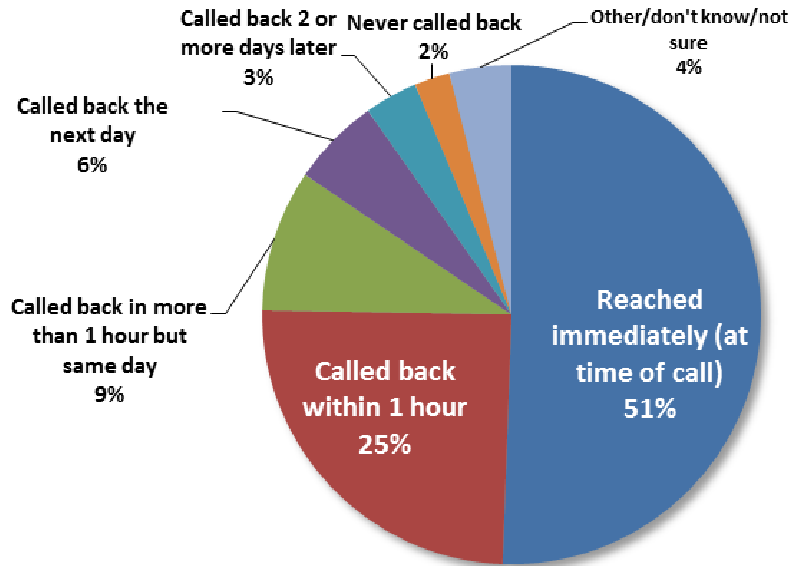
Exhibit 2-13 – Reason for Most Recent Call – Initial Survey (Longitudinal) & Follow-up

	Reason for Most Recent Call to CCU Nurse				
	Initial Survey				Follow-up Survey
Reason	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate		
Routine health question	73.0%	70.8%	***71.3%***		***67.5%***
Urgent health problem	2.7%	2.2%	***2.3%***		***2.5%***
Seeking assistance in scheduling an appointment	5.4%	3.6%	***4.0%***		***10.0%***
Returning call from CCU nurse	16.2%	22.6%	***21.3%***		***20.0%***
Other	2.7%	0.7%	***1.1%***		***0.0%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

Eighty-five percent of initial survey respondents who called the number reached their coach immediately or heard back later the same day. Over 95 percent reported eventually getting a call back (Exhibit 2-14).

Exhibit 2-14 – CCU Nurse Call-Back Time – Initial Survey (Aggregate)



A large majority of follow-up survey respondents reported being called back the same day, although a higher percentage than in the initial survey stated they were called back the next day (Exhibit 2-15).

Exhibit 2-15 – CCU Nurse Call-Back Time – Initial Survey (Longitudinal) & Follow-up

Response	CCU Nurse Call-Back Time			
	Initial Survey			Follow-up Survey
	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate	
Reached immediately (at time of call)	45.9%	51.8%	***50.6%***	***45.0%***
Called back within 1 hour	35.1%	21.9%	***24.7%***	***22.5%***
Called back in more than 1 hour but same day	8.1%	9.5%	***9.2%***	***7.5%***
Called back the next day	0.0%	7.3%	***5.7%***	***7.5%***
Called back 2 or more days later	2.7%	3.6%	***3.4%***	***0.0%***
Never called back	2.7%	2.2%	***2.3%***	***7.5%***
Other/don't know/not sure	5.4%	3.6%	***4.0%***	***10.0%***

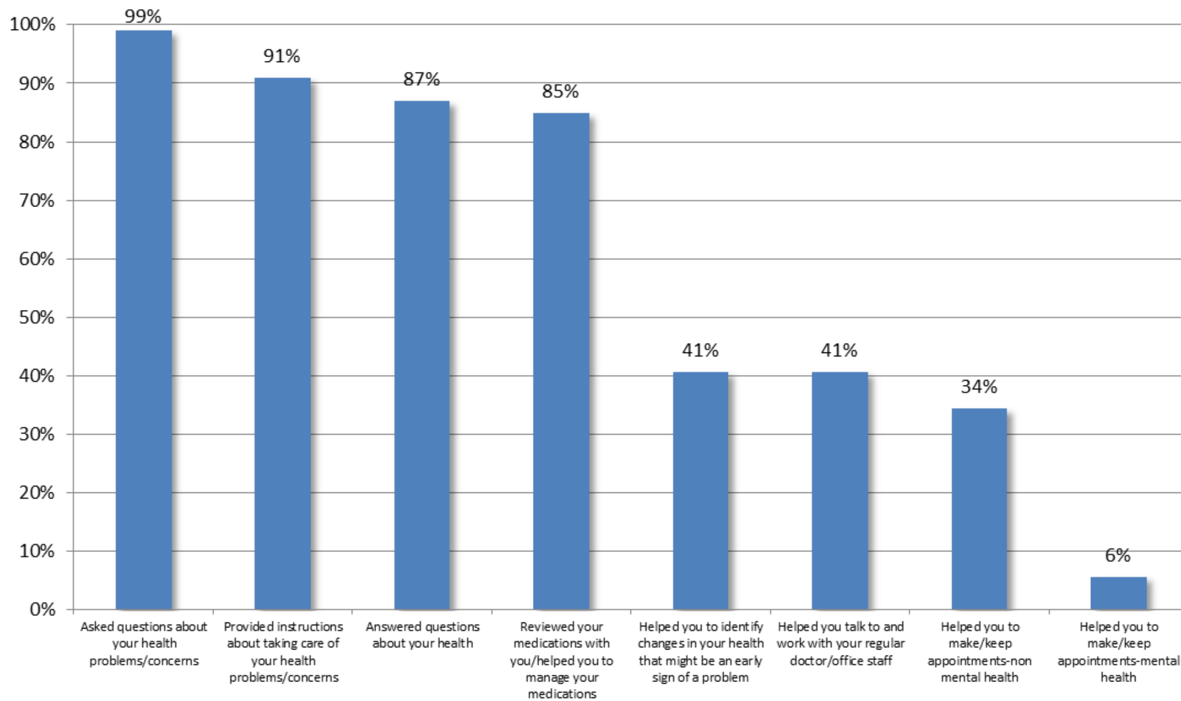
Note: Percentages on this and other tables may not total to 100 percent due to rounding.

CCU Nurse Activities

CCU nurses are expected to help participants build their self-management skills and improve their health through a variety of activities. Respondents were read a list of activities and asked, for each, whether it had occurred and, if so, how satisfied they were with the interaction or help they received.

Nearly all of the initial survey respondents stated that their CCU nurse asked questions about health problems or concerns, and the great majority stated their nurse also provided answers and instructions for taking care of their health problems or concerns, answered questions about their health and assisted with medications (Exhibit 2-16). Respondents reported that other activities occurred with less frequency.

Exhibit 2-16 – CCU Nurse Activity – Initial Survey (Aggregate)



The rate at which activities occurred was generally consistent across initial survey time periods and between the initial and follow-up surveys (Exhibit 2-17). One notable change from the first to second initial surveys was an increase of 15 percentage points in the number of respondents stating they received medication management assistance. Another change from the first to second initial survey time periods was a decline of 13 percentage points in the number of respondents who reported receiving help in making and keeping medical appointments.

Exhibit 2-17 – CCU Nurse Activity – Initial Survey (Longitudinal) & Follow-up

	CCU Nurse Activity Occurrence			
	Initial Survey (% "yes")			Follow-up Survey (% "yes")
Activity	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate	
1. Asked questions about your health problems or concerns	99.1%	99.1%	***99.1%***	***98.0%***
2. Provided instructions about taking care of your health problems or concerns	89.6%	91.4%	***91.0%***	***93.1%***
3. Helped you to identify changes in your health that might be an early sign of a problem	34.9%	42.5%	***40.6%***	***42.2%***
4. Answered questions about your health	88.7%	86.5%	***87.0%***	***89.2%***
5. Helped you talk to and work with your regular doctor and your regular doctor's staff	45.3%	39.1%	***40.6%***	***26.5%***
6. Helped you to make and keep health care appointments with other doctors, such as specialists, for medical problems	44.3%	31.1%	***34.3%***	***25.5%***
7. Helped you to make and keep health care appointments for mental health or substance abuse problems	7.5%	4.9%	***5.6%***	***6.9%***
8. Reviewed your medications with you and helped you to manage your medications	73.6%	88.6%	***84.9%***	***90.2%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

Respondents were asked to rate their satisfaction with each "yes" activity. The overwhelming majority across all survey groups reported being very satisfied with the help they received (Exhibit 2-18). The only activity registering somewhat lower "very satisfied" ratings was assistance with mental health/substance abuse problems, particularly among initial survey respondents in the second time period. However, nearly all respondents rating this activity reported being either very or somewhat satisfied.

Exhibit 2-18 – Satisfaction with CCU Nurse Activity ("Very Satisfied")[31] – Initial Survey (Longitudinal) & Follow-up

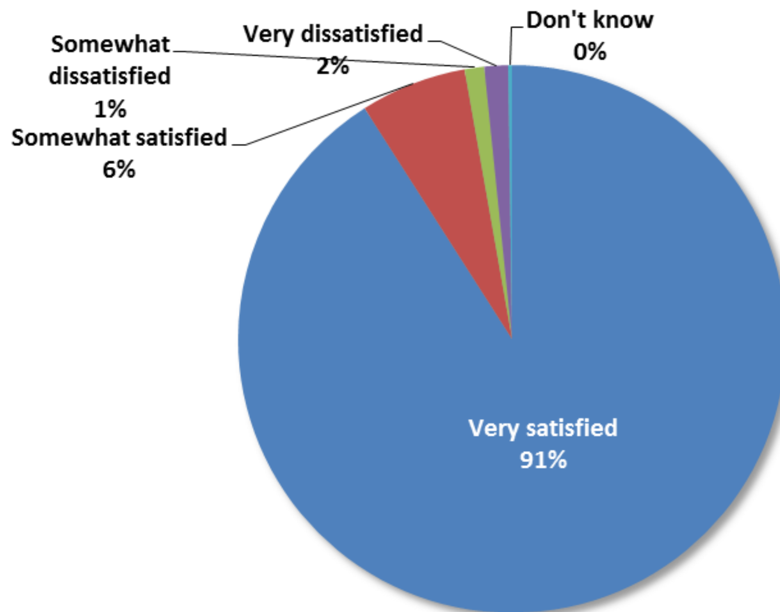
Activity	CCU Nurse Activity Satisfaction (Very Satisfied)				
	Initial Survey (% "very satisfied")				Follow-up Survey (% "very satisfied")
	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate		
1. Asked questions about your health problems or concerns	91.4%	92.2%	***92.0%***		***91.9%***
2. Provided instructions about taking care of your health problems or concerns	93.6%	97.0%	***96.2%***		***93.6%***
3. Helped you to identify changes in your health that might be an early sign of a problem	97.4%	93.7%	***94.5%***		***97.7%***
4. Answered questions about your health	97.9%	96.8%	***97.1%***		***95.5%***
5. Helped you talk to and work with your regular doctor and your regular doctor's staff	97.8%	94.0%	***95.0%***		***100.0%***
6. Helped you to make and keep health care appointments with other doctors, such as specialists, for medical problems	95.7%	94.3%	***94.8%***		***92.6%***
7. Helped you to make and keep health care appointments for mental health or substance abuse problems	90.9%	60.0%	***69.4%***		***85.7%***
8. Reviewed your medications with you and helped you to manage your medications	96.2%	95.9%	***95.9%***		***93.3%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

[31] Satisfaction percentages shown in Appendix B for this and later tables are for all survey respondents, rather than the subset answering "yes" to an activity. The two data sets therefore do not match for these questions.

This positive attitude carried over to the members' overall satisfaction with their CCU nurses. Over 90 percent of initial survey respondents stated they were "very satisfied" with their nurse (Exhibit 2-19).

Exhibit 2-19 – Satisfaction with CCU Nurse – Initial Survey (Aggregate)



The high level of satisfaction was consistent across initial survey time periods and between the initial and follow-up surveys (Exhibit 2-20).

Exhibit 2-20– Satisfaction with CCU Nurse – Initial Survey (Longitudinal) & Follow-up

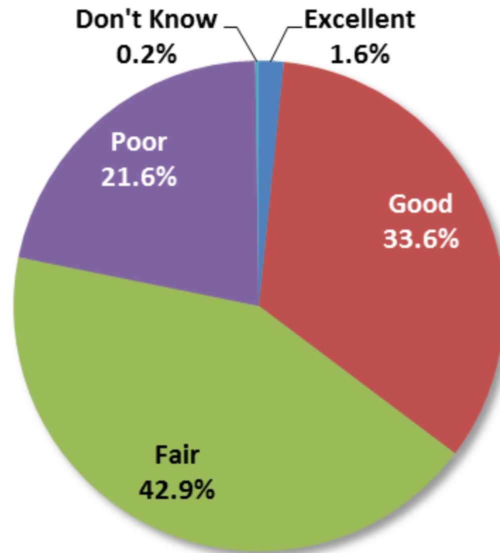
	Satisfaction with CCU Nurse				
	Initial Survey				Follow-up Survey
Response	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate		
Very satisfied	91.5%	90.8%	***91.0%***		***91.2%***
Somewhat satisfied	6.6%	6.2%	***6.3%***		***4.9%***
Somewhat dissatisfied	0.9%	1.2%	***1.2%***		***3.9%***
Very dissatisfied	0.9%	1.5%	***1.4%***		***0.0%***
Don't know/not sure/no response	0.0%	0.3%	***0.2%***		***0.0%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

Health Status and Lifestyle

The ultimate objectives of the CCU are to assist members in adopting healthier lifestyles and improving their overall health. When asked to rate their current health status, the largest segment of initial survey respondents said “fair” (Exhibit 2-21).

Exhibit 2-21 – Current Health Status – Initial Survey (Aggregate)



The self-reported health status profile was generally consistent across initial survey time periods and between the initial and follow-up surveys (Exhibit 2-22).

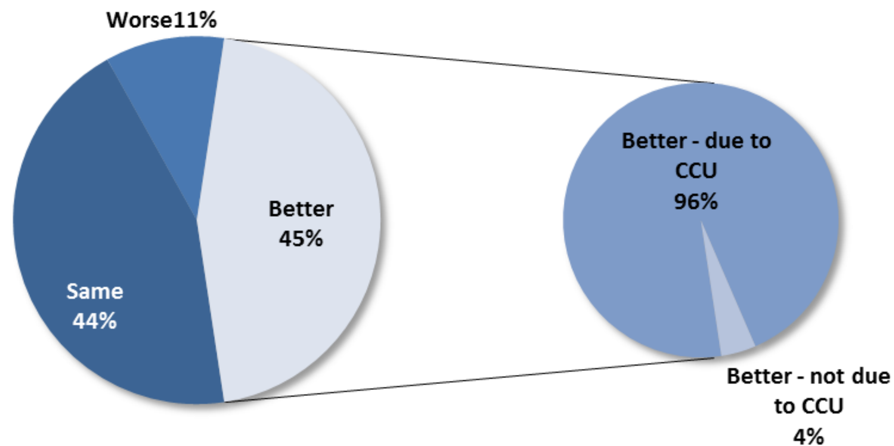
Exhibit 2-22 – Current Health Status – Initial Survey (Longitudinal) & Follow-up

Response	Health Status			
	Initial Survey			Follow-up Survey
	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate	
Excellent	1.0%	1.8%	***1.6%***	***1.0%***
Good	41.0%	31.3%	***33.6%***	***40.2%***
Fair	39.0%	44.2%	***42.9%***	***41.2%***
Poor	19.0%	22.4%	***21.6%***	***17.6%***
Don’t know/not sure/no response	0.0%	0.3%	***0.2%***	***0.0%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

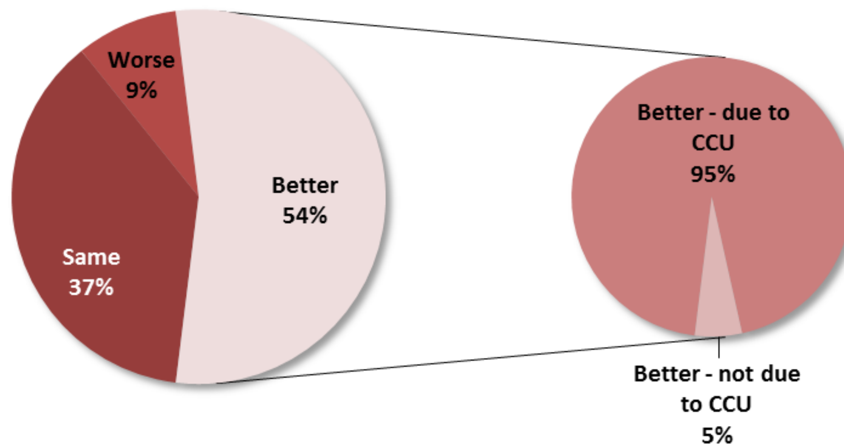
When next asked if their health status had changed since enrolling in the SoonerCare CCU, the largest segment of initial survey respondents (45 percent) said it was "better", although nearly as many (44 percent) said their health was "about the same". Only 11 percent said it was "worse". Among those respondents who reported a positive change, nearly all (96 percent) credited the SoonerCare CCU with contributing to their improved health (Exhibit 2-23).

Exhibit 2-23 – Health Status as Compared to Pre-CCU Enrollment – Initial Survey (Aggregate)



The results were even more encouraging among follow-up survey respondents. Fifty-four percent reported improved health, with 95 percent crediting this improvement to the program (Exhibit 2-24).

Exhibit 2-24 – Health Status as Compared to Pre-CCU Enrollment – Follow-up Survey



Respondents in the follow-up survey who stated that the SoonerCare CCU contributed to their improvement in health were asked to provide examples of the program's impact. The answers generally referred back to the activities shown in Exhibits 2-17 and 2-18. However, many respondents also simply were grateful to have someone to talk to who they viewed as compassionate and interested in their health.

Respondents also were asked whether their CCU nurse had tried to help them improve their health by changing behaviors and, if so, whether they had in fact made a change. Respondents were asked whether their nurse discussed behavior changes with respect to: smoking, exercise, diet, medication management, water intake and alcohol/substance consumption. If yes, respondents were asked about the impact of the nurse's intervention on their behavior (no change, temporary change or continuing change).

A majority of respondents in both the initial and follow-up survey groups reported discussing each of the activities with their CCU nurse. A significant percentage also reported continuing to make changes with respect to exercise, diet, water intake and medication management. Smaller percentages reported working to reduce tobacco, alcohol or other substance use.

The results for the initial survey, in aggregate, and the follow-up survey were very similar across the six behaviors (Exhibit 2-25).

Exhibit 2-25– Changes in Behavior – Initial Survey (Aggregate) & Follow-up

Behavior		Discussion and Change in Behavior					
	Survey	N/A – Not Discussed[32]	Discussed – No Change	Discussed – Temporary Change	Discussed – Continuing Change	Discussed – But Not Applicable	Unsure/ No Response
1. Smoking less or using other tobacco products less	Initial	10.9%	6.3%	2.6%	20.0%	2.6%	57.8%
	Follow-up	12.7%	1.0%	0.0%	15.7%	63.7%	6.9%
2. Moving around more or getting more exercise	Initial	12.3%	9.0%	1.9%	43.6%	29.7%	3.5%
	Follow-up	15.7%	3.9%	1.0%	44.1%	28.4%	6.9%

[32] "N/A – not discussed" includes members for whom no inquiry was made. "Discussed but not applicable" column refers to members for whom an inquiry was made but the category did not apply (e.g., non-tobacco users).

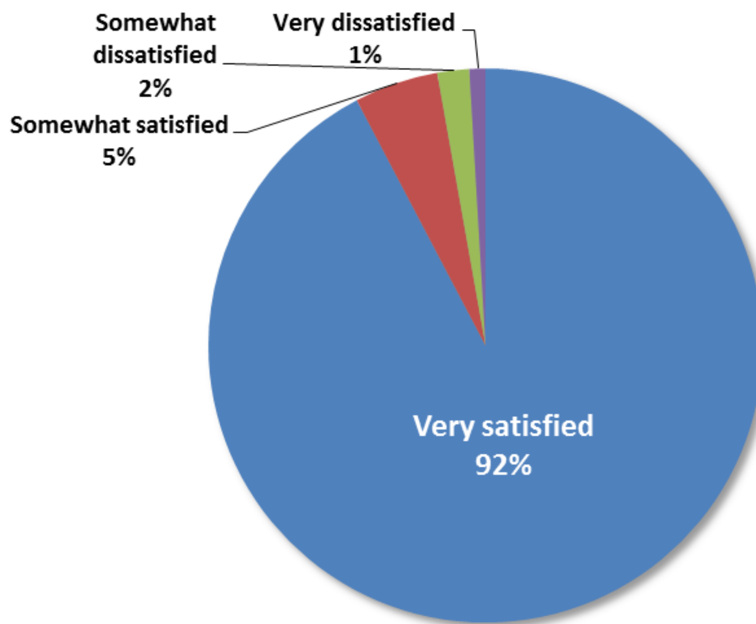
Behavior	Survey	Discussion and Change in Behavior					
		N/A – Not Discussed[32]	Discussed – No Change	Discussed – Temporary Change	Discussed – Continuing Change	Discussed – But Not Applicable	Unsure/ No Response
3. Changing your diet	Initial	13.0%	5.6%	1.2%	54.5%	22.7%	3.0%
	Follow-up	13.7%	5.9%	2.0%	51.0%	19.6%	7.8%
4. Managing and taking your medications better	Initial	11.8%	0.2%	0.5%	61.7%	23.0%	2.8%
	Follow-up	9.8%	1.0%	0.0%	60.8%	22.5%	5.9%
5. Making sure to drink enough water throughout the day	Initial	31.3%	4.6%	0.5%	38.5%	20.6%	4.4%
	Follow-up	29.4%	4.9%	1.0%	40.2%	16.7%	7.8%
6. Drinking or using other substances less	Initial	19.7%	0.0%	0.0%	2.1%	74.9%	3.2%
	Follow-up	31.4%	0.0%	1.0%	2.0%	58.8%	6.9%

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

Overall Satisfaction

Survey respondents reported very high levels of satisfaction with the SoonerCare CCU overall, consistent with their opinion of the CCU nurse, who serves as their point of contact with the program (Exhibit 2-26). Ninety-two percent of initial survey respondents reported being "very satisfied". An even higher percentage (95 percent) said they would recommend the program to a friend with health care needs like theirs.

Exhibit 2-26 – Overall Satisfaction with SoonerCare CCU – Initial Survey (Aggregate)



The "very satisfied" percentage was consistent across initial survey time periods and between the initial and follow-up surveys (Exhibit 2-27).

Exhibit 2-27 – Overall Satisfaction with SoonerCare CCU – Initial Survey (Longitudinal) & Follow-up

	Satisfaction with SoonerCare CCU				
	Initial Survey				Follow-up Survey
Response	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate		
Very satisfied	91.5%	92.0%	***91.9%***		***91.2%***
Somewhat satisfied	6.6%	4.3%	***4.9%***		***6.9%***
Somewhat dissatisfied	1.9%	1.8%	***1.9%***		***2.0%***

Response	Satisfaction with SoonerCare CCU				
	Initial Survey				Follow-up Survey
	Feb – Apr 2015	May 2015 – Apr 2016	Aggregate		
Very dissatisfied	0.0%	1.2%	***0.9%***		***0.0%***
Don't know/not sure/no response	0.0%	0.6%	***0.5%***		***0.0%***

Note: Percentages on this and other tables may not total to 100 percent due to rounding.

Participant appreciation of the CCU nurse and CCU program overall is further reflected in the types of comments made during the survey. While not all of the comments were positive, the great majority were. For example:

> *Parent of four children: "(My nurse) has been a lifesaver! I do not have internet and she looks up information for me and does homework on any questions I have. She is very encouraging too. I get down over all the health problems my kids have but she encourages me. They all have a rare connective tissue disorder and sometimes I don't understand what the doctor tells me. I will ask her and she will look it up and call me back right away with the answers. I always have a lot of questions and she is very kind and patient with me."*
>
> *"(My nurse) helped me quite a lot. Because of her I have been able to make all of my doctor appointments by giving me the information on getting rides. I used to have to ask friends for rides. I would miss a lot of appointments then. She also helped me get dentures which didn't cost me anything. She also called St. John's and got me set up for food and supplements to help me gain weight. She also helped me get treatment for the Hep. C which I didn't think there was anything that could be done. She is a God send!"*
>
> *(My nurse) has been very helpful. I am on Hep. C medicine and did not know what other medications I could take with it. He sent me information on my medicine and it had a list of over the counter pill that I could take for headaches. That was very helpful. I am ecstatic over him!"*
>
> *"(My nurse) is a great help. She stays on top of everything and goes out of her way to make sure everything goes smoothly. She made sure that I got my Hep. C medication on time and helped me with the side effects. She calls and checks on me all the time. If I needed to take a medication I could call her to make sure it didn't interact with my Hep. C meds. "*
>
> *"(My nurse) is really nice. She does not rush through our phone calls. It's nice to have someone check up on you and help keep track of your meds and appointments."*

"(My nurse) helped me get a MRI done on my shoulder. SoonerCare kept denying it until he called them. Then all of a sudden, they approved it!"

"(My nurse) is wonderful. She takes her time and makes sure that we understand everything she is telling us. She helps us with our doctor too, if we're having any problems."

"(My nurse) is excellent. I give him A+ in my book! He calls me every week to do a pill count on my Hep. C medications. He is very supportive and has a very positive outlook on life."

"I thank God every day for bringing (my nurse) into my life. She has helped by working with my primary care doctor to find a specialist that can help figure out what the tumors are that are growing on my spine. My family has had a lot of health problems and bad luck this year and (my nurse) has given me the support and help I have needed to go on each day. She has also helped me to lose 80 pounds which has taken some of the pressure off my back. She is very dependable; if she promises to do, or send, something, she does. If she says she is going to call on a certain day, she does. I just wish that I could meet her in person. I feel like she is a dear friend. I tell people how great the program is and how wonderful she is."

Voluntary Disenrollments

Six respondents in the follow-up survey stated that they had voluntarily disenrolled from the SoonerCare CCU. When asked why they disenrolled, they gave the following reasons:

- No health needs (two respondents)
- Satisfied with current doctor/health access without the program (one respondent)
- Nurse stopped calling (one respondent)
- Don't know (two respondents)

One of the reasons cited – nurse stopped calling – arguably was not a voluntary disenrollment, although it was considered such by the respondent.

Summary of Key Findings

SoonerCare CCU members report being very satisfied with their experience in the program and value highly their relationship with the CCU nurse. This was true both at the time of the initial survey and when participants were re-contacted six months later for the follow-up survey.

CHAPTER 3 – SOONERCARE CCU QUALITY OF CARE ANALYSIS

Introduction

SoonerCare CCU nurses devote much of their time to improving the quality of care for program participants. This includes educating participants about adherence to clinical guidelines for preventive care and for treatment of chronic conditions.

PHPG evaluated the impact of SoonerCare CCU interventions on quality of care through calculation of Healthcare Effectiveness Data and Information Set (HEDIS®) and HEDIS®-like measures applicable to the SoonerCare CCU population. The evaluation included 19 diagnosis-specific measures and three population-wide preventive measures:

- Asthma measures
  - Use of appropriate medications for people with asthma
  - Medication management for people with asthma – 50 percent
  - Medication management for people with asthma – 75 percent

- Cardiovascular (CAD and heart failure) measures
  - Persistence of beta-blocker treatment after a heart attack
  - Cholesterol management for patients with cardiovascular conditions – LDL-C screening

- COPD measures
  - Use of spirometry testing in the assessment and diagnosis of COPD
  - Pharmacotherapy management of COPD exacerbation – 14 days
  - Pharmacotherapy management of COPD exacerbation – 30 days

- Diabetes measures
  - Percentage of members who had LDL-C screening
  - Percentage of members who had retinal eye exam performed
  - Percentage of members who had Hemoglobin A1c (HbA1c) testing
  - Percentage of members who received medical attention for nephropathy
  - Percentage of members prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy)

- Hypertension measures
  - Percentage of members who had LDL-C screening
  - Percentage of members prescribed ACE/ARB therapy
  - Percentage of members prescribed diuretics
  - Percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring

- Mental Health measures
  - Follow-up after hospitalization for mental illness – 7 days
  - Follow-up after hospitalization for mental illness – 30 days

- Preventive health measures
  - Adult access to preventive/ambulatory health services
  - Children and adolescents' access to PCPs
  - Adult body mass index (BMI) assessment

The specifications for each measure are presented in the applicable section.

Methodology

The quality of care analysis targeted SoonerCare CCU participants meeting the criteria outlined in chapter one. The analysis was performed in accordance with HEDIS specifications. PHPG used administrative (claims) data to develop findings for the measures.

PHPG determined the total number of members to be evaluated for each measure (denominator), the number meeting the clinical standard (numerator) and the resultant "percent compliant." The results were compared to compliance rates for the general SoonerCare population (SFY 2015 reporting year), where available, and to national Medicaid MCO benchmarks where SoonerCare data was not available. (SoonerCare rates are shown in black font; national rates, when used, are shown in blue font. In a few instances, neither source was available, as denoted by dash lines.)

PHPG also compared SFY 2014 SoonerCare CCU compliance rates to SFY 2015 SoonerCare CCU compliance rates to examine year-over-year trends.

For each measure, the first exhibit displayed presents SoonerCare CCU participants and a comparison group (general SoonerCare population or national Medicaid MCO benchmark). The second exhibit presents SoonerCare CCU year-over-year compliance percentages.

Statistically significant differences between CCU participants and the comparison group at a 95 percent confidence interval are noted in the exhibits through bold face type of the value shown in the "% point difference" column. However, disease-specific results should be interpreted with caution where there are small sample sizes.

There were no statistically significant differences at the 95 percent confidence interval identified in the CCU participant year-over-year analysis.

Asthma

The quality of care for CCU participants with asthma (ages 5 to 64) was evaluated through three clinical measures:

- *Use of Appropriate Medications for People with Asthma*: Percent with persistent asthma who had at least one dispensed prescription for inhaled corticosteroids, nedocromil, cromolyn sodium, leukotriene modifiers or methylaxanthines.
- *Medication Management for People with Asthma – 50 Percent*: Percentage of members receiving at least one asthma medication who had an active prescription for an asthma controller medication for at least 50 percent (50 percent compliance rate) of the year, starting with the first date of receiving such a prescription.
- *Medication Management for People with Asthma – 75 Percent*: Percentage of members receiving at least one asthma medication who had an active prescription at least 75 percent (75 percent compliance rate) of the year, starting with the first date of receiving such a prescription.

The compliance rate for the CCU population exceeded the comparison group rate on one of three measures (Exhibit 3-1[33]). The difference was statistically significant for one measure, although this result should be viewed with caution given the small CCU population.

Exhibit 3-1– Asthma Clinical Measures - CCU Participants vs. Comparison Group

Measure	CCU Participants			CCU Participants versus Comparison Group	
	Total Members	Members Compliant	Percent Compliant	Comparison Group - Compliance Rate	CCU - Comparison: % Point Difference
1. Use of Appropriate Medications for People with Asthma	7	7	100.0%	81.2%	**18.8%**
2. Medication Management for People with Asthma – 50 Percent	7	3	42.9%	61.3%	(18.4%)
3. Medication Management for People with Asthma – 75 Percent	7	2	28.6%	38.6%	(10.0%)

Results for this diagnosis should be interpreted with caution given the small size of the population.

[33] In the interest of space, the population size for the comparison group is not presented in the tables. However, in all instances, it was many multiples of the CCU population, as would be expected for a total program number. For example, the denominator for asthma measures was 16,230.

There were improvements in both of the asthma medication management measures from SFY 2014 to SFY 2015. There was 100 percent compliance in both SFY 2014 and SFY 2015 for individuals with asthma who were appropriately prescribed medications (Exhibit 3-2).

Exhibit 3-2 – Asthma Clinical Measures - 2014 - 2015

Measure	Percent Compliant		2014-2015 Comparison % Point Change
	June 2014 Findings	June 2015 Findings	
1. Use of Appropriate Medications for People with Asthma	100.0%	100.0%	0.0%
2. Medication Management for People with Asthma – 50 Percent	40.0%	42.9%	2.9%
3. Medication Management for People with Asthma – 75 Percent	20.0%	28.6%	8.6%

Results for this diagnosis should be interpreted with caution given the small size of the population.

Cardiovascular Disease

The quality of care for CCU with cardiovascular disease (coronary artery disease and/or heart failure) was evaluated through two clinical measures:

- *Persistence of Beta Blocker Treatment after Heart Attack*: Percentage of members 18 and older with prior MI prescribed beta-blocker therapy.
- *LDL-C Screening*: Percentage of members 18 to 75 who received at least one LDL-C screening in previous twelve months.

The compliance rate for the comparison group exceeded the CCU population rate for beta blocker treatment after a heart attack (Exhibit 3-3). Over 70 percent of the CCU population received at least one LDL-C screening; however, a comparison group was not identified for this measure in SFY 2015.

Exhibit 3-3 – Cardiovascular Disease Clinical Measures – CCU Participants vs. Comparison Group

Measure	CCU Participants			CCU Participants versus Comparison Group	
	Total Members	Members Compliant	Percent Compliant	Comparison Group - Compliance Rate	CCU - Comparison: % Point Difference
1. Persistence of Beta Blocker Treatment after Heart Attack	1	0	0.0%	83.3%	(83.3%)[34]
2. LDL-C Screening	61	43	70.5%	---	---

Results for this diagnosis should be interpreted with caution given the small size of the population.

[34] Statistical significance cannot be calculated on a sample of 1.

There was a small sample size (n=1) for beta blocker treatment after a heart attack in both SFY 2014 and SFY 2015. There was a slight decline in LDL-C screening (0.6 percent) from SFY 2014 to SFY 2015 but compliance rates in both years remained above 70 percent (Exhibit 3-4).

Exhibit 3-4 – Cardiovascular Disease Clinical Measures - 2014 - 2015

Measure	Percent Compliant		2014-2015 Comparison % Point Change
	June 2014 Findings	June 2015 Findings	
1. Persistence of Beta Blocker Treatment after Heart Attack	0.0%	0.0%	0.0%
2. LDL-C Screening	71.1%	70.5%	(0.6%)

Results for this diagnosis should be interpreted with caution given the small size of the population.

COPD

The quality of care for CCU participants with COPD (ages 40 and older) was evaluated through three clinical measures:

- *Use of Spirometry Testing in the Assessment/Diagnosis of COPD*: Percentage of members who received spirometry screening.
- *Pharmacotherapy Management of COPD Exacerbation – 14 Days*: Percentage of COPD exacerbations for members who had an acute inpatient discharge or ED visit and who were dispensed systemic corticosteroid within 14 days.
- *Pharmacotherapy Management of COPD Exacerbation – 30 Days*: Percentage of COPD exacerbations for members who had an acute inpatient discharge or ED visit and who were dispensed a bronchodilator within 30 days.

The compliance rate for the comparison group exceeded the CCU population rate on all three measures (Exhibit 3-5). The difference was statistically significant for two measures, although this result should be viewed with caution given the small CCU population.

Exhibit 3-5 – COPD Clinical Measures – CCU Participants vs. Comparison Group

Measure	CCU Participants			CCU Participants versus Comparison Group	
	Total Members	Members Compliant	Percent Compliant	Comparison Group - Compliance Rate	CCU - Comparison: % Point Difference
1. Use of Spirometry Testing in the Assessment/Diagnosis of COPD	31	4	12.9%	31.0%	**(18.1%)**
2. Pharmacotherapy Management of COPD Exacerbation – 14 Days	34	12	35.3%	65.3%	**(30.0%)**
3. Pharmacotherapy Management of COPD Exacerbation – 30 Days	34	21	61.8%	79.0%	(17.2%)

Results for this diagnosis should be interpreted with caution given the small size of the population.

The compliance rate for the CCU population who received spirometry screening increased from SFY 2014 to SFY 2015 (Exhibit 3-6).

There was a small decline in the rates for the pharmacotherapy management of COPD exacerbation measures during SFY 2015 when compared to SFY 2014. Despite this, over one-third of the CCU population with COPD was dispensed systemic corticosteroids within 14 days of an acute inpatient discharge or ED visit, and over 60 percent received systemic corticosteroids within 30 days.

Exhibit 3-6 – COPD Clinical Measures - 2014 - 2015

Measure	Percent Compliant		2014-2015 Comparison % Point Change
	June 2014 Findings	June 2015 Findings	
1. Use of Spirometry Testing in the Assessment/Diagnosis of COPD	8.7%	12.9%	4.2%
2. Pharmacotherapy Management of COPD Exacerbation – 14 Days	36.0%	35.3%	(0.7%)
3. Pharmacotherapy Management of COPD Exacerbation – 30 Days	64.0%	61.8%	(2.2%)

Results for this diagnosis should be interpreted with caution given the small size of the population.

Diabetes

The quality of care for CCU participants (ages 18 to 75) with diabetes was evaluated through five clinical measures:

- *LDL-C Screening*: Percentage of members who received at least one LDL-C screening in previous twelve months.
- *Retinal Eye Exam*: Percentage of members who received at least one dilated retinal eye exam in previous twelve months.
- *HbA1c Test*: Percentage of members who received at least one HbA1C test in previous twelve months.
- *Medical Attention for Nephropathy*: Percentage of members who received medical attention for nephropathy in previous twelve months.
- *ACE/ARB Therapy*: Percentage of members who received ACE/ARB therapy in previous twelve months.

The compliance rate for the CCU population exceeded the comparison group rate on the four measures having a comparison group percentage (Exhibit 3-7). The difference was statistically significant for one measure, medical attention for nephropathy.

Exhibit 3-7 – Diabetes Clinical Measures – CCU Participants vs. Comparison Group

Measure	CCU Participants			CCU Participants versus Comparison Group	
	Total Members	Members Compliant	Percent Compliant	Comparison Group - Compliance Rate	CCU - Comparison: % Point Difference
1. LDL-C Screening	141	101	71.6%	63.9%	7.7%
2. Retinal Eye Exam	141	53	37.6%	27.3%	10.3%
3. HbA1c Test	141	114	80.9%	72.1%	8.8%
4. Medical Attention for Nephropathy	141	111	78.7%	52.4%	**26.3%**
5. ACE/ARB Therapy	141	93	66.0%	---	---

The compliance rate for three measures increased slightly from SFY 2014 to SFY 2015 (Exhibit 3-8). There was a small decline in compliance rates for two measures in SFY 2015; however, the ACE/ARB therapy rate remained above 65 percent and medical attention for nephropathy rate exceeded 75 percent.

Exhibit 3-8 – Diabetes Clinical Measures - 2014 - 2015

Measure	Percent Compliant		2014-2015 Comparison % Point Change
	June 2014 Findings	June 2015 Findings	
1. LDL-C Screening	70.5%	71.6%	1.1%
2. Retinal Eye Exam	35.2%	37.6%	2.4%
3. HbA1c Test	78.1%	80.9%	2.8%
4. Medical Attention for Nephropathy	80.0%	78.7%	(1.3%)
5. ACE/ARB Therapy	66.7%	66.0%	(0.7%)

Hypertension

The quality of care for CCU participants with hypertension (ages 18 and older) was evaluated through four clinical measures:

- *LDL-C Screening*: Percentage of members who received at least one LDL-C screening in previous twelve months.
- *ACE/ARB Therapy*: Percentage of members who received ACE/ARB therapy in previous twelve months.
- *Diuretics*: Percentage of members who received diuretic in previous twelve months.
- *Annual Monitoring for Patients Prescribed ACE/ARB or Diuretics*: Percentage of members prescribed ACE/ARB therapy or diuretic who received annual medication monitoring.

The compliance rate for the comparison group exceeded the CCU population rate on one measure having a comparison group percentage (Exhibit 3-9). The difference was not statistically significant.

Exhibit 3-9 – Hypertension Clinical Measures – CCU Participants vs. Comparison Group

Measure	CCU Participants			CCU Participants versus Comparison Group	
	Total Members	Members Compliant	Percent Compliant	Comparison Group - Compliance Rate	CCU - Comparison: % Point Difference
1. LDL-C Screening	238	158	66.4%	---	---
2. ACE/ARB Therapy	238	149	62.6%	---	---
3. Diuretics	238	111	46.6%	---	---
4. Annual Monitoring for Patients Prescribed ACE/ARB or Diuretics[35]	105	88	83.8%	86.8%	(3.0%)

[35] Denominator for measure 4 is smaller than numerator for measure 2 because numerator for measure 2 is defined as having at least one prescription active during the year. Denominator 4 is defined as having a prescription active for at least 180 days during the year.

The compliance rate for one measure increased by a small amount from SFY 2014 to SFY 2015, while the rates declined slightly for the other three measures (Exhibit 3-10).

Exhibit 3-10 – Hypertension Clinical Measures - 2014 - 2015

Measure	Percent Compliant		2014-2015 Comparison % Point Change
	June 2014 Findings	June 2015 Findings	
1. LDL-C Screening	66.9%	66.4%	(0.5%)
2. ACE/ARB Therapy	63.0%	62.6%	(0.4%)
3. Diuretics	46.8%	46.6%	(0.2%)
4. Annual Monitoring for Patients Prescribed ACE/ARB or Diuretics	82.3%	83.8%	1.5%

Mental Health

The quality of care for CCU participants with mental illness (ages six and older) was evaluated through two clinical measures:

- *Follow-up after Hospitalization for Mental Illness – Seven Days*: Percentage of members who were hospitalized during the measurement year for the treatment of selected mental health diagnoses who had a follow up visit with a mental health practitioner within seven days.
- *Follow-up after Hospitalization for Mental Illness – 30 Days*: Percentage of members who were hospitalized during the measurement year for the treatment of selected mental health diagnoses who had a follow up visit with a mental health practitioner within 30 days.

The compliance rate for the CCU population exceeded the comparison group rate on both measures (Exhibit 3-11). The difference was not statistically significant for either measure.

Exhibit 3-11 – Mental Health Measures – CCU Participants vs. Comparison Group

Measure	CCU Participants			CCU Participants versus Comparison Group	
	Total Members	Members Compliant	Percent Compliant	Comparison Group - Compliance Rate	CCU - Comparison: % Point Difference
1. Follow-up after Hospitalization for Mental Illness – Seven Days	13	5	38.5%	21.9%	16.6%
2. Follow-up after Hospitalization for Mental Illness – 30 Days	13	6	46.2%	44.1%	2.1%

Results for this diagnosis should be interpreted with caution given the small size of the population.

The compliance rates for both mental health measures increased from SFY 2014 to SFY 2015 (Exhibit 3-12).

Exhibit 3-12 – Mental Health Measures - 2014 - 2015

Measure	Percent Compliant		2014-2015 Comparison % Point Change
	June 2014 Findings	June 2015 Findings	
1. Follow-up after Hospitalization for Mental Illness – Seven Days	33.3%	38.5%	5.2%
2. Follow-up after Hospitalization for Mental Illness – 30 Days	44.4%	46.2%	1.8%

Results for this diagnosis should be interpreted with caution given the small size of the population.

Prevention

The quality of preventive care for CCU participants was evaluated through three clinical measures:

- *Adult Access to Preventive/Ambulatory Care*: Percentage of members 20 years and older who had an ambulatory or preventive care visit during the measurement year.
- *Child Access to PCP*: Percentage of children 12 months to 19 years old who visited a primary care practitioner (PCP) during the measurement year, or if seven years or older, in the measurement year or year prior.
- *Adult BMI*: Percentage of adults 18 to 75 years old who had an outpatient visit where his/her BMI was documented, either during the measurement year or year prior to the measurement year.

The compliance rate for the CCU population exceeded the comparison group rate on all three measures (Exhibit 3-13). The difference was statistically significant for all three measures.

Exhibit 3-13 – Preventive Measures – CCU Participants vs. Comparison Group

Measure	CCU Participants			CCU Participants versus Comparison Group	
	Total Members	Members Compliant	Percent Compliant	Comparison Group - Compliance Rate	CCU - Comparison: % Point Difference
1. Adult Access to Preventive/Ambulatory Care	341	333	97.7%	84.1%	**13.6%**
2. Child Access to PCP	95	95	100.0%	91.7%	**8.3%**
3. Adult BMI	330	67	20.3%	10.7%	**9.6%**

There was 100 percent compliance in both SFY 2014 and SFY 2015 for the measure of child access to PCP (Exhibit 3-14). There was a slight decline in compliance rates for the remaining two measures from SFY 2014 to SFY 2015. Even with the decline, the compliance rate for adult access to preventive/ambulatory care remained very high at 97.7 percent. The compliance rate for adult BMI remained low.

Exhibit 3-14 – Preventive Measures - 2014 - 2015

Measure	June 2014 Findings	June 2015 Findings	2014-2015 Comparison
	Percent Compliant	Percent Compliant	% Point Change
1. Adult Access to Preventive/Ambulatory Care	98.4%	97.7%	(0.7%)
2. Child Access to PCP	100.0%	100.0%	0.0%
3. Adult BMI	21.2%	20.3%	(0.9%)

Summary of Key Findings

The CCU participant compliance rate exceeded the comparison group rate on 10 of 17 measures for which there was a comparison group percentage (58.8 percent). The difference was statistically significant for five of the 10 measures (50.0 percent).

Conversely, the comparison group achieved a higher rate on seven of the 17 measures (41.2 percent), including two for which the difference was statistically significant.

The CCU participant compliance rate improved on nine of 22 measures (40.9 percent) from SFY 2014 to SFY 2015, although typically by small amounts. Three of 22 measures did not change (13.6 percent); however, two of the three already were at 100 percent compliance. Ten of 22 measures (45.5 percent) experienced a slight decline from SFY 2014 to SFY 2015.

While it is still early in the evaluation process, the above findings suggest that the Chronic Care Unit is having a positive impact on the quality of care for program participants. The long term benefit to participants will continue to be measured through the quality of care longitudinal analysis and through the utilization and expenditure analysis presented in the next chapter.

CHAPTER 4 – SOONERCARE CCU UTILIZATION, EXPENDITURE & COST EFFECTIVENESS ANALYSIS

Introduction

CCU nurse care management, if effective, should have an observable impact on participant service utilization and expenditures. Improvement in quality of care should yield better outcomes in the form of fewer emergency department visits and hospitalizations, and lower acute care costs.

PHPG obtained MEDai data for SoonerCare CCU participants, excluding a small number of Medicare/Medicaid dual eligible members; the data includes a twelve-month forecast of emergency department visits, hospitalizations and total expenditures. MEDai's advanced predictive modeling, as opposed to extrapolating historical trends, accounts for participants' risk factors and recent clinical experience.

The resulting forecasts serve as an accurate depiction of what participant utilization would have been like in the absence of the program. They serve as benchmarks against which each member's actual utilization and expenditures, post CCU enrollment, can be compared.

At the program level, the expenditure test also must take into account SoonerCare CCU administrative expenses. To be cost effective, actual expenditures must be sufficiently below forecast to cover administrative expenses and yield some level of net savings.

The CCU also is responsible for:

- Members with hemophilia or sickle cell anemia, even if the member otherwise would be enrolled in the SoonerCare HMP.
- Members identified as high utilizers of the emergency department.
- Members undergoing bariatric surgery.
- Members with Hepatitis-C receiving treatment and whose treating provider has referred for case management.
- Members identified through a Health Risk Assessment (HRA), which SoonerCare applicants are given the option of completing as part of the online enrollment process. Based on responses to the HRA, members can be referred to different programs for assistance or case management, including the SoonerCare CCU.

These members are enrolled regardless of their MEDai score.

Methodology

PHPG conducted the utilization and expenditure evaluation by comparing participants' actual claims experience to MEDai forecasts for the period following the start date of engagement up to 24 months. Data includes both active participants and persons who have disenrolled from the program.

MEDai forecasts only extend to the first 12 months of engagement. For months 13 to 24, PHPG applied a trend rate to the MEDai data to calculate an estimated PMPM absent SoonerCare CCU enrollment. The trend rate was set equal to the actual PMPM trend in SFY 2015 for a comparison group comprised of SoonerCare members who were determined to be eligible for the SoonerCare HMP but who declined the opportunity to enroll ("eligible but not engaged")[36].

The trend rate was calculated using a roster of "eligible but not engaged" members dating back to the start of the second generation SoonerCare HMP in SFY 2014. Before calculating the trend, PHPG analyzed the roster data and removed members without at least one chronic condition, as well as members with no or very low claims activity. This was done to ensure the comparison group accurately reflected the engaged population.

The trend rate for the eligible but not engaged comparison group was three percent. This trend was applied to the MEDai forecast PMPM for months 1 – 12 to establish a PMPM for months 13 – 24 absent enrollment in the SoonerCare CCU.

The evaluation examined participants in six priority diagnostic categories used by MEDai as part of its calculation of the chronic impact score for potential SoonerCare CCU participants: asthma, coronary artery disease (CAD), chronic obstructive pulmonary disease (COPD), heart failure, diabetes mellitus and hypertension[37]. The evaluation also examined the CCU population as a whole, with one exception.

Participants with hemophilia were excluded, based on their extraordinarily high PMPM costs, which averaged $16,700[38]. Although few in number, including these participants in the analysis would distort the findings, by significantly raising average CCU participant costs. It also is unclear that CCU nurses have the ability to affect these costs, a good portion of which are pharmaceutical in nature, making for an unfair test of the program's effectiveness. (This does not argue against enrolling members with hemophilia in the CCU; these members benefit from assistance in obtaining needed drugs and services and the OHCA benefits from maintaining current information on their service needs.)

[36] The SoonerCare HMP was used as a proxy for the SoonerCare CCU, as there is no equivalent "eligible but not engaged" CCU cohort. The HMP and CCU populations share similar profiles, in terms of chronic conditions. See chapter 1 of the SoonerCare HMP SFY 2015 Evaluation Report and chapter 1 of this report for diagnostic information on the two populations.
[37] MEDai examines diagnoses beyond the six listed, but these six are among the most common found among SoonerCare HMP and CCU participants and are significant contributors to member utilization and expenditures.
[38] SFY 2014 costs.

Participants in each of the six diagnostic categories were included in the analysis only if it was their most expensive at the time of engagement. A member's most expensive diagnostic category at the time of engagement was defined as the diagnostic category associated with the greatest medical expenditures during the pre-engaged (1-12 months) and engaged periods. As participants have significant rates of physical co-morbidities, categorizing them in this manner allows for a targeted analysis of both the absolute and relative impact of the CCU on the various chronic impact conditions driving participant utilization.

PHPG developed utilization/expenditure rates using claims with dates of service from SFY 2013 through SFY 2015. (The SFY 2103 data was used for calculation of pre-engagement activity.) The OHCA and HPE (the state's Medicaid fiscal agent) prepared a claims file employing the same extraction methodology used by the OHCA on a monthly basis to provide updated claims files to MEDai.

The initial file contained individual eligibility records and complete claims for Medicaid eligibles. PHPG created a dataset that identified each individual's eligibility and claims experience during the evaluation period.

Participants were included in the analysis only if they had three months or more of engagement experience as of June 30, 2015, and had MEDai forecast data available at the time of engagement.[39]

The following data is provided for each of the six diagnoses:

1. Number of participants having the diagnosis and portion for which the diagnosis is their most expensive condition;
2. Comorbidity rates with other targeted conditions;
3. Inpatient days – forecast versus actual;
4. Emergency department visits – forecast versus actual;
5. PMPM medical expenditures – forecast versus actual;
6. Medical expenditures by category of service – pre- and post-engagement; and
7. Aggregate medical expenditure impact of SoonerCare CCU participation.

Items 3 through 7 also are presented for the SoonerCare CCU population as a whole. Appendix C contains detailed expenditure exhibits.

CCU utilization and expenditure findings should be interpreted with caution, due to the small number of participants within the individual diagnosis categories.

[39] See chapter one for information on other exclusions made prior to the utilization/expenditure analysis.

Asthma Population Utilization and Expenditure Evaluation

The SoonerCare CCU in SFY 2015 included 120 participants with an asthma diagnosis[40]. Asthma was the most expensive diagnosis at the time of engagement for 40 percent of participants with this diagnosis (Exhibit 4-1).

Exhibit 4-1 – Participants with Asthma as Most Expensive Diagnosis

Participants w/Asthma	Number Most Expensive	Percent Most Expensive
120	48	40%

A significant portion of participants with asthma also were diagnosed with another chronic impact condition, the most common being hypertension and COPD (Exhibit 4-2).

Exhibit 4-2 – Participants with Asthma
Co-morbidity with Chronic Impact Conditions

Condition	Percent w/Comorbidity
Asthma	---
Coronary Artery Disease	29%
COPD	57%
Diabetes	47%
Heart Failure	20%
Hypertension	72%

[40] All participation and expenditure data in the chapter is for the portion of the SoonerCare CCU population remaining after application of the exclusions described in chapter one.

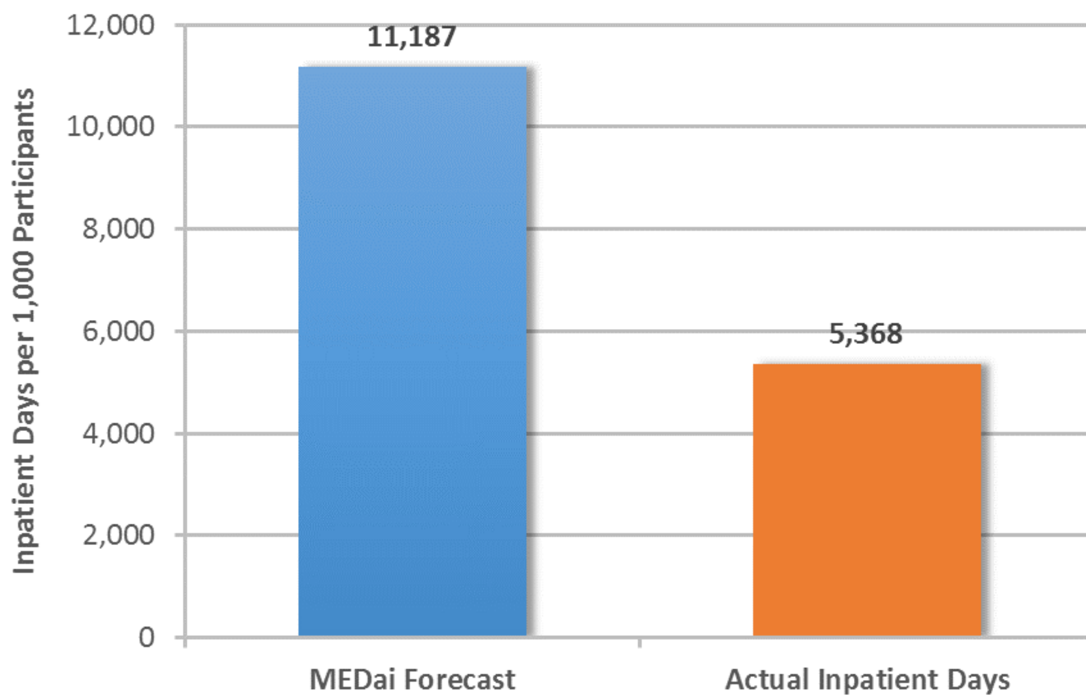
Utilization

PHPG analyzed inpatient hospital and emergency department utilization rates by comparing MEDai forecasts to actual utilization. Hospital utilization was measured by number of inpatient days and emergency department utilization by number of visits per 1,000 participants with asthma as their most expensive diagnosis at the time of engagement.

The purpose of this analysis was to determine if enrollment in the SoonerCare CCU had an impact on avoidable and expensive acute care episodes. All hospitalizations and emergency department visits for a participant were included in the calculations, regardless of the primary admitting/presenting diagnosis. The SoonerCare CCU is intended to be holistic and not limited in its impact to a member's particular chronic condition.

MEDai forecasted that participants with asthma would incur 11,187 inpatient days per 1,000 participants in the first 12 months of engagement[41]. The actual rate was 5,368, or 48 percent of forecast (Exhibit 4-3). (As a point of comparison, the rate for all Oklahomans in 2014 was 560 days per 1,000.[42])

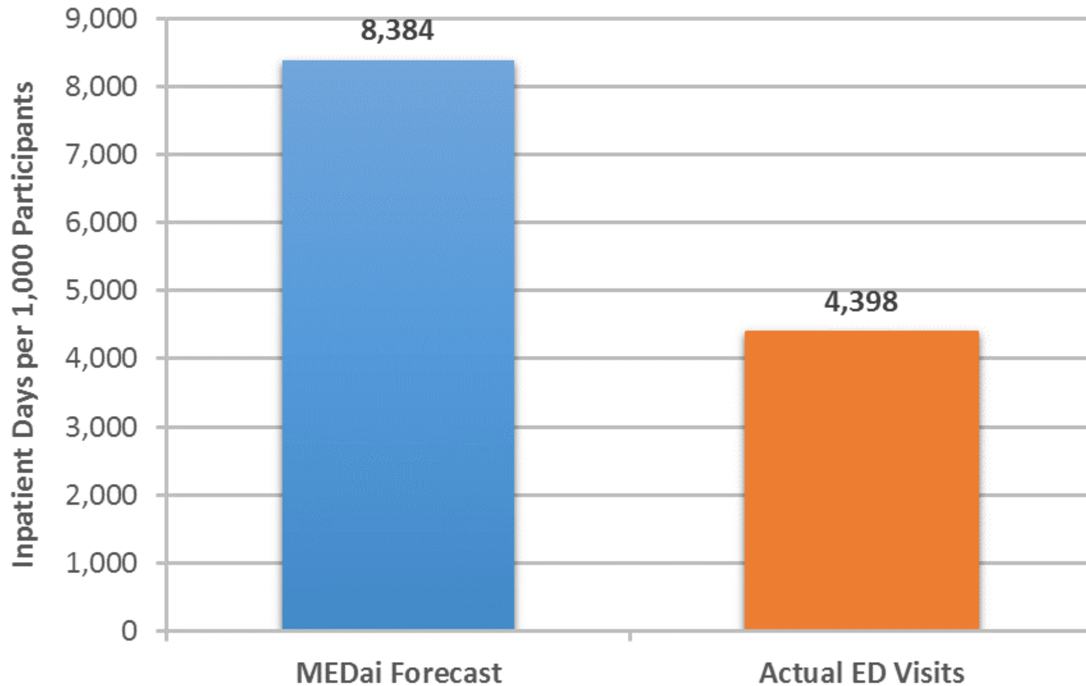
Exhibit 4-3 – Participants with Asthma as Most Expensive Diagnosis
Inpatient Utilization - First 12 Months Following Engagement, per 1,000 Participants



[41] All MEDai forecasts assume no intervention in terms of care management. Rate calculated for portion of year that each participant was engaged in program.
[42] Source: http://kff.org/other/state-indicator/inpatient-days-by-ownership/ 2014 is the most recent year available.

MEDai forecasted that participants with asthma would incur 8,384 emergency department visits per 1,000 participants in the first 12 months of engagement. The actual rate was 4,398, or 52 percent of forecast (Exhibit 4-4). (As a point of comparison, the rate for all Oklahomans in 2014 was 479 visits per 1,000.[43])

Exhibit 4-4 – Participants with Asthma as Most Expensive Diagnosis
Emergency Department Utilization - First 12 Months Following Engagement, per 1,000 Participants



[43] Source: http://kff.org/other/state-indicator/emergency-room-visits-by-ownership/ 2014 is the most recent year available.

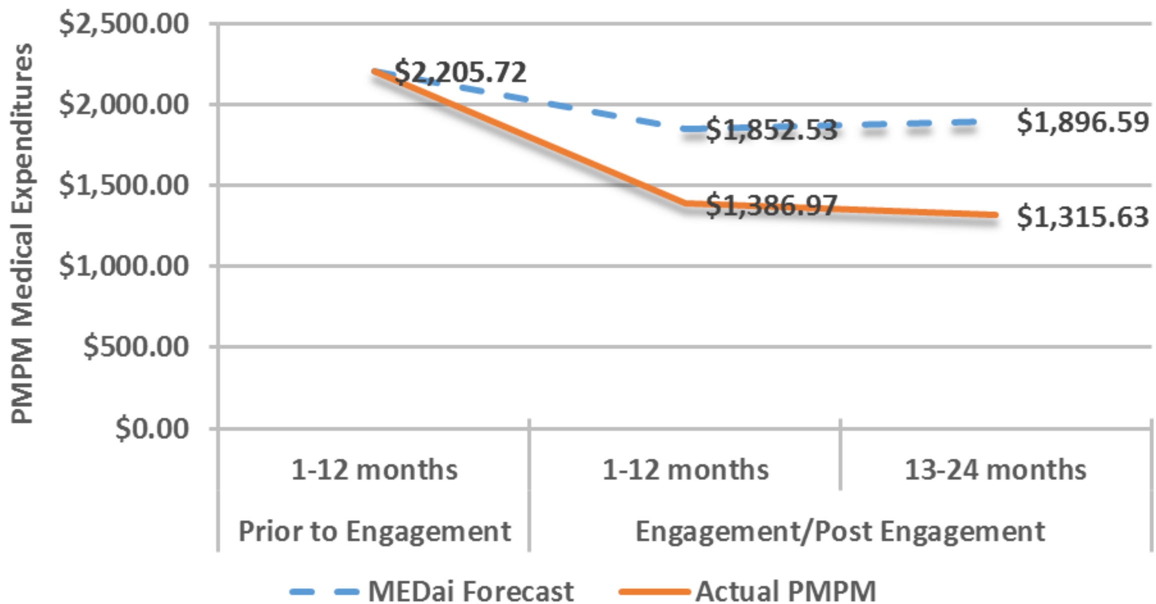
Medical Expenditures – Total and by Category of Service

PHPG documented total PMPM medical expenditures for participants with asthma during the twelve months prior to engagement and compared actual medical expenditures to forecast for the first 24 months of engagement[44].

MEDai forecasted that participants with asthma would incur an average of $1,853 in PMPM expenditures in the first 12 months of engagement. The actual amount was $1,387, or 75 percent of forecast.

For months 13 to 24, the MEDai forecast with trend applied was $1,897 in PMPM expenditures. The actual amount was $1,316, or 69 percent of forecast1 (Exhibit 4-5).

Exhibit 4-5 – Participants with Asthma as Most Expensive Diagnosis
Total PMPM Expenditures



[44] PMPM rate calculated for portion of year that each participant was engaged in program.

At the category-of-service level in the first 12 months of engagement, all expenditures declined, with hospital costs experiencing the greatest drop (Exhibit 4-6).

Exhibit 4-6 – Participants with Asthma as Most Expensive Diagnosis PMPM Expenditures by Category of Service

Category of Service	PMPM 12 Months Prior to Engagement	PMPM First 12 Months of Engagement	Dollar Change (Engaged minus Prior to Engagement)	Percent Change (As Percent of PMPM Prior to Engagement)
Inpatient Hospital	$644.60	$354.88	($289.72)	(45%)
Outpatient Hospital	$458.53	$252.88	($205.65)	(45%)
Physician	$410.99	$309.19	($101.80)	(25%)
Pharmacy	$216.93	$185.81	($31.12)	(14%)
Behavioral Health	$221.03	$141.81	($79.92)	(36%)
All Other	$253.63	$142.41	($111.22)	(44%)
Total	$2,205.71	$1,386.98	($818.73)	(37%)

Aggregate Dollar Impact

PHPG calculated an aggregate dollar impact for SoonerCare CCU participants with asthma as their most expensive diagnosis by multiplying total months of engagement by average PMPM savings. The resultant savings equaled approximately $394,000 (Exhibit 4-7).

Exhibit 4-7 – Participants with Asthma as Most Expensive Diagnosis Aggregate Savings

Engagement Period	Member Months	PMPM Savings (Forecast – Actual)	Aggregate Savings / (Deficit)
First 12 Months	602	$465.56	$280,267
Months 13 - 24	196	$580.96	$113,868
Total	**798**	**$493.93**	**$394,135**

Coronary Artery Disease Population Utilization and Expenditure Evaluation

The SoonerCare CCU in SFY 2015 included 83 participants with a coronary artery disease diagnosis (CAD) . Coronary artery disease was the most expensive diagnosis at the time of engagement for 24 percent of participants with this diagnosis (Exhibit 4-8).

Exhibit 4-8 – Participants with CAD as Most Expensive Diagnosis

Participant w/CAD	Number Most Expensive	Percent Most Expensive
83	20	24%

The majority of participants with coronary artery disease also were diagnosed with another chronic impact condition, the most common being hypertension and diabetes (Exhibit 4-9).

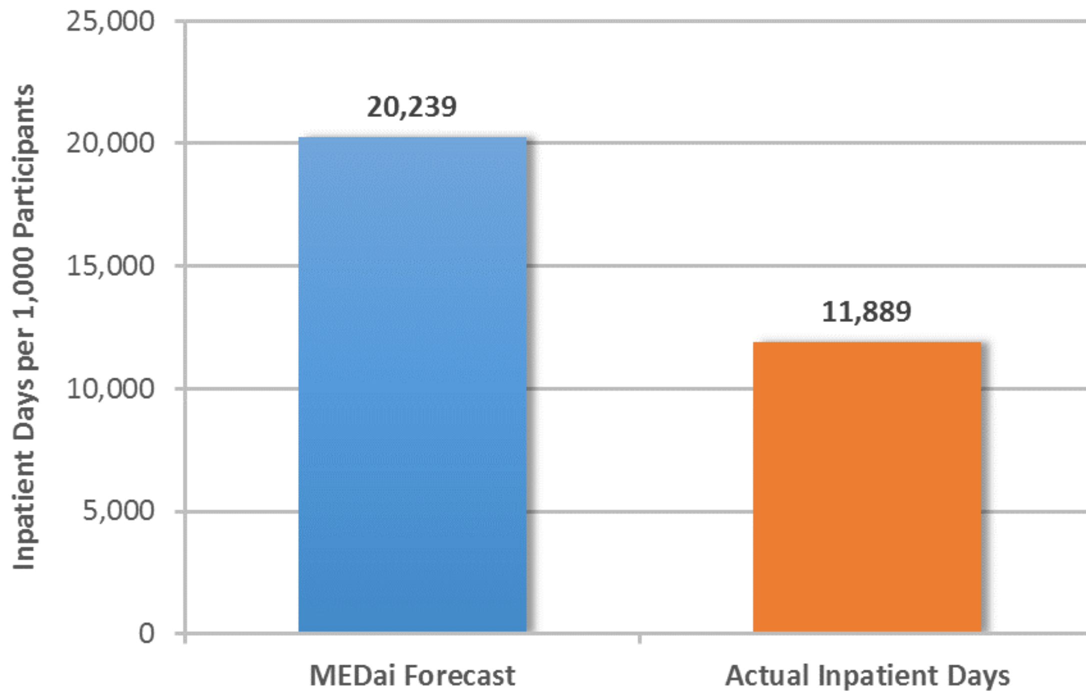
Exhibit 4-9 – Participants with CAD
Co-morbidity with Chronic Impact Conditions

Condition	Percent w/Comorbidity
Asthma	43%
Coronary Artery Disease	---
COPD	66%
Diabetes	73%
Heart Failure	34%
Hypertension	95%

Utilization

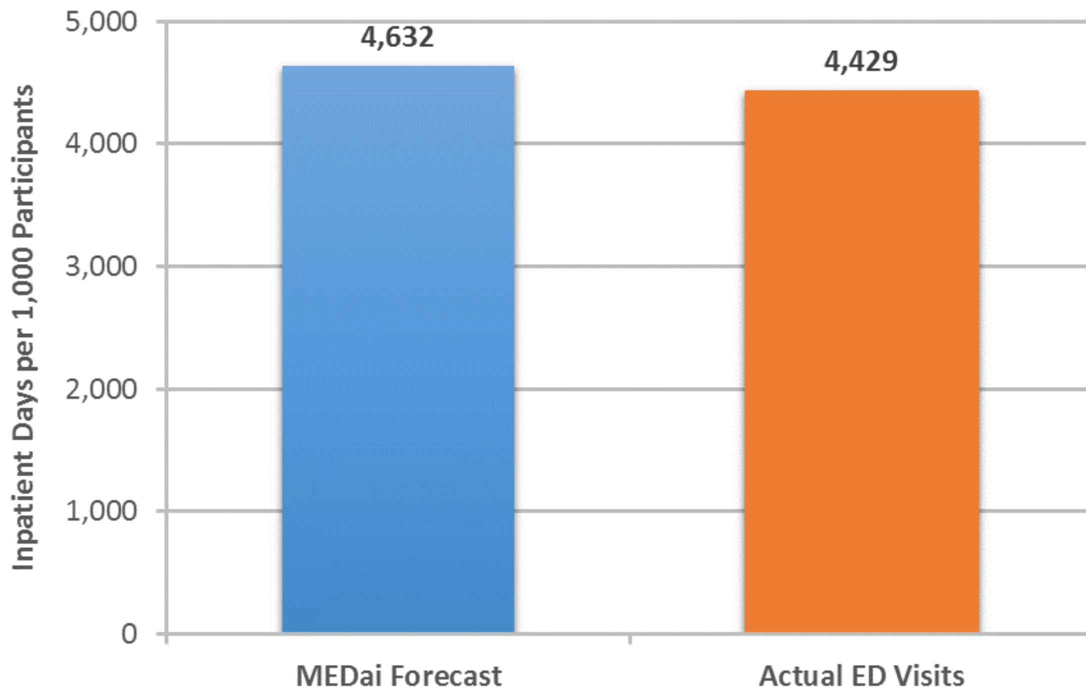
MEDai forecasted that participants with coronary artery disease would incur 20,239 inpatient days per 1,000 participants in the first 12 months of engagement. The actual rate was 11,889, or 59 percent of forecast (Exhibit 4-10).

Exhibit 4-10 – Participants with CAD as Most Expensive Diagnosis
Inpatient Utilization - First 12 Months Following Engagement, per 1,000 Participants



MEDai forecasted that participants with coronary artery disease would incur 4,632 emergency department visits per 1,000 participants in the first 12 months of engagement. The actual rate was 4,429, or 96 percent of forecast (Exhibit 4-11).

Exhibit 4-11 – Participants with CAD as Most Expensive Diagnosis
Emergency Department Utilization - First 12 Months Following Engagement, per 1,000 Participants



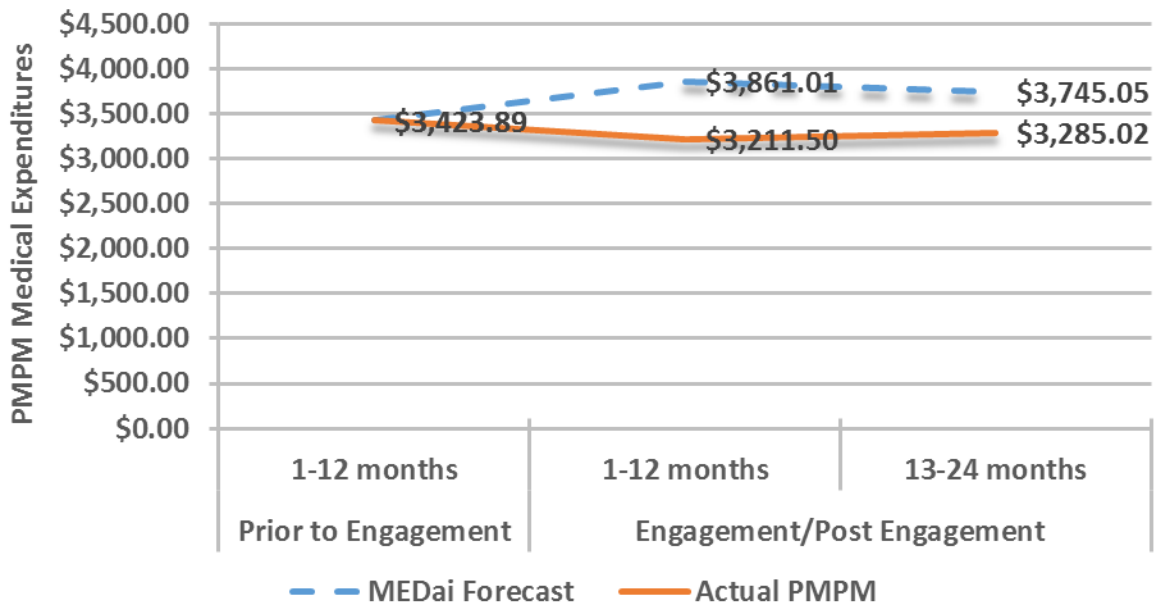
Medical Expenditures – Total and by Category of Service

PHPG documented total PMPM medical expenditures for participants with coronary artery disease during the twelve months prior to engagement and compared actual medical expenditures to forecast for the first 24 months of engagement.

MEDai forecasted that participants with coronary artery disease would incur an average of $3,861 in PMPM expenditures in the first 12 months of engagement. The actual amount was $3,212, or 83 percent of forecast.

For months 13 to 24, the MEDai forecast with trend applied was $3,745 in PMPM expenditures. The actual amount was $3,285, or 88 percent of forecast (Exhibit 4-12).

Exhibit 4-12 – Participants with CAD as Most Expensive Diagnosis Total PMPM Expenditures



At the category-of-service level in the first 12 months of engagement, outpatient hospital expenditures declined, while all other service costs increased (Exhibit 4-13).

Exhibit 4-13 – Participants with CAD as Most Expensive Diagnosis
PMPM Expenditures by Category of Service

Category of Service	PMPM 12 Months Prior to Engagement	PMPM First 12 Months of Engagement	Dollar Change (Engaged minus Prior to Engagement)	Percent Change (As Percent of PMPM Prior to Engagement)
Inpatient Hospital	$1,489.65	$1,748.74	$259.09	17%
Outpatient Hospital	$613.93	$349.76	($264.17)	(43%)
Physician	$589.52	$674.11	$84.59	14%
Pharmacy	$293.96	$546.29	$252.33	86%
Behavioral Health	$131.26	$138.86	$7.60	6%
All Other	$305.57	$403.25	$97.68	32%
Total	$3,423.89	$3,861.01	$437.12	13%

Aggregate Dollar Impact

PHPG calculated an aggregate dollar impact for SoonerCare CCU participants with coronary artery disease as their most expensive diagnosis by multiplying total months of engagement by average PMPM savings. The resultant savings equaled approximately ($242,000) (Exhibit 4-14).

Exhibit 4-14 – Participants with CAD as Most Expensive Diagnosis
Aggregate Savings

Engagement Period	Member Months	PMPM Savings (Forecast – Actual)	Aggregate Savings / (Deficit)
First 12 Months	304	$649.51	$197,451
Months 13 - 24	97	$460.03	$44,623
Total	**401**	**$603.68**	**$242,074**

COPD Population Utilization and Expenditure Evaluation

The SoonerCare CCU in SFY 2015 included 140 participants with a chronic obstructive pulmonary disease (COPD) diagnosis. COPD was the most expensive diagnosis at the time of engagement for 25 percent of participants with this diagnosis (Exhibit 4-15).

Exhibit 4-15 – Participants with COPD as Most Expensive Diagnosis

Participants w/COPD	Number Most Expensive	Percent Most Expensive
140	35	25%

The majority of participants with COPD also were diagnosed with another chronic impact condition, the most common being hypertension and diabetes (Exhibit 4-16).

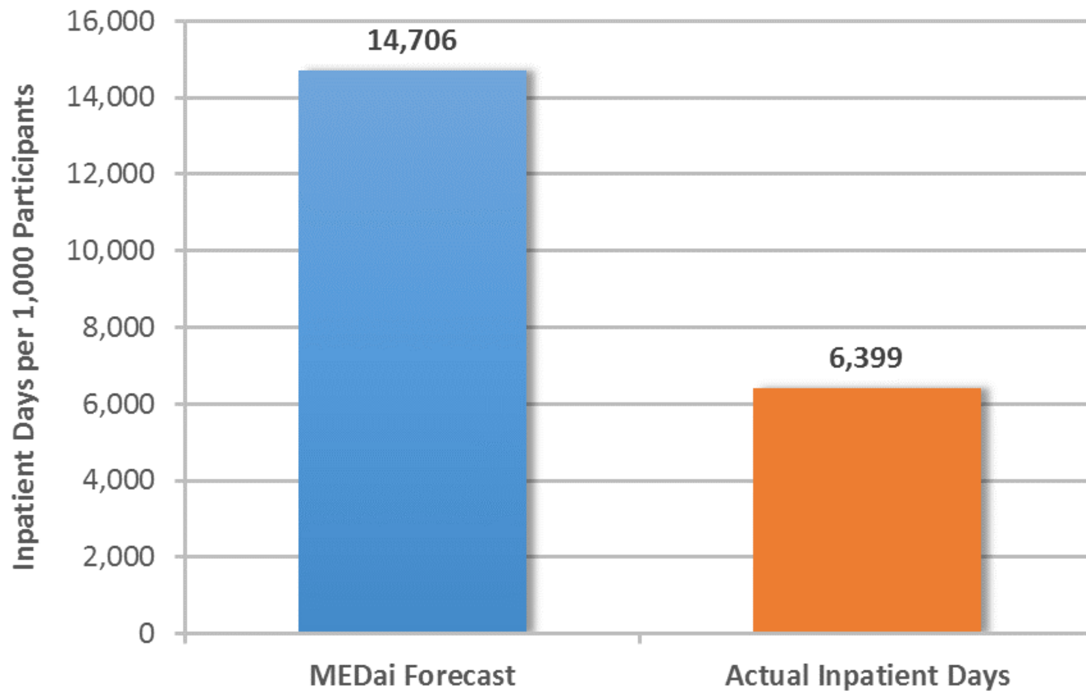
Exhibit 4-16 – Participants with COPD
Co-morbidity with Chronic Impact Conditions

Condition	Percent w/Comorbidity
Asthma	47%
Coronary Artery Disease	40%
COPD	---
Diabetes	53%
Heart Failure	27%
Hypertension	89%

Utilization

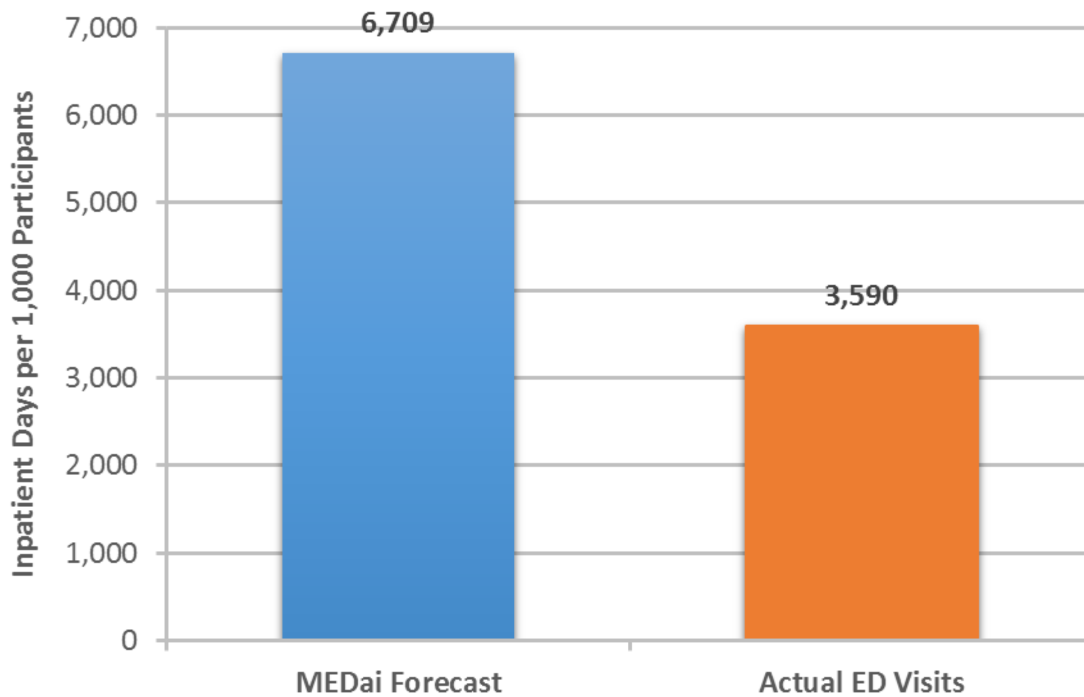
MEDai forecasted that participants with COPD would incur 14,706 inpatient days per 1,000 participants in the first 12 months of engagement. The actual rate was 6,399, or 44 percent of forecast (Exhibit 4-17).

Exhibit 4-17 – Participants with COPD as Most Expensive Diagnosis
Inpatient Utilization - First 12 Months Following Engagement, per 1,000 Participants



MEDai forecasted that participants with COPD would incur 6,709 emergency department visits per 1,000 participants in the first 12 months of engagement. The actual rate was 3,590, or 54 percent of forecast (Exhibit 4-18).

Exhibit 4-18 – Participants with COPD as Most Expensive Diagnosis
Emergency Department Utilization - First 12 Months Following Engagement, per 1,000 Participants



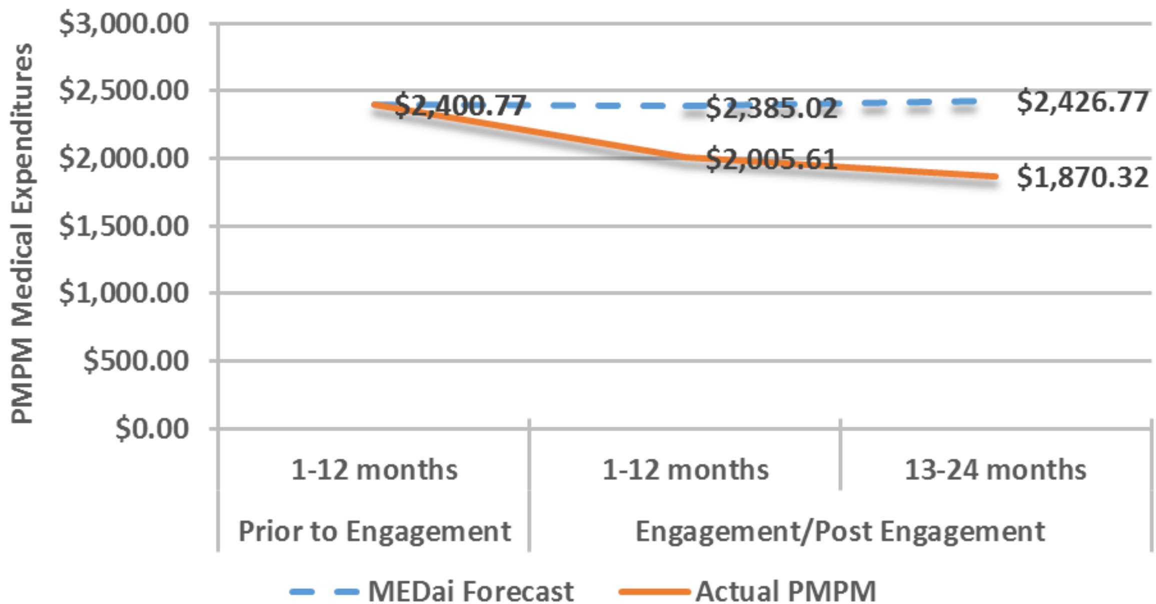
Medical Expenditures – Total and by Category of Service

PHPG documented total PMPM medical expenditures for participants with COPD during the twelve months prior to engagement and compared actual medical expenditures to forecast for the first 24 months of engagement.

MEDai forecasted that participants with COPD would incur an average of $2,385 in PMPM expenditures in the first 12 months of engagement. The actual amount was $2,006, or 84 percent of forecast.

For months 13 to 24, the MEDai forecast with trend applied was $2,427 in PMPM expenditures. The actual amount was $1,870, or 77 percent of forecast (Exhibit 4-19).

Exhibit 4-19 – Participants with COPD as Most Expensive Diagnosis Total PMPM Expenditures



At the category-of-service level in the first 12 months of engagement, expenditures for all service types declined, with the exception of pharmacy (Exhibit 4-20).

Exhibit 4-20 – Participants with COPD as Most Expensive Diagnosis
PMPM Expenditures by Category of Service

Category of Service	PMPM 12 Months Prior to Engagement	PMPM First 12 Months of Engagement	Dollar Change (Engaged minus Prior to Engagement)	Percent Change (As Percent of PMPM Prior to Engagement)
Inpatient Hospital	$936.39	$812.66	($123.73)	(13%)
Outpatient Hospital	$274.88	$194.26	($80.62)	(29%)
Physician	$443.17	$375.66	($67.51)	(15%)
Pharmacy	$237.22	$246.02	$8.80	4%
Behavioral Health	$102.41	$73.32	($29.09)	(28%)
All Other	$406.69	$303.69	($103.00)	(25%)
Total	$2,400.76	$2,005.61	($395.15)	(16%)

Aggregate Dollar Impact

PHPG calculated an aggregate dollar impact for SoonerCare CCU participants with COPD as their most expensive diagnosis by multiplying total months of engagement by average PMPM savings. The resultant savings equaled approximately $300,000 (Exhibit 4-21).

Exhibit 4-21 – Participants with COPD as Most Expensive Diagnosis
Aggregate Savings

Engagement Period	Member Months	PMPM Savings (Forecast – Actual)	Aggregate Savings / (Deficit)
First 12 Months	533	$379.41	$202,226
Months 13 - 24	174	$556.45	$96,822
Total	**707**	**$422.98**	**$299,047**

Diabetes Population Utilization and Expenditure Evaluation

The SoonerCare CCU in SFY 2015 included 160 participants with a diabetes diagnosis. Diabetes was the most expensive diagnosis at the time of engagement for 58 percent of participants with this diagnosis (Exhibit 4-22).

Exhibit 4-22 – Participants with Diabetes as Most Expensive Diagnosis

Participants w/Diabetes	Number Most Expensive	Percent Most Expensive
160	93	58%

The majority of participants with diabetes also were diagnosed with another chronic impact condition, the most common being hypertension and COPD (Exhibit 4-23).

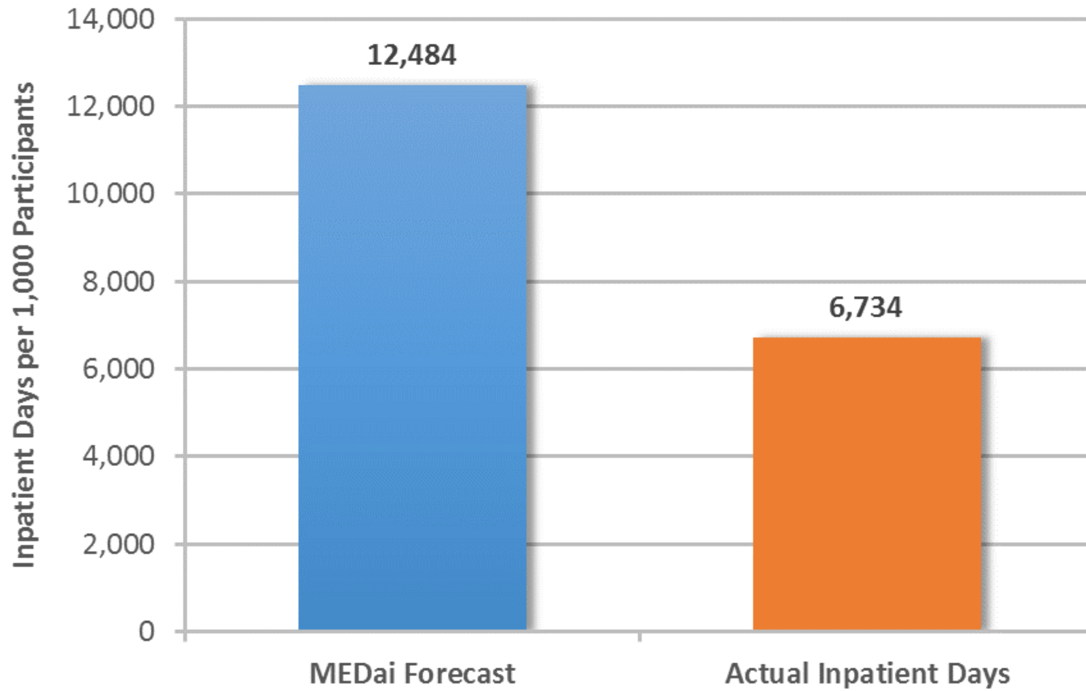
Exhibit 4-23 – Participants with Diabetes
Co-morbidity with Chronic Impact Conditions

Condition	Percent w/Comorbidity
Asthma	35%
Coronary Artery Disease	40%
COPD	49%
Diabetes	---
Heart Failure	22%
Hypertension	91%

Utilization

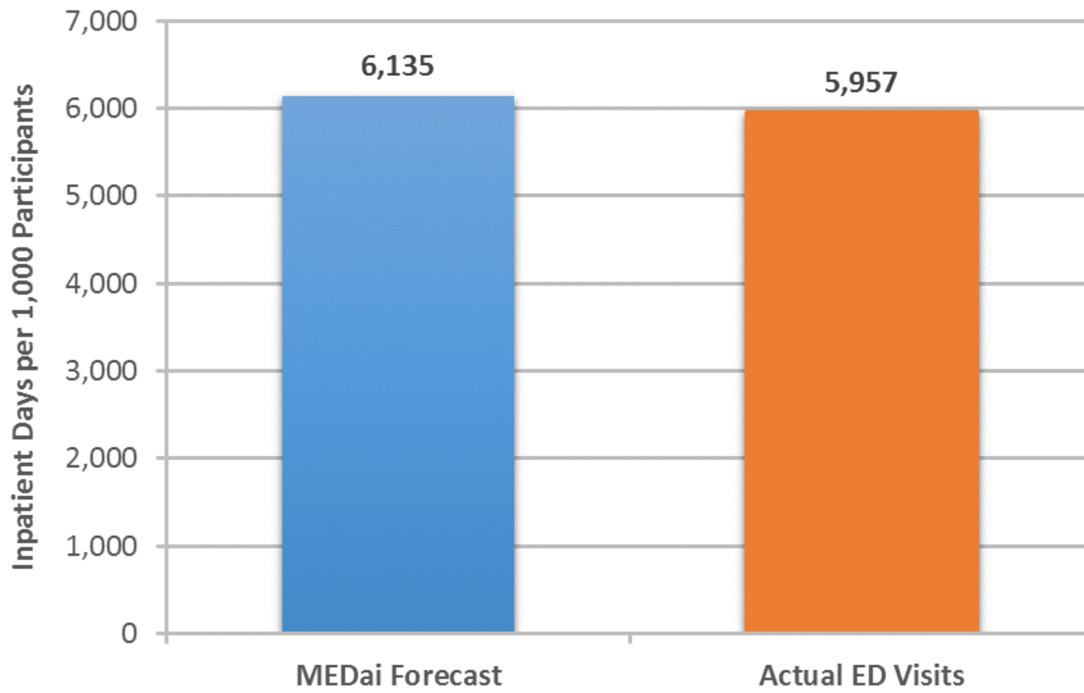
MEDai forecasted that participants with diabetes would incur 12,484 inpatient days per 1,000 participants in the first 12 months of engagement. The actual rate was 6,734, or 54 percent of forecast (Exhibit 4-24).

Exhibit 4-24 – Participants with Diabetes as Most Expensive Diagnosis
Inpatient Utilization - First 12 Months Following Engagement, per 1,000 Participants



MEDai forecasted that participants with diabetes would incur 6,135 emergency department visits per 1,000 participants in the first 12 months of engagement. The actual rate was 5,957, or 97 percent of forecast (Exhibit 4-25).

Exhibit 4-25 – Participants with Diabetes as Most Expensive Diagnosis
Emergency Department Utilization - First 12 Months Following Engagement, per 1,000 Participants



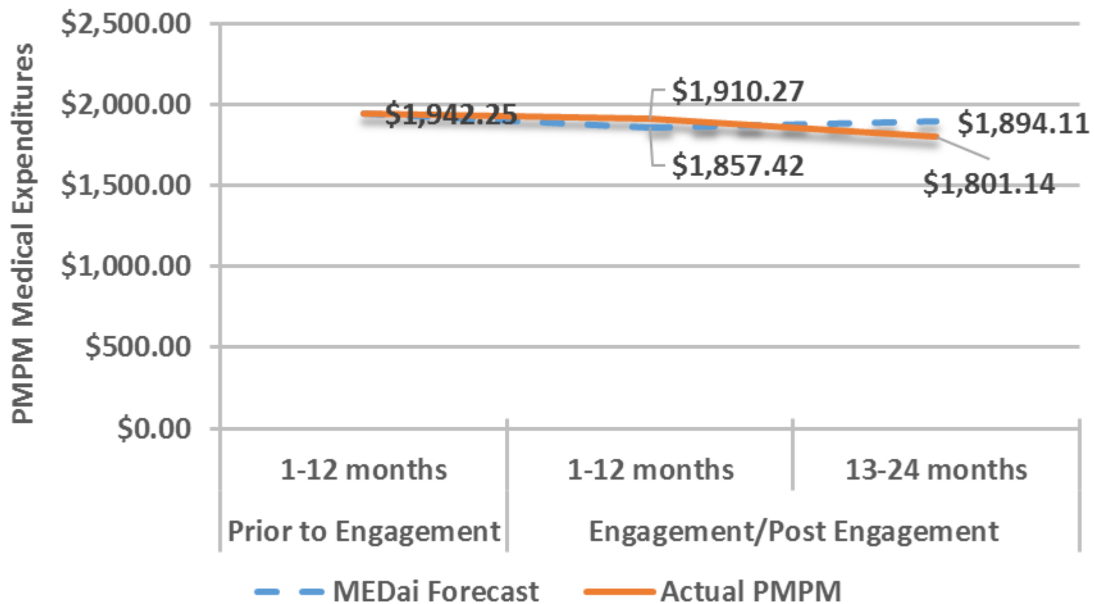
Medical Expenditures – Total and by Category of Service

PHPG documented total PMPM medical expenditures for participants with diabetes during the twelve months prior to engagement and compared actual medical expenditures to forecast for the first 24 months of engagement.

MEDai forecasted that participants with diabetes would incur an average of $1,857 in PMPM expenditures in the first 12 months of engagement.

The actual amount was $1,910, or 103 percent of forecast. For months 13 to 24, the MEDai forecast with trend applied was $1,894 in PMPM expenditures. The actual amount was $1,801, or 95 percent of forecast (Exhibit 4-26).

Exhibit 4-26 – Participants with Diabetes as Most Expensive Diagnosis Total PMPM Expenditures



At the category-of-service level in the first 12 months of engagement, inpatient hospital, physician and behavioral health service expenditures declined, offsetting increases in other service categories (Exhibit 4-27).

Exhibit 4-27 – Participants with Diabetes as Most Expensive Diagnosis PMPM Expenditures by Category of Service

Category of Service	PMPM 12 Months Prior to Engagement	PMPM First 12 Months of Engagement	Dollar Change (Engaged minus Prior to Engagement)	Percent Change (As Percent of PMPM Prior to Engagement)
Inpatient Hospital	$697.20	$613.61	($83.59)	(12%)
Outpatient Hospital	$272.13	$288.71	$16.58	6%
Physician	$349.50	$318.22	($31.28)	(9%)
Pharmacy	$319.40	$379.81	$60.41	19%
Behavioral Health	$98.93	$55.27	($43.66)	(44%)
All Other	$205.09	$254.66	$49.57	24%
Total	$1,942.25	$1,910.28	($31.97)	(2%)

Aggregate Dollar Impact

PHPG calculated an aggregate dollar impact for SoonerCare CCU participants with diabetes as their most expensive diagnosis by multiplying total months of engagement by average PMPM savings. The resultant deficit equaled approximately ($28,000), although savings were documented for months 13 – 24 of engagement (Exhibit 4-28).

Exhibit 4-28 – Participants with Diabetes as Most Expensive Diagnosis Aggregate Deficit

Engagement Period	Member Months	PMPM Savings (Forecast – Actual)	Aggregate Savings / (Deficit)
First 12 Months	1,257	($52.85)	($66,432)
Months 13 - 24	411	$92.97	$38,211
Total	**1,668**	**($16.92)**	**($28,223)**

Heart Failure Population Utilization and Expenditure Evaluation

The SoonerCare CCU in SFY 2015 included 52 participants with a heart failure diagnosis. Heart failure was the most expensive diagnosis at the time of engagement for six percent of participants with this diagnosis (Exhibit 4-29). All results for this diagnosis should be treated as informational only and not assigned any statistical significance given the small size of the population.

Exhibit 4-29 – Participants with Heart Failure as Most Expensive Diagnosis

Participants w/Heart Failure	Number Most Expensive	Percent Most Expensive
52	3	6%

The majority of participants with heart failure also were diagnosed with another chronic impact condition, the most common being hypertension and COPD (Exhibit 4-30).

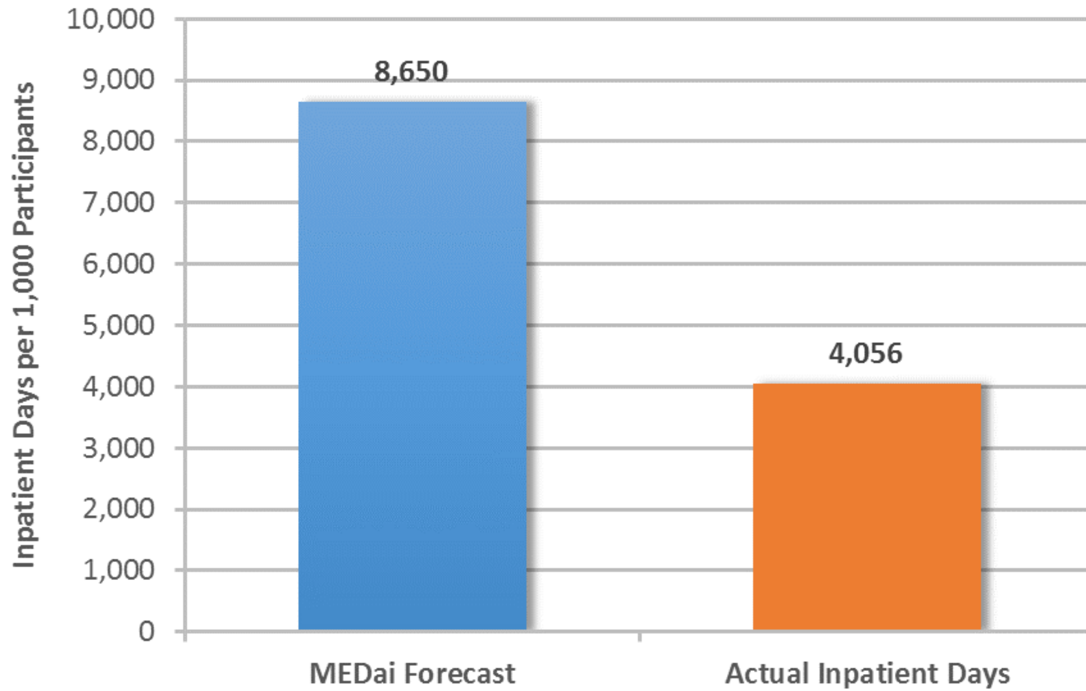
Exhibit 4-30 – Participants with Heart Failure Co-morbidity with Chronic Impact Conditions

Condition	Percent w/Comorbidity
Asthma	46%
Coronary Artery Disease	58%
COPD	79%
Diabetes	63%
Heart Failure	---
Hypertension	93%

Utilization

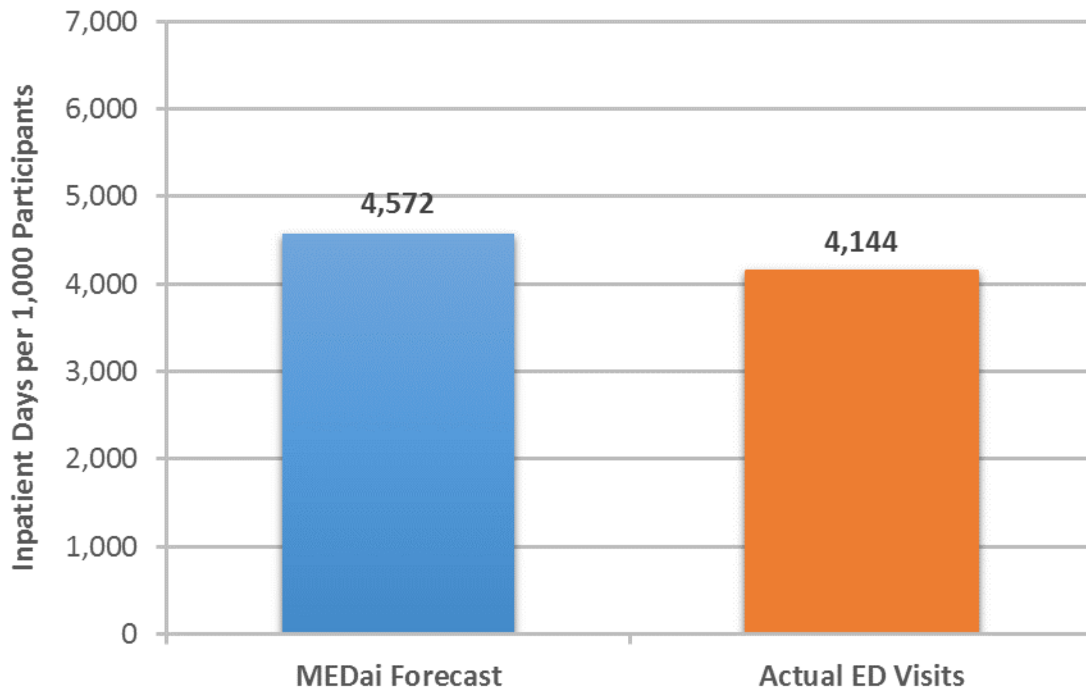
MEDai forecasted that participants with heart failure would incur 8,650 inpatient days per 1,000 participants in the first 12 months of engagement. The actual rate was 4,056, or 47 percent of forecast (Exhibit 4-31).

Exhibit 4-31 – Participants with Heart Failure as Most Expensive Diagnosis
Inpatient Utilization - First 12 Months Following Engagement, per 1,000 Participants



MEDai forecasted that participants with heart failure would incur 4,572 emergency department visits per 1,000 participants in the first 12 months of engagement. The actual rate was 4,144, or 91 percent of forecast (Exhibit 4-32).

Exhibit 4-32 – Participants with Heart Failure as Most Expensive Diagnosis
Emergency Department Utilization - First 12 Months Following Engagement, per 1,000 Participants



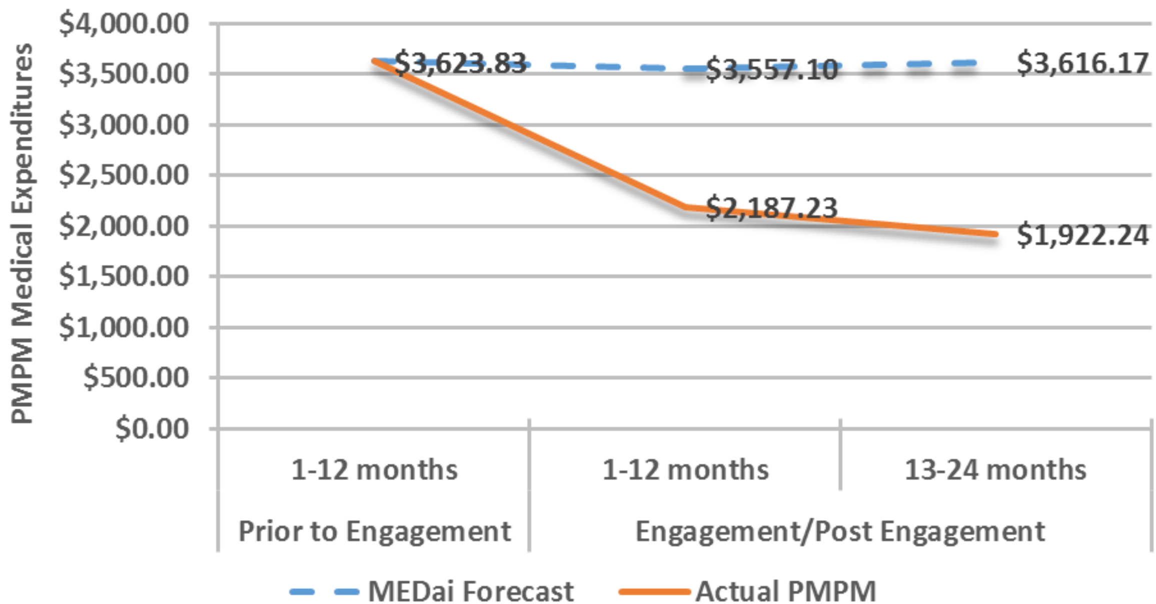
Medical Expenditures – Total and by Category of Service

PHPG documented total PMPM medical expenditures for participants with heart failure during the twelve months prior to engagement and compared actual medical expenditures to forecast for the first 24 months of engagement.

MEDai forecasted that participants with heart failure would incur an average of $3,557 in PMPM expenditures in the first 12 months of engagement. The actual amount was $2,187, or 61 percent of forecast.

For months 13 to 24, the MEDai forecast with trend applied was $3,616 in PMPM expenditures. The actual amount was $1,922, or 53 percent of forecast (Exhibit 4-33).

Exhibit 4-33 – Participants with Heart Failure as Most Expensive Diagnosis Total PMPM Expenditures



At the category-of-service level in the first 12 months of engagement, expenditures declined substantially across most service types (Exhibit 4-34).

Exhibit 4-34 – Participants with Heart Failure as Most Expensive Diagnosis PMPM Expenditures by Category of Service

Category of Service	PMPM 12 Months Prior to Engagement	PMPM First 12 Months of Engagement	Dollar Change (Engaged minus Prior to Engagement)	Percent Change (As Percent of PMPM Prior to Engagement)
Inpatient Hospital	$244.85	$178.65	($66.20)	(27%)
Outpatient Hospital	$749.24	$98.27	($650.97)	(87%)
Physician	$395.96	$336.85	($59.11)	(15%)
Pharmacy	$1,868.43	$1,062.81	($805.62)	(43%)
Behavioral Health	$39.64	$39.73	$0.09	<1%
All Other	$325.72	$470.93	$145.21	45%
Total	$3,623.84	$2,187.24	($1,436.60)	(40%)

Aggregate Dollar Impact

PHPG calculated an aggregate dollar impact for SoonerCare CCU participants with heart failure as their most expensive diagnosis by multiplying total months of engagement by average PMPM savings. The resultant savings equaled approximately $55,000 (Exhibit 4-35).

Exhibit 4-35 – Participants with Heart Failure as Most Expensive Diagnosis Aggregate Savings

Engagement Period	Member Months	PMPM Savings (Forecast – Actual)	Aggregate Savings / (Deficit)
First 12 Months	28	$1,369.87	$38,356
Months 13 - 24	10	$1,693.93	$16,939
Total	**38**	**$1,455.15**	**$55,296**

Hypertension Population Utilization and Expenditure Evaluation

The SoonerCare CCU in SFY 2015 included 217 participants with a hypertension diagnosis. Hypertension was the most expensive diagnosis at the time of engagement for 40 percent of participants with this diagnosis (Exhibit 4-36).

Exhibit 4-36– Participants with Hypertension as Most Expensive Diagnosis

Participants w/Hypertension	Number Most Expensive	Percent Most Expensive
217	87	40%

A majority of participants with hypertension also were diagnosed with another chronic impact condition, although the comorbidity rate was lower than for other diagnosis groups (Exhibit 4-37).

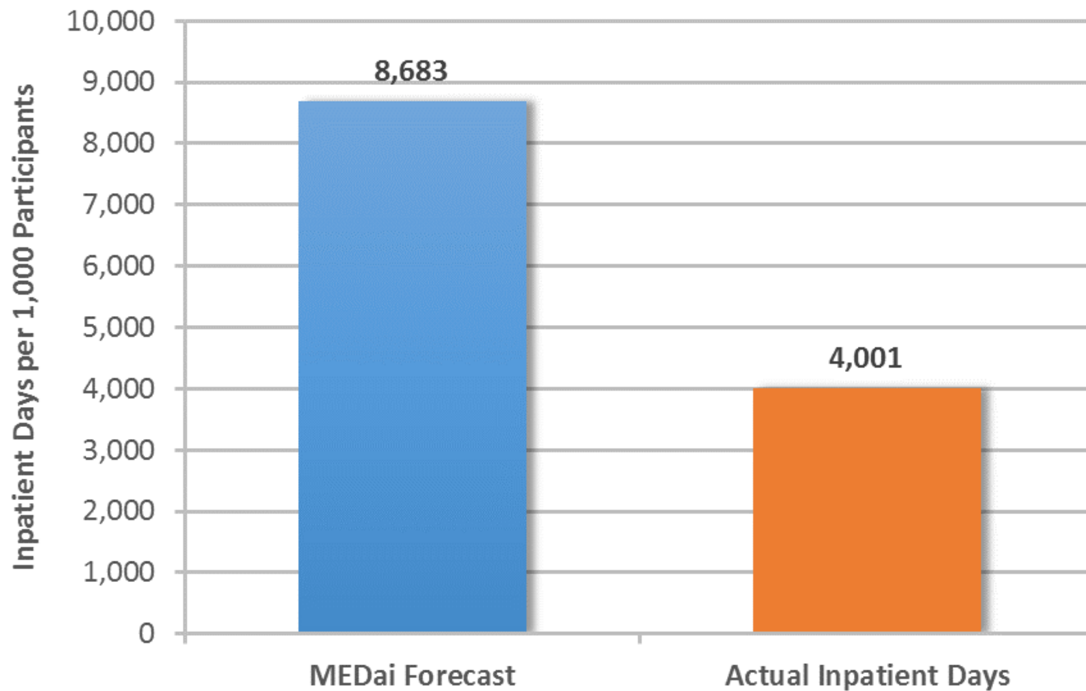
Exhibit 4-37 – Participants with Hypertension Co-morbidity with Chronic Impact Conditions

Condition	Percent w/Comorbidity
Asthma	40%
Coronary Artery Disease	38%
COPD	56%
Diabetes	64%
Heart Failure	23%
Hypertension	---

Utilization

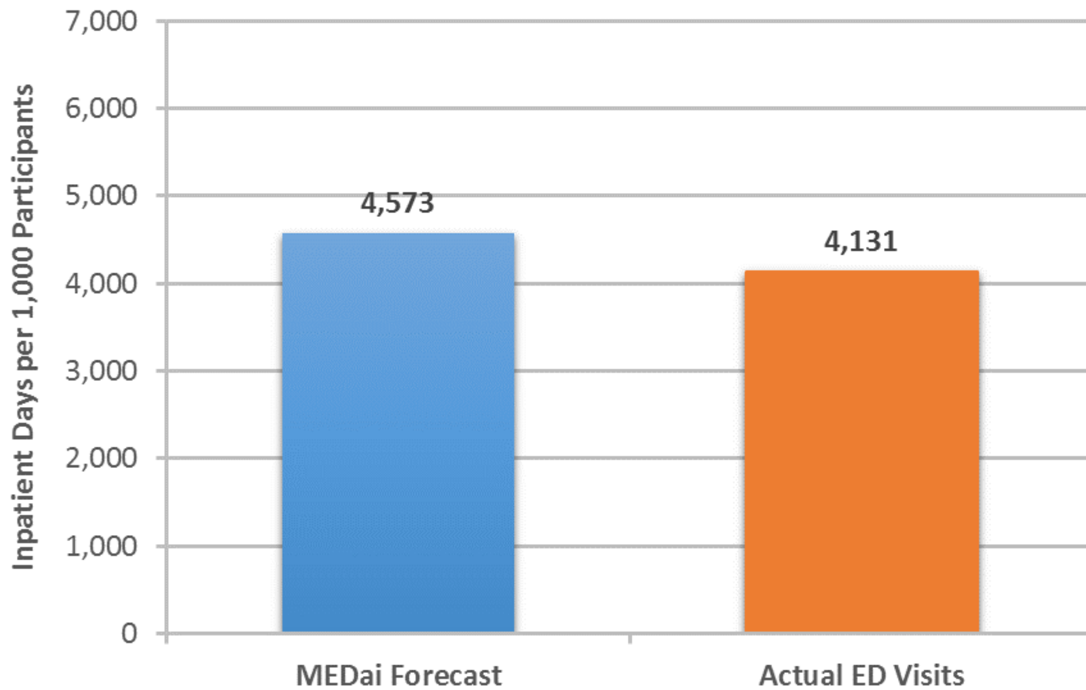
MEDai forecasted that participants with hypertension would incur 8,683 inpatient days per 1,000 participants in the first 12 months of engagement. The actual rate was 4,001, or 46 percent of forecast (Exhibit 4-38).

Exhibit 4-38 – Participants with Hypertension as Most Expensive Diagnosis Inpatient Utilization - First 12 Months Following Engagement, per 1,000 Participants



MEDai forecasted that participants with hypertension would incur 4,573 emergency department visits per 1,000 participants in the first 12 months of engagement. The actual rate was 4,131, or 90 percent of forecast (Exhibit 4-39).

Exhibit 4-39 – Participants with Hypertension as Most Expensive Diagnosis
Emergency Department Utilization - First 12 Months Following Engagement, per 1,000 Participants



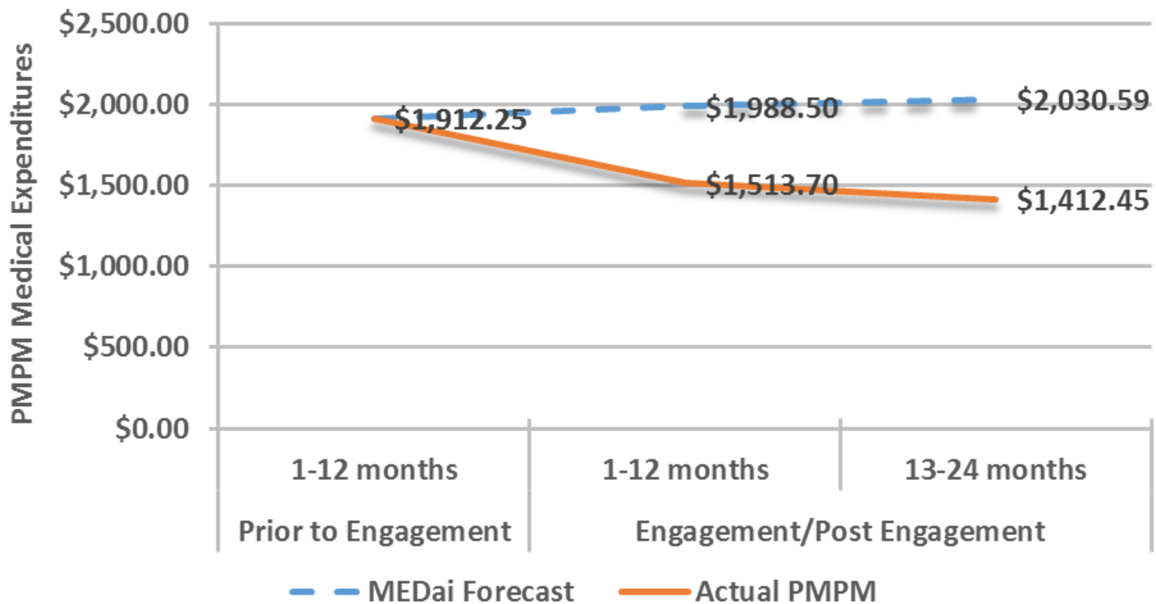
Medical Expenditures – Total and by Category of Service

PHPG documented total PMPM medical expenditures for participants with hypertension during the twelve months prior to engagement and compared actual medical expenditures to forecast for the first 24 months of engagement.

MEDai forecasted that participants with hypertension would incur an average of $1,989 in PMPM expenditures in the first 12 months of engagement. The actual amount was $1,514, or 76 percent of forecast.

For months 13 to 24, the MEDai forecast with trend applied was $2,031 in PMPM expenditures. The actual amount was $1,412, or 70 percent of forecast (Exhibit 4-40).

Exhibit 4-40 – Participants with Hypertension as Most Expensive Diagnosis Total PMPM Expenditures



At the category-of-service level the first 12 months of engagement, inpatient hospital and pharmacy experienced the most significant declines (Exhibit 4-41).

Exhibit 4-41 – Participants with Hypertension as Most Expensive Diagnosis PMPM Expenditures by Category of Service

Category of Service	PMPM 12 Months Prior to Engagement	PMPM First 12 Months of Engagement	Dollar Change (Engaged minus Prior to Engagement)	Percent Change (As Percent of PMPM Prior to Engagement)
Inpatient Hospital	$720.64	$344.17	($376.47)	(52%)
Outpatient Hospital	$195.21	$185.63	($9.58)	(5%)
Physician	$335.64	$364.41	$28.77	9%
Pharmacy	$370.84	$283.17	($87.67)	(24%)
Behavioral Health	$75.33	$107.23	$31.90	42%
All Other	$214.59	$209.86	($4.73)	(2%)
Total	$1,912.25	$1,494.47	($417.78)	(22%)

Aggregate Dollar Impact

PHPG calculated an aggregate dollar impact for SoonerCare CCU participants with hypertension as their most expensive diagnosis by multiplying total months of engagement by average PMPM savings. The resultant savings equaled approximately $889,000 (Exhibit 4-42).

Exhibit 4-42 – Participants with Hypertension as Most Expensive Diagnosis Aggregate Savings

Engagement Period	Member Months	PMPM Savings (Forecast – Actual)	Aggregate Savings / (Deficit)
First 12 Months	1,312	$474.80	$622,938
Months 13 - 24	430	$618.14	$265,800
Total	**1,742**	**$510.18**	**$888,734**

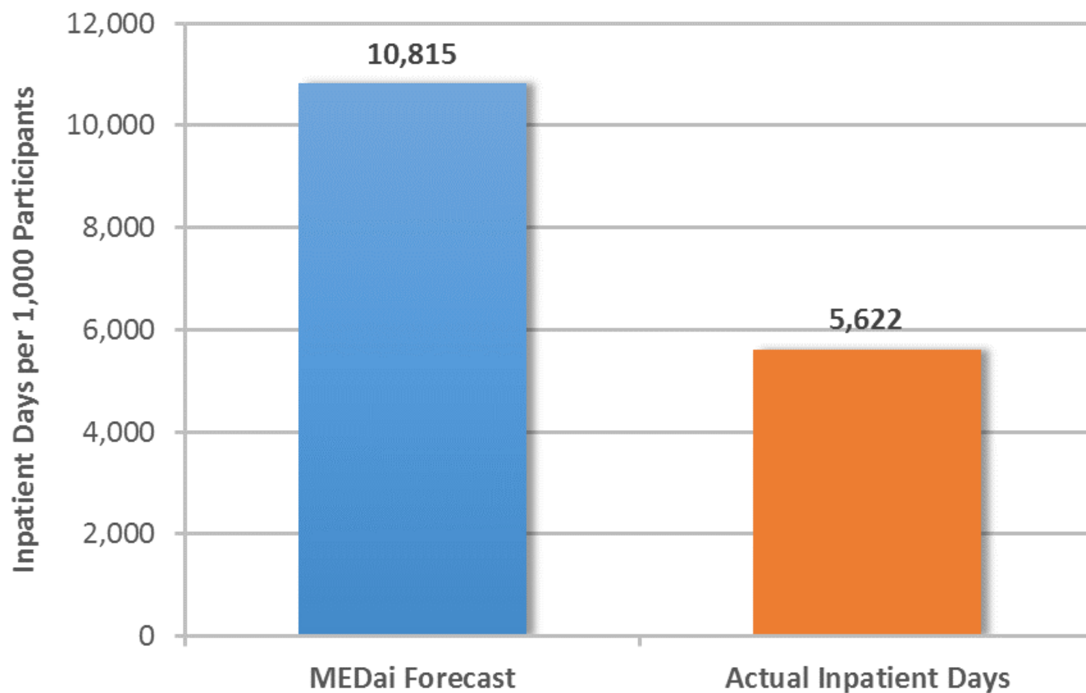
Utilization and Expenditure Evaluation – All Participants

This section presents consolidated trend data across all 529 SoonerCare CCU participants, regardless of diagnosis. For approximately 79 percent of participants, the most expensive diagnosis at the time of engagement was one of the six target chronic impact conditions.

Utilization

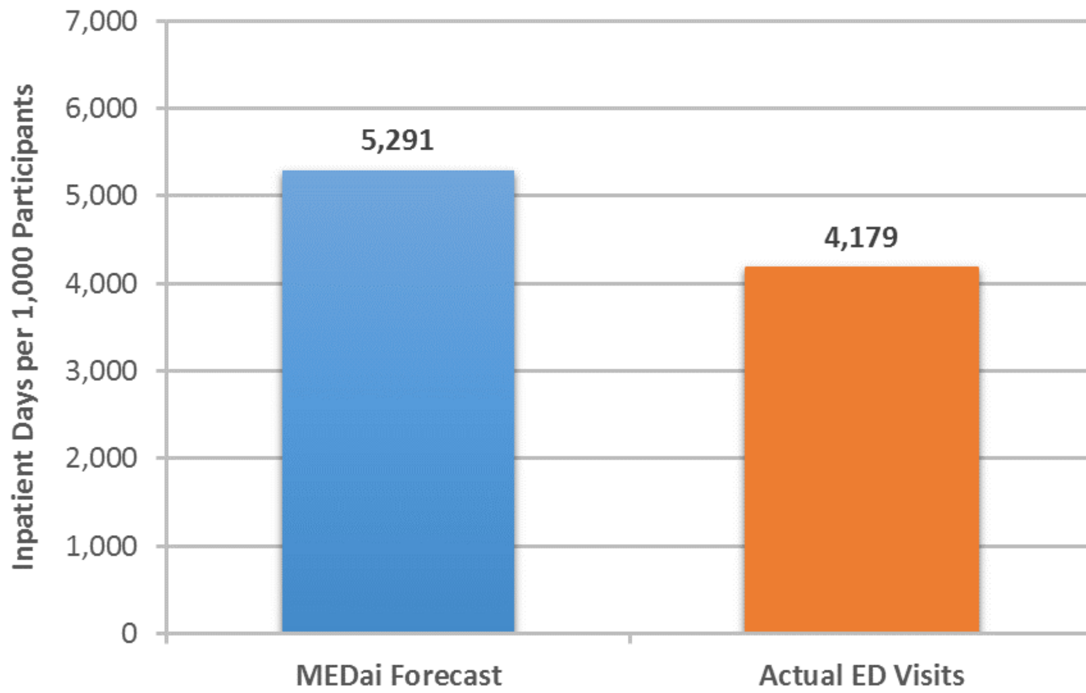
MEDai forecasted that SoonerCare CCU participants as a group would incur 10,815 inpatient days per 1,000 participants in the first 12 months of engagement. The actual rate was 5,622, or 52 percent of forecast (Exhibit 4-43).

Exhibit 4-43 – All SoonerCare CCU Participants
Inpatient Utilization - First 12 Months Following Engagement, per 1,000 Participants



MEDai forecasted that SoonerCare CCU participants as a group would incur 5,291 emergency department visits per 1,000 participants in the first 12 months of engagement. The actual rate was 4,179, or 79 percent of forecast (Exhibit 4-44).

Exhibit 4-44 – All SoonerCare CCU Participants
Emergency Department Utilization - First 12 Months Following Engagement, per 1,000 Participants



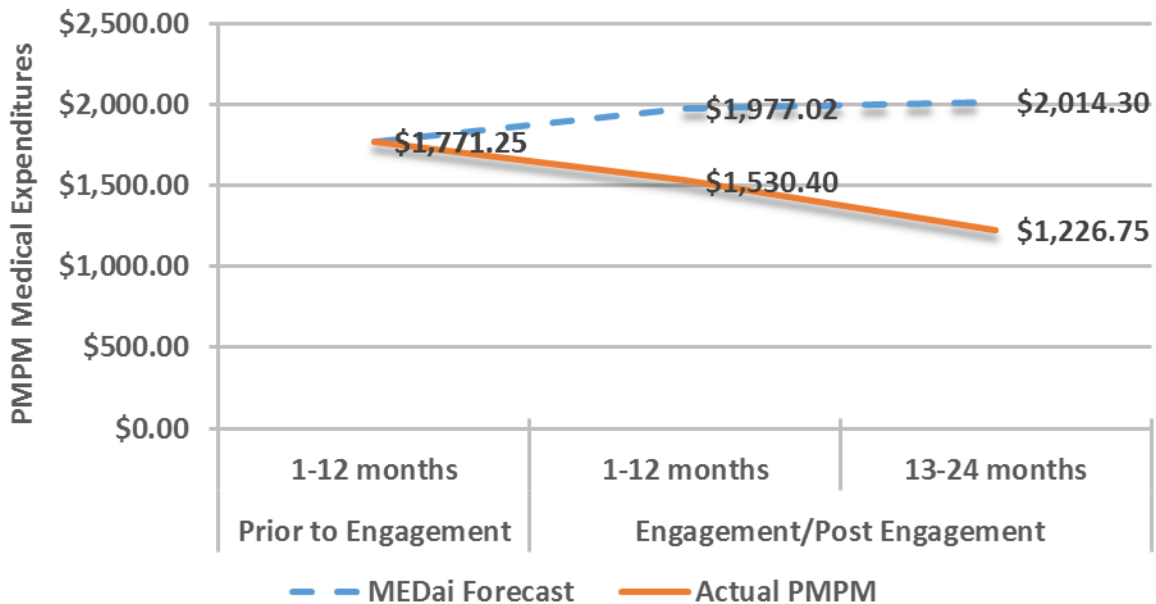
Medical Expenditures – Total and by Category of Service

PHPG documented total PMPM medical expenditures for all SoonerCare CCU participants as a group and compared actual medical expenditures to forecast for the first 24 months of engagement.

MEDai forecasted that the participant population would incur an average of $1,977 in PMPM expenditures in the first 12 months of engagement. The actual amount was $1,530, or 77 percent of forecast.

For months 13 to 24, the MEDai forecast with trend applied was $2,014 in PMPM expenditures. The actual amount was $1,227, or 61 percent of forecast (Exhibit 4-45).

Exhibit 4-45 – All SoonerCare CCU Participants
Total PMPM Expenditures



At the category-of-service level in the first 12 months of engagement, all services types experienced declines, with hospital costs registering the greatest drop (Exhibit 4-46).

Exhibit 4-46 – All SoonerCare CCU Participants
PMPM Expenditures by Category of Service

Category of Service	PMPM 12 Months Prior to Engagement	PMPM First 12 Months of Engagement	Dollar Change (Engaged minus Prior to Engagement)	Percent Change (As Percent of PMPM Prior to Engagement)
Inpatient Hospital	$620.55	$500.68	($119.87)	(19%)
Outpatient Hospital	$240.68	$188.48	($52.20)	(22%)
Physician	$308.43	$290.22	($18.21)	(6%)
Pharmacy	$301.07	$276.83	($24.24)	(8%)
Behavioral Health	$88.75	$72.58	($16.17)	(18%)
All Other	$211.77	$201.61	($10.16)	(5%)
Total	$1,771.25	$1,530.40	($240.85)	(14%)

Aggregate Dollar Impact

PHPG calculated an aggregate dollar impact for all SoonerCare CCU participants by multiplying total months of engagement by average PMPM savings. The resultant savings exceeded $4 million (Exhibit 4-47).

Exhibit 4-47 – All SoonerCare CCU Participants
Aggregate Savings

Engagement Period	Member Months	PMPM Savings (Forecast – Actual)	Aggregate Savings / (Deficit)
First 12 Months	5,501	$446.62	$2,456,857
Months 13 - 24	2,059	$787.55	$1,621,565
Total	**7,560**	**$539.47**	**$4,078,393**

SoonerCare CCU Cost Effectiveness Analysis

Over time, the SoonerCare CCU should demonstrate its efficacy through a reduction in the relative PMPM and aggregate costs of engaged members versus what would have occurred absent participation. PHPG performed a cost effectiveness analysis by carrying forward and expanding the medical expenditure impact findings from the previous section and adding program administrative expenses to the analysis. To be cost effective, the SoonerCare CCU must demonstrate lower expenditures even after factoring-in the program's administrative component.[45]

Administrative Expenses

SoonerCare CCU administrative expenses include salary, benefits and overhead costs for persons working in the SoonerCare CCU unit. The OHCA provided PHPG with detailed information on administrative expenditures during SFY 2014 and SFY 2015 for use in performing the cost effectiveness test.

OHCA salary and benefit costs were included for staff assigned to the SoonerCare CCU unit. Costs were prorated for employees working less than full time on the SoonerCare CCU.

Overhead expenses (rent, travel, etc.) were allocated based on the unit's share of total OHCA salary/benefit expenses in each fiscal year (1.5 percent in SFY 2014 and 1.1 percent in SFY 2015). No specific allocation was made for MEDai activities, as these are occurring under a pre-existing contract.

SFY 2014 and SFY 2015 aggregate administrative expenses for the SoonerCare CCU were approximately $1.4 million (Exhibit 4-48 on the following page). This equated to $182.60 on a PMPM basis. The PMPM calculation was performed using total member months (7,560) for CCU participants meeting the criteria outlined in chapter one (e.g., enrolled for at least three months)[46].

[45] For the purposes of the cost effectiveness analysis only, PHPG altered MEDai forecasts for members whose cost for the year prior to engagement exceeded $144,000, as MEDai forecasts have an upper limit of $144,000. To ensure they would not skew the cost effectiveness test results, PHPG set the forecasts for these members equal to prior year costs, assuming no increase or decrease in medical costs.

[46] This methodology overstates the PMPM amount, in that it excludes member months for participants who did not meet the analysis criteria. However, it is the appropriate for determining cost effectiveness, as it accounts for all administrative expenses. The combined SFY 2014-2015 amount was significantly below the SFY 2014 amount, which exceeded $250 PMPM due to low enrollment in the program's first year.

Exhibit 4-48 – SoonerCare CCU Administrative Expense

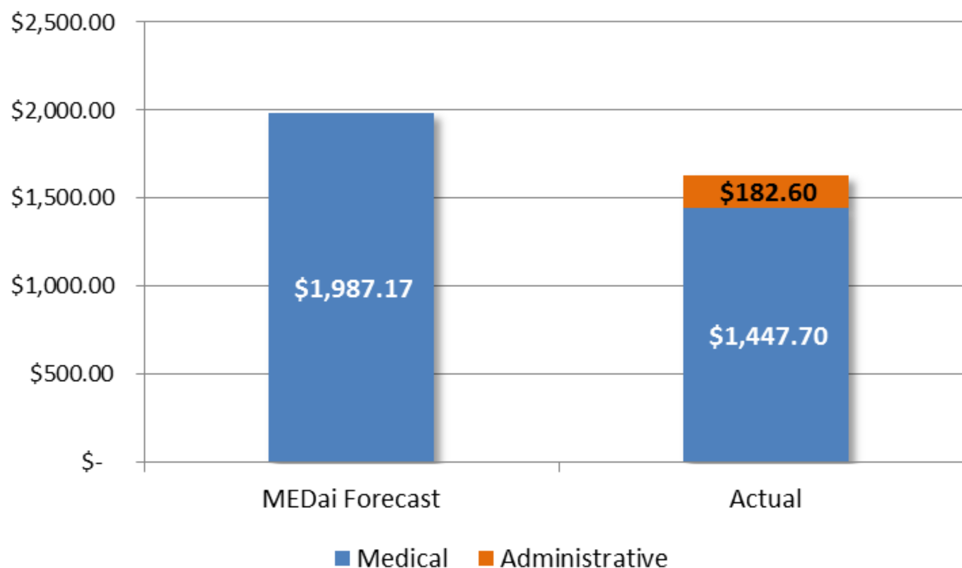
Cost Component	SFY 2015 Aggregate Dollars	SFY 2015 PMPM
OHCA SoonerCare CCU unit salaries and benefits	$1,095,010	$144.84
OHCA SoonerCare CCU overhead	$285,480	$37.76
Total Administrative Expense	**$1,380,489**	**$182.60**

Cost Effectiveness Calculation[47]

PHPG performed a cost effectiveness test by comparing forecasted costs to actual costs during SFY 2014 and SFY 2015, inclusive of SoonerCare CCU administrative expenses.

SoonerCare CCU participants as a group were forecasted to incur average medical costs of $1,987.17[48]. Their actual average PMPM medical costs were $1,447.70. With the addition of $182.60 in average PMPM administrative expenses, total actual costs were $1,630.30. Medical expenses accounted for 89 percent of the total and administrative expenses for the other 11 percent. Overall, net SoonerCare CCU participant PMPM expenses, inclusive of administrative costs were 82.0 percent of forecast (Exhibit 4-49).

Exhibit 4-49 – SoonerCare CCU PMPM Savings



[47] PMPM and aggregate values differ slightly due to rounding.
[48] This represents a weighted average (by member months) of the forecasted PMPM values for the first 12 months and months 13 – 24, as shown in exhibit 4-45.

On an aggregate basis, the SoonerCare CCU achieved net savings during its initial 24 months of operation (July 2013 through June 2015 of nearly $2.7 million, reversing a small deficit of ($337,000) incurred in its first 12 months that was largely attributable to fixed administrative expenses coupled with low enrollment (the program achieved medical savings in its first year, prior to application of administrative costs) (Exhibit 4-50).

Exhibit 4-50 – All SoonerCare CCU Participants
Aggregate Savings – Net of Administrative Expenses

Medical Savings	Administrative Costs	Net Savings
$4,078,393	($1,380,489)	**$2,697,904**

CHAPTER 5 – SOONERCARE CCU RETURN ON INVESTMENT

Introduction

The value of the SoonerCare CCU is measurable on multiple axes, including participant satisfaction and change in behavior, quality of care, improvement in service utilization and overall impact on medical expenditures. The last criterion is arguably the most important, as progress in other areas should ultimately result in medical expenditures remaining below the level that would have occurred absent the program.

ROI Results

PHPG examined the program's return on investment (ROI) through SFY 2015, by comparing administrative expenditures to medical savings. The results are presented in Exhibit 5-1 below.

As the exhibit illustrates, the SoonerCare CCU achieved a positive ROI, with the program as a whole generating a return on investment of 195.4 percent. Put another way, the ***SoonerCare CCU generated nearly $2.00 in net medical savings for every dollar in administrative expenditures.***

Exhibit 5-1 – SoonerCare CCU ROI (State and Federal Dollars)

Medical Savings	Administrative Costs	Net Savings	Return on Investment
$4,078,393	($1,380,489)	$2,697,904	**195.4%**

APPENDIX A – PARTICIPANT SURVEY INSTRUMENT

Appendix A includes the advance letter sent to SoonerCare CCU participants and survey instrument. The instrument is annotated to flag questions that have been discontinued or are asked of follow-up survey respondents only.

JOEL NICO GOMEZ
CHIEF EXECUTIVE OFFICER

MARY FALLIN
GOVERNOR

STATE OF OKLAHOMA
OKLAHOMA HEALTH CARE AUTHORITY

<First> <Last>
<Street Address 1>
<Street Address 2>
<City>, <State> <Zip>

The Oklahoma Health Care Authority is conducting a survey of SoonerCare members. You were selected for the survey because you may have received help from one of our nurse case management programs. We are interested in learning about your experience and how we can make these services better.

The survey will be over the phone and should take about 15 minutes of your time. In the next few days, someone will be calling you to conduct the survey.

THE SURVEY IS VOLUNTARY. If you decide not to complete the survey, it will NOT affect your SoonerCare enrollment or the enrollment of anyone else in your family.

However, we want to hear from you and hope you will agree to help. The survey will be conducted by the Pacific Health Policy Group (PHPG), an outside company. All of your answers will be kept confidential.

If you have any questions about the survey, you can reach PHPG toll-free at 1-888-941-9358. If you would like to take the survey right away, you may call the same number any time between the hours of 9 a.m. and 4 p.m. If you have any questions for the Oklahoma Health Care Authority, please call the toll-free number 1-877-252-6002.

We look forward to speaking with you soon.

SOONERCARE CHRONIC CARE PROGRAM MEMBER SURVEY

INTRODUCTION & CONSENT

Hello, my name is _______ and I am calling on behalf of the Oklahoma SoonerCare program. May I please speak to {RESPONDENT NAME}?

INTRO1. **We are conducting a short survey to find out about where SoonerCare members get their health care. The survey takes about 10 minutes.**

[ANSWER ANY QUESTIONS AND PROCEED TO QUESTION 1]

INTRO2. **[If need to leave a message] We are conducting a short survey to find out about where SoonerCare members get their health care. We can be reached toll-free at 1-888-941-9358.**

1. The SoonerCare program is a health insurance program offered by the state. Are you currently participating in SoonerCare?[49]
   a. Yes
   b. No → [ASK IF ENROLLED IN MEDICAID. IF NO, END CALL]
   c. Don't Know/Not Sure → [ASK IF ENROLLED IN MEDICAID. IF NO, END CALL]

2. Some SoonerCare members with health needs receive help from the Chronic Care Program. Have you heard of this? [IF RESPONDENT SAYS 'NO' OR 'NOT SURE'] The program includes nurses who call you to discuss your health care needs and partner with you and your doctor to help manage your needs. Does that sound familiar?
   a. Yes
   b. No
   c. Don't Know/Not Sure

3. Were you contacted and offered a chance to participate in the Chronic Care Program?
   a. Yes
   b. No → [END CALL]
   c. Don't Know/Not Sure → [END CALL]

4. Did you decide to participate?
   a. Yes
   b. No → [GO TO Q34]
   c. Not yet, but still considering → [INFORM THAT WE MAY CALL BACK AT A LATER DATE AND END CALL]
   d. Don't Know/Not Sure → [END CALL]

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[49] All questions include a "don't know/not sure" or similar option which is unprompted by the surveyor; this response is listed on the instrument to allow surveyors to document such a response. Questions are reworded for parents/guardians completing the survey on behalf of program participants.

5. Are you still participating today in the Chronic Care Program?
    a. Yes
    b. No → [GO TO Q32]
    c. Don't Know/Not Sure → [END CALL]

6. How long have you been participating in the Chronic Care Program?
    a. Less than 1 month
    b. One to two months
    c. Three to four months
    d. Four to six months
    e. More than six months
    f. Don't Know/Not Sure

Now I want to ask about your decision to participate and partner with a Nurse Care Manager.

7. How did you learn about the Chronic Care Program?
    a. Received information in the mail
    b. Received a call from my Nurse Care Manager
    c. Received a call from someone else SPECIFY ______________________________________
    d. Doctor referred me while I was in his/her office
    e. Other. SPECIFY: ____
    f. Don't Know/Not Sure

8. What were your reasons for deciding to participate in the Chronic Care Program? [CHECK ALL THAT APPLY]
    a. Learn how to better manage health problems
    b. Learn how to identify changes in health
    c. Have someone to call with questions about health
    d. Get help making health care appointments
    e. Personal doctor recommended I enroll
    f. Improve my health
    g. Was invited to enroll/no specific reason
    h. Other. SPECIFY: ____
    i. Don't Know/Not Sure

9. Among the reasons you gave, what was your <u>most important</u> reason for deciding to participate?
   a. Learn how to better manage health problems
   b. Learn how to identify changes in health
   c. Have someone to call with questions about health
   d. Get help making health care appointments
   e. Personal doctor recommended I enroll
   f. Improve my health
   g. Was invited to enroll/no specific reason
   h. Other. SPECIFY: ____
   i. Don't Know/Not Sure

Now I'm going to ask you a few questions about your experience in the Chronic Care Program, starting with your Nurse Care Manager.

CHRONIC CARE PROGRAM NURSE CARE MANAGER

10. How soon after you started participating in the Chronic Care Program were you contacted by your Nurse Care Manager?
    a. Contacted at time of enrollment to participate
    b. Less than one week
    c. One to two weeks
    d. More than two weeks
    e. Have not been contacted – enrolled two weeks ago or less
    f. Have not been contacted – enrolled two to four weeks ago
    g. Have not been contacted – enrolled more than four weeks ago
    h. Don't Know/Not Sure

11. Can you tell me the name of your Nurse Care Manager?
    a. Yes. RECORD: ____
    b. No

12. About when was the last time you spoke to your Nurse Care Manager?
    a. Within the last week
    b. One to two weeks ago
    c. Two to four weeks ago
    d. More than four weeks ago
    e. Have never spoken to Nurse Care Manager
    f. Don't know/Not Sure

13. Did your Nurse Care Manager give you a telephone number to call if you needed help with your care?
    a. Yes
    b. No → [GO TO Q17]
    c. Don't Know/Not Sure → [GO TO Q17]

14. Have you tried to call your Nurse Care Manager at the number you were given?
    a. Yes
    b. No → [GO TO Q17]
    c. Don't Know/Not Sure → [GO TO Q17]

15. Thinking about the last time you called your Nurse Care Manager, what was the reason for your call?
    a. Routine health question
    b. Urgent health problem
    c. Seeking assistance in scheduling appointment
    d. Returning call from Nurse Care Manager
    e. Other. SPECIFY: ____
    f. Don't Know/Not Sure

16. Did you reach your Nurse Care Manager immediately? [IF NO] How quickly did you get a call back?
    a. Reached immediately (at time of call)
    b. Called back within one hour
    c. Called back in more than one hour but same day
    d. Called back the next day
    e. Called back two or more days later
    f. Never called back
    g. Other. SPECIFY: ____
    h. Don't Know/Not Sure

17. [ASK QUESTION EVEN IF RESPONDENT STATES S/HE HAS NOT SPOKEN TO THE NURSE CARE MANAGER. IF RESPONDENT REPEATS S/HE IS UNABLE TO ANSWER DUE TO LACK OF CONTACT, GO TO Q20 (OVERALL SATISFACTION)] I am going to mention some things your Nurse Care Manager may have done for you. Has your Nurse Care Manager:

	Yes	No	DK
a. Asked questions about your health problems or concerns			
b. Provided instructions about taking care of your health problems or concerns			
c. Helped you to identify changes in your health that might be an early sign of a problem			
d. Answered questions about your health			
e. Helped you talk to and work with your regular doctor and your regular doctor's office staff			
f. Helped you to make and keep health care appointments with other doctors, such as specialists, for medical problems			
g. Helped you to make and keep health care appointments for mental health or substance abuse problems			
h. Reviewed your medications with you and helped you to manage your medications			

18. [ASK FOR EACH "YES" ACTIVITY IN Q17] Thinking about what your Nurse Care Manager has done for you, please tell me how satisfied you are with the help you received. Tell me if you are very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied.

	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied	DK	N/A
a. Learning about you and your health care needs						
b. Getting easy to understand instructions about taking care of health problems or concerns						
c. Getting help identifying changes in your health that might be an early sign of a problem						
d. Answering questions about your health						
e. Helping you to talk to and work with your regular doctor and your regular doctor's staff						
f. Helping you make and keep health care appointments with other doctors, such as specialists, for medical problems						
g. Helping you make and keep health care appointments for mental health or substance abuse problems						
h. Reviewing your medications and helping you to manage your medications						

19. Overall, how satisfied are you with your Nurse Care Manager? Would you say you are very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied?
    a. Very satisfied
    b. Somewhat satisfied
    c. Somewhat dissatisfied
    d. Very dissatisfied
    e. Don't Know/Not Sure

OVERALL SATISFACTION

20. Overall, how satisfied are you with your whole experience in the Chronic Care Program?
    a. Very satisfied
    b. Somewhat satisfied
    c. Somewhat dissatisfied
    d. Very dissatisfied
    e. Don't Know/Not Sure

21. Would you recommend the Chronic Care Program to a friend who has health care needs like yours?
    a. Yes
    b. No
    c. Don't Know/Not Sure

22. Do you have any suggestions for improving the Chronic Care Program?

    ____

    ____

    ____

HEALTH STATUS & LIFESTYLE

23. Overall, how would you rate your health today? Would you say it is excellent, good, fair or poor?
    a. Excellent
    b. Good
    c. Fair
    d. Poor
    e. Don't Know/Not Sure

24. Compared to before you participated in the Chronic Care Program, how has your health changed? Would you say your health is better, worse or about the same?

    a. Better

    b. Worse → [GO TO Q27]

    c. About the same → [GO TO Q27]

25. Do you think the Chronic Care Program has contributed to your improvement in health?

    a. Yes

    b. No

    c. Don't know/not sure

26. I am going to mention a few areas where Nurse Care Managers sometimes try to help members to improve their health by changing behaviors. For each, please tell me if your Nurse Care Manager spoke to you, and if so, whether you changed your behavior as a result. [IF BEHAVIOR WAS CHANGED, ASK IF CHANGE WAS TEMPORARY OR IS CONTINUING]

	N/A – Not Discussed	Discussed – No Change	Discussed – Temporary Change	Discussed – Continuing Change	DK	Not Applicable
a. Smoking less or using other tobacco products less						
b. Moving around more or getting more exercise						
c. Changing your diet						
d. Managing and taking your medications better						
e. Making sure to drink enough water throughout the day						
f. Drinking or using other substances less						

Questions 27 to 31 have been discontinued

~~27. [IF RESPONDENT'S RECORD SHOWS ENROLLMENT DATE PRIOR TO JULY 2013, ASK THIS QUESTION] We're almost done. Before July 2013, the SoonerCare Health Management Program included Nurse Care Managers who visited members in their homes or called them each month on the phone. Did you have a Nurse Care Manager under this earlier program? [IF YES, ASK WHETHER NCM VISITED THEIR HOME OR CALLED ON PHONE. IF RESPONDENT SAYS "BOTH", RECORD AS VISITED IN THEIR HOME.]~~

    ~~a. Yes, visited in home~~

    ~~b. Yes, called on phone~~

    ~~c. No → [GO TO Q36]~~

    ~~d. Don't Know/Not Sure → [GO TO Q36]~~

28. Were you aware that the program changed in July 2013?

a. Yes

b. No

c. Don't Know/Not Sure

29. I am going to ask about different kinds of help that you may have received from your Nurse Care Manager under the previous program and that you may be receiving today from your current Nurse Care Manager. For each, please tell me who was more helpful, the Nurse Care Manager you had before July 2013 under the previous program or your current Nurse Care Manager [REVERSE ORDER FROM PREVIOUS SURVEY]. [RECORD "SAME" IF VOLUNTEERED BY RESPONDENT; DO NOT OFFER AS OPTION.]

	Telligen NCM More Helpful	CCP NCM More Helpful	About the Same Help	Don't Know/ Not Sure	N/A
a. Providing instructions about taking care of your health problems or concerns					
b. Helping you to identify changes in your health that might be an early sign of a problem					
c. Answering questions about your health					
d. Helping you talk to and work with your regular doctor and your regular doctor's office staff					
e. Helping you to make and keep health care appointments with other doctors, such as specialists, for medical problems					
f. Helping you to make and keep health care appointments for mental health or substance abuse problems					
g.Helping you manage your medications					

30. Overall, what do you prefer – the program as it was before July 2013 or the program as it is today? [REVERSE ORDER FROM PREVIOUS SURVEY.] [RECORD "NO PREFERENCE/SAME" IF VOLUNTEERED BY RESPONDENT; DO NOT OFFER AS OPTION.]

a. Program before, with Telligen Nurse Care Manager

b. Program today, with Chronic Care Program Nurse Care Manager

c. No preference/programs are about the same → [GO TO Q36]

d. Don't Know/Not Sure → [GO TO Q36]

31. Why do you prefer [MEMBER'S CHOICE]? [RECORD ANSWER AND GO TO Q36]

Questions 32 and 33 are asked of follow-up survey respondents only

32. [IF RESPONDENT ANSWERED "NO" TO Q5] About when did you decide to no longer participate?

   a. Month/Year [SPECIFY] ____________________

   b. Don't Know/Not Sure

33. Why did you decide to no longer participate in the program [RECORD ANSWER & SKIP TO Q36]?

   a. Not aware of program/did not know was enrolled

   b. Did not understand purpose of the program

   c. Satisfied with doctor/current health care access without program

   d. Doctor recommended I not participate

   e. Do not wish to self-manage care/receive health education/receive health coaching

   f. Do not want to be evaluated by Nurse Care Manager/Health Coach

   g. Dislike Nurse Care Manager/Health Coach

   h. Have no health needs at this time

   i. Nurse Care Manager/Health Coach stopped calling or visiting

   j. Did not like change from Nurse Care Management to Health Coaching

   k. Other. SPECIFY: ____________________

   l. Not Sure/Don't Know

Questions 34 and 35 have been discontinued

~~34. [IF RESPONDENT ANSWERED "NO" TO Q4] About when did you decide to not participate?~~

   ~~a. Month/Year [SPECIFY] ____________________~~

   ~~b. Don't Know/Not Sure~~

~~35. Why did you decide not to participate in the program?~~

   ~~a. Not aware of program/did not know was enrolled~~

   ~~b. Did not understand purpose of the program~~

   ~~c. Satisfied with doctor/current health care access without program~~

   ~~d. Doctor recommended I not participate~~

   ~~e. Do not wish to self-manage care/receive health education/receive health coaching~~

   ~~f. Do not want to be evaluated by Nurse Care Manager/Health Coach~~

   ~~g. Dislike Nurse Care Manager/Health Coach~~

   ~~h. Have no health needs at this time~~

   ~~i. Nurse Care Manager/Health Coach stopped calling or visiting~~

   ~~j. Did not like change from Nurse Care Management to Health Coaching~~

   ~~k. Other. SPECIFY: ____________________~~

   ~~l. Not Sure/Don't Know~~

DEMOGRAPHICS

36. I'm now going to ask about your race. I will read you a list of choices. You may choose 1 or more. This question is being used for demographic purposes only and you may also choose not to respond.
    a. White or Caucasian
    b. Black or African-American
    c. Asian
    d. Native Hawaiian or other Pacific Islander
    e. American Indian
    f. Hispanic or Latino
    g. Other. SPECIFY: ____

Those are all the questions I have today. We may contact you again in the future to follow-up and learn if anything about your health care has changed. Thank you for your help.

APPENDIX B – DETAILED PARTICIPANT SURVEY RESULTS

Appendix B includes active participant responses to all survey questions. Data is presented for both the initial and follow-up surveys.

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
1) Are you currently enrolled in SoonerCare?				
A. Yes	**129** *99.2%*	**380** *98.2%*	**509** *98.5%*	**109** *97.3%*
B. No	**1** *0.8%*	**7** *1.8%*	**8** *1.5%*	**3** *2.7%*
2) Have you heard of the Chronic Care Program (CCP)?				
A. Yes	**111** *86.0%*	**343** *90.3%*	**454** *89.2%*	*N/A - not asked*
B. No	**18** *14.0%*	**36** *9.5%*	**54** *10.6%*	
C. Don't know/not sure	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	
3) Were you contacted and offered a chance to participate in the CCP?				
A. Yes	**111** *86.0%*	**342** *90.2%*	**453** *89.2%*	*N/A - not asked*
B. No	**18** *14.0%*	**37** *9.8%*	**55** *10.8%*	
C. Don't know/not sure	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	
4) Did you decide to participate?				
A. Yes	**109** *98.2%*	**342** *100.0%*	**451** *99.6%*	*N/A - not asked*
B. No	**2** *1.8%*	**0** *0.0%*	**2** *0.4%*	

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
5) Are you still participating today in the CCP?				
A. Yes	**106** *95.5%*	**325** *95.6%*	**431** *95.6%*	**103** *94.5%*
B. No	**5** *4.5%*	**15** *4.4%*	**20** *4.4%*	**6** *5.5%*
6) How long have you been participating in the CCP?				
A. Less than 1 month	**2** *1.9%*	**6** *1.8%*	**8** *1.9%*	**0** *0.0%*
B. 1 to 2 months	**16** *15.1%*	**32** *9.8%*	**48** *11.1%*	**0** *0.0%*
C. 3 to 4 months	**18** *17.0%*	**32** *9.8%*	**50** *11.6%*	**0** *0.0%*
D. 5 to 6 months	**9** *8.5%*	**40** *12.3%*	**49** *11.4%*	**0** *0.0%*
E. More than 6 months	**61** *57.5%*	**212** *65.2%*	**273** *63.3%*	*See below*
F. 6 to 9 months	*For initial survey, tenures greater than six months are not further stratified*			**9** *8.7%*
G. 9 to 12 months				**68** *66.0%*
H. More than 12 months				**22** *21.4%*
F. Don't know/not sure	**0** *0.0%*	**3** *0.9%*	**3** *0.7%*	**4** *3.9%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
7) How did you learn about the CCP?				
A. Received information in the mail	**19** *17.9%*	**62** *19.1%*	**81** *18.8%*	*N/A - not asked*
B. Received a call from my Nurse Care Manager	**35** *33.0%*	**186** *57.2%*	**221** *51.3%*	
C. Received a call from someone else	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	
D. Doctor referred me while I was in his/her office	**31** *29.2%*	**20** *6.2%*	**51** *11.8%*	
E. Other	**2** *1.9%*	**12** *3.7%*	**14** *3.2%*	
F. Don't know/not sure	**19** *17.9%*	**44** *13.5%*	**63** *14.6%*	
8) What were your reasons for deciding to participate in the CCP? (Multiple answers allowed.)				
A. Learn how to better manage health problems	**37** *34.9%*	**128** *39.0%*	**165** *38.0%*	*N/A - not asked*
B. Learn how to identify changes in health	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	
C. Have someone to call with questions about health	**9** *8.5%*	**18** *5.5%*	**27** *6.2%*	
D. Get help making health care appointments	**2** *1.9%*	**7** *2.1%*	**9** *2.1%*	
E. Personal doctor recommended I enroll	**13** *12.3%*	**7** *2.1%*	**20** *4.6%*	
F. Improve my health	**4** *3.8%*	**19** *5.8%*	**23** *5.3%*	

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
G. Was invited to enroll/no specific reason	**37** *34.9%*	**124** *37.8%*	**161** *37.1%*	
H. Other	**1** *0.9%*	**12** *3.7%*	**13** *3.0%*	
I. Don't know/not sure	**3** *2.8%*	**13** *4.0%*	**16** *3.7%*	
9) Among the reasons you gave, what was your most important reason for deciding to participate?				
A. Learn how to better manage health problems	**37** *34.9%*	**128** *39.4%*	**165** *38.3%*	*N/A - not asked*
B. Learn how to identify changes in health	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	
C. Have someone to call with questions about health	**10** *9.4%*	**17** *5.2%*	**27** *6.3%*	
D. Get help making health care appointments	**2** *1.9%*	**6** *1.8%*	**8** *1.9%*	
E. Personal doctor recommended I enroll	**13** *12.3%*	**7** *2.2%*	**20** *4.6%*	
F. Improve my health	**4** *3.8%*	**19** *5.8%*	**23** *5.3%*	
G. Was invited to enroll/no specific reason	**37** *34.9%*	**124** *38.2%*	**161** *37.4%*	
H. Other	**1** *0.9%*	**12** *3.7%*	**13** *3.0%*	
I. Don't know/not sure	**2** *1.9%*	**12** *3.7%*	**14** *3.2%*	

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
10) How soon after you started participating in the CCP were you contacted by your Nurse Care Manager?				
A. Contacted at time of enrollment in the doctor's office	32 *30.2%*	196 *60.3%*	228 *52.9%*	*N/A - not asked*
B. Less than 1 week	23 *21.7%*	26 *8.0%*	49 *11.4%*	
C. 1 to 2 weeks	8 *7.5%*	19 *5.8%*	27 *6.3%*	
D. More than 2 weeks	0 *0.0%*	4 *1.2%*	4 *0.9%*	
E. Have not been contacted - enrolled 2 weeks ago or less	0 *0.0%*	0 *0.0%*	0 *0.0%*	
F. Have not been contacted - enrolled 2 to 4 weeks ago	0 *0.0%*	2 *0.6%*	2 *0.5%*	
G. Have not been contacted - enrolled more than 4 weeks ago	0 *0.0%*	2 *0.6%*	2 *0.5%*	
H. Don't know/not sure/other	43 *40.6%*	76 *23.4%*	119 *27.6%*	
11) Can you tell me the name of your Nurse Care Manager?				
A. Yes	64 *61.5%*	204 *62.4%*	268 *62.2%*	69 *67.0%*
B. No	40 *38.5%*	123 *37.6%*	163 *37.8%*	34 *33.0%*
12) About when was the last time you spoke to your Nurse Care Manager?				
A. Within last week	34 *33.7%*	104 *31.5%*	138 *32.0%*	30 *29.1%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
B. 1 to 2 weeks ago	**29** *28.7%*	**94** *28.5%*	**123** *28.5%*	**9** *8.7%*
C. 2 to 4 weeks ago	**24** *23.8%*	**69** *20.9%*	**93** *21.6%*	**19** *18.4%*
D. More than 4 weeks ago	**13** *12.9%*	**52** *15.8%*	**65** *15.1%*	**41** *39.8%*
E. Have never spoken to Nurse Care Manager	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	**1** *1.0%*
F. Don't know/not sure	**1** *1.0%*	**10** *3.0%*	**11** *2.6%*	**3** *2.9%*
13) Did your Nurse Care Manager give you a telephone number to call if you needed help with your care?				
A. Yes	**96** *93.2%*	**312** *96.3%*	**408** *95.6%*	**97** *94.2%*
B. No	**3** *2.9%*	**5** *1.5%*	**8** *1.9%*	**3** *2.9%*
C. Don't know/not sure	**4** *3.9%*	**7** *2.2%*	**11** *2.6%*	**3** *2.9%*
14) Have you tried to call your Nurse Care Manager at the number you were given?				
A. Yes	**37** *38.5%*	**137** *43.9%*	**174** *42.6%*	**40** *41.2%*
B. No	**59** *61.5%*	**175** *56.1%*	**234** *57.4%*	**57** *58.8%*
C. Don't know/not sure	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
15) Thinking about the last time you called your Nurse Care Manager, what was the reason for your call?				
A. Routine health question	**27** *73.0%*	**97** *70.8%*	**124** *71.3%*	**27** *67.5%*
B. Urgent health problem	**1** *2.7%*	**3** *2.2%*	**4** *2.3%*	**1** *2.5%*
C. Seeking assistance in scheduling an appointment	**2** *5.4%*	**5** *3.6%*	**7** *4.0%*	**4** *10.0%*
D. Returning call from Nurse Care Manager	**6** *16.2%*	**31** *22.6%*	**37** *21.3%*	**8** *20.0%*
E. Other	**1** *2.7%*	**1** *0.7%*	**2** *1.1%*	**0** *0.0%*
F. Don't know/not sure	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
16) Did you reach your Nurse Care Manager immediately? If no, how quickly did you get a call back?				
A. Reached immediately (at time of call)	**17** *45.9%*	**71** *51.8%*	**88** *50.6%*	**18** *45.0%*
B. Called back within 1 hour	**13** *35.1%*	**30** *21.9%*	**43** *24.7%*	**9** *22.5%*
C. Called back in more than 1 hour but same day	**3** *8.1%*	**13** *9.5%*	**16** *9.2%*	**3** *7.5%*
D. Called back the next day	**0** *0.0%*	**10** *7.3%*	**10** *5.7%*	**3** *7.5%*
E. Called back 2 or more days later	**1** *2.7%*	**5** *3.6%*	**6** *3.4%*	**0** *0.0%*
F. Never called back	**1** *2.7%*	**3** *2.2%*	**4** *2.3%*	**3** *7.5%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
G. Other	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**1** *2.5%*
H. Don't know/not sure	**2** *5.4%*	**5** *3.6%*	**7** *4.0%*	**3** *7.5%*
17) I'm going to mention some things your Nurse Care Manager may have done for you. Has your Nurse Care Manager:				
(a) Asked questions about your health problems or concerns				
A. Yes	**105** *99.1%*	**322** *99.1%*	**427** *99.1%*	**100** *98.0%*
B. No	**1** *0.9%*	**2** *0.6%*	**3** *0.7%*	**2** *2.0%*
C. Don't know/not sure	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	**0** *0.0%*
(b) Provided instructions about taking care of your health problems or concerns				
A. Yes	**95** *89.6%*	**297** *91.4%*	**392** *91.0%*	**95** *93.1%*
B. No	**8** *7.5%*	**24** *7.4%*	**32** *7.4%*	**7** *6.9%*
C. Don't know/not sure	**3** *2.8%*	**4** *1.2%*	**7** *1.6%*	**0** *0.0%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
(c) Helped you to identify changes in your health that might be an early sign of a problem				
A. Yes	**37** *34.9%*	**138** *42.5%*	**175** *40.6%*	**43** *42.2%*
B. No	**67** *63.2%*	**185** *56.9%*	**252** *58.5%*	**57** *55.9%*
C. Don't know/not sure	**2** *1.9%*	**2** *0.6%*	**4** *0.9%*	**2** *2.0%*
(d) Answered questions about your health				
A. Yes	**94** *88.7%*	**281** *86.5%*	**375** *87.0%*	**91** *89.2%*
B. No	**12** *11.3%*	**44** *13.5%*	**56** *13.0%*	**11** *10.8%*
C. Don't know/not sure	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
(e) Helped you talk to and work with your regular doctor and your regular doctor's office staff				
A. Yes	**48** *45.3%*	**127** *39.1%*	**175** *40.6%*	**27** *26.5%*
B. No	**54** *50.9%*	**197** *60.6%*	**251** *58.2%*	**73** *71.6%*
C. Don't know/not sure	**4** *3.8%*	**1** *0.3%*	**5** *1.2%*	**2** *2.0%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
(f) Helped you to make and keep health care appointments with other doctors, such as specialists, for medical problems?				
A. Yes	**47** *44.3%*	**101** *31.1%*	**148** *34.3%*	**26** *25.5%*
B. No	**58** *54.7%*	**223** *68.6%*	**281** *65.2%*	**75** *73.5%*
C. Don't know/not sure	**1** *0.9%*	**1** *0.3%*	**2** *0.5%*	**1** *1.0%*
(g) Helped you to make and keep health care appointments for mental health or substance abuse problems				
A. Yes	**8** *7.5%*	**16** *4.9%*	**24** *5.6%*	**7** *6.9%*
B. No	**98** *92.5%*	**309** *95.1%*	**407** *94.4%*	**94** *92.2%*
C. Don't know/not sure	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**1** *1.0%*
(h) Reviewed your medications with you and helped you to manage your medications				
A. Yes	**78** *73.6%*	**288** *88.6%*	**366** *84.9%*	**92** *90.2%*
B. No	**26** *24.5%*	**32** *9.8%*	**58** *13.5%*	**9** *8.8%*
C. Don't know/not sure	**2** *1.9%*	**5** *1.5%*	**7** *1.6%*	**1** *1.0%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
18) (For each activity performed) How satisfied are you with the help you received?				
(a) Asked questions about your health problems or concerns				
A. Very satisfied	**96** *90.6%*	**297** *91.4%*	**393** *91.2%*	**91** *89.2%*
B. Somewhat satisfied	**7** *6.6%*	**19** *5.8%*	**26** *6.0%*	**4** *3.9%*
C. Somewhat dissatisfied	**1** *0.9%*	**2** *0.6%*	**3** *0.7%*	**3** *2.9%*
D. Very dissatisfied	**1** *0.9%*	**4** *1.2%*	**5** *1.2%*	**1** *1.0%*
E. Don't know/Not Applicable	**1** *0.9%*	**3** *0.9%*	**4** *0.9%*	**3** *2.9%*
(b) Provided instructions about taking care of your health problems or concerns				
A. Very satisfied	**88** *83.0%*	**288** *88.6%*	**376** *87.2%*	**88** *86.3%*
B. Somewhat satisfied	**5** *4.7%*	**8** *2.5%*	**13** *3.0%*	**3** *2.9%*
C. Somewhat dissatisfied	**1** *0.9%*	**0** *0.0%*	**1** *0.2%*	**2** *2.0%*
D. Very dissatisfied	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	**1** *1.0%*
E. Don't know/Not Applicable	**12** *11.3%*	**28** *8.6%*	**40** *9.3%*	**8** *7.8%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
(c) Helped you to identify changes in your health that might be an early sign of a problem				
A. Very satisfied	**38** *35.8%*	**133** *40.9%*	**171** *39.7%*	**42** *41.2%*
B. Somewhat satisfied	**1** *0.9%*	**9** *2.8%*	**10** *2.3%*	**1** *1.0%*
C. Somewhat dissatisfied	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
D. Very dissatisfied	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
E. Don't know/Not Applicable	**67** *63.2%*	**183** *56.3%*	**250** *58.0%*	**59** *57.8%*
(d) Answered questions about your health				
A. Very satisfied	**93** *87.7%*	**272** *83.7%*	**365** *84.7%*	**84** *82.4%*
B. Somewhat satisfied	**2** *1.9%*	**8** *2.5%*	**10** *2.3%*	**3** *2.9%*
C. Somewhat dissatisfied	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	**1** *1.0%*
D. Very dissatisfied	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
E. Don't know/Not Applicable	**11** *10.4%*	**44** *13.5%*	**55** *12.8%*	**14** *13.7%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
(e) Helped you talk to and work with your regular doctor and your regular doctor's office staff				
A. Very satisfied	**45** *42.5%*	**125** *38.5%*	**170** *39.4%*	**28** *27.5%*
B. Somewhat satisfied	**1** *0.9%*	**8** *2.5%*	**9** *2.1%*	**0** *0.0%*
C. Somewhat dissatisfied	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
D. Very dissatisfied	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
E. Don't know/Not Applicable	**60** *56.6%*	**192** *59.1%*	**252** *58.5%*	**74** *72.5%*
(f) Helped you to make and keep health care appointments with other doctors, such as specialists, for medical problems?				
A. Very satisfied	**45** *42.5%*	**100** *30.8%*	**145** *33.6%*	**25** *24.5%*
B. Somewhat satisfied	**1** *0.9%*	**6** *1.8%*	**7** *1.6%*	**2** *2.0%*
C. Somewhat dissatisfied	**1** *0.9%*	**0** *0.0%*	**1** *0.2%*	**0** *0.0%*
D. Very dissatisfied	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
E. Don't know/Not Applicable	**59** *55.7%*	**219** *67.4%*	**278** *64.5%*	**75** *73.5%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
(g) Helped you to make and keep health care appointments for mental health or substance abuse problems				
A. Very satisfied	**10** *9.4%*	**15** *4.6%*	**25** *5.8%*	**6** *5.9%*
B. Somewhat satisfied	**1** *0.9%*	**10** *3.1%*	**11** *2.6%*	**1** *1.0%*
C. Somewhat dissatisfied	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
D. Very dissatisfied	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
E. Don't know/Not Applicable	**95** *89.6%*	**300** *92.3%*	**395** *91.6%*	**95** *93.1%*
(h) Reviewed your medications with you and helped you to manage your medications				
A. Very satisfied	**76** *71.7%*	**278** *85.5%*	**354** *82.1%*	**84** *82.4%*
B. Somewhat satisfied	**2** *1.9%*	**9** *2.8%*	**11** *2.6%*	**4** *3.9%*
C. Somewhat dissatisfied	**1** *0.9%*	**1** *0.3%*	**2** *0.5%*	**1** *1.0%*
D. Very dissatisfied	**0** *0.0%*	**2** *0.6%*	**2** *0.5%*	**1** *1.0%*
E. Don't know/Not Applicable	**27** *25.5%*	**35** *10.8%*	**62** *14.4%*	**12** *11.8%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
19) Overall, how satisfied are you with your Nurse Care Manager?				
A. Very satisfied	**97** *91.5%*	**295** *90.8%*	**392** *91.0%*	**93** *91.2%*
B. Somewhat satisfied	**7** *6.6%*	**20** *6.2%*	**27** *6.3%*	**5** *4.9%*
C. Somewhat dissatisfied	**1** *0.9%*	**4** *1.2%*	**5** *1.2%*	**4** *3.9%*
D. Very dissatisfied	**1** *0.9%*	**5** *1.5%*	**6** *1.4%*	**0** *0.0%*
E. Don't know/not sure	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	**0** *0.0%*
20) Overall, how satisfied are you with your whole experience in the CCP?				
A. Very satisfied	**97** *91.5%*	**299** *92.0%*	**396** *91.9%*	**93** *91.2%*
B. Somewhat satisfied	**7** *6.6%*	**14** *4.3%*	**21** *4.9%*	**7** *6.9%*
C. Somewhat dissatisfied	**2** *1.9%*	**6** *1.8%*	**8** *1.9%*	**2** *2.0%*
D. Very dissatisfied	**0** *0.0%*	**4** *1.2%*	**4** *0.9%*	**0** *0.0%*
E. Don't know/not sure	**0** *0.0%*	**2** *0.6%*	**2** *0.5%*	**0** *0.0%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
21) Would you recommend the CCP to a friend who has health care needs like yours?				
A. Yes	**102** *96.2%*	**309** *95.1%*	**411** *95.4%*	**99** *97.1%*
B. No	**2** *1.9%*	**8** *2.5%*	**10** *2.3%*	**2** *2.0%*
C. Don't know/not sure	**2** *1.9%*	**8** *2.5%*	**10** *2.3%*	**1** *1.0%*
22) Do you have any suggestions for improving the CCP?				
A. Yes *(member-specific responses documented)*	**9** *8.5%*	**25** *7.7%*	**34** *7.9%*	**7** *6.9%*
B. No	**97** *91.5%*	**300** *92.3%*	**397** *92.1%*	**95** *93.1%*
23) Overall, how would you rate your health today?				
A. Excellent	**1** *1.0%*	**6** *1.8%*	**7** *1.6%*	**1** *1.0%*
B. Good	**43** *41.0%*	**102** *31.3%*	**145** *33.6%*	**41** *40.2%*
C. Fair	**41** *39.0%*	**144** *44.2%*	**185** *42.9%*	**42** *41.2%*
D. Poor	**20** *19.0%*	**73** *22.4%*	**93** *21.6%*	**18** *17.6%*
E. Don't know/not sure/no response	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	**0** *0.0%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
24) Compared to before you participated in the CCP, how has your health changed?				
A. Better	**51** *48.6%*	**143** *43.9%*	**194** *45.0%*	**55** *53.9%*
B. Worse	**4** *3.8%*	**41** *12.6%*	**45** *10.4%*	**9** *8.8%*
C. About the same	**50** *47.6%*	**140** *42.9%*	**190** *44.1%*	**38** *37.3%*
D. No response	**0** *0.0%*	**2** *0.6%*	**2** *0.5%*	**0** *0.0%*
25) (If better) Do you think the CCP has contributed to your improvement in health?				
A. Yes	**48** *104.3%*	**138** *93.2%*	**186** *95.9%*	**52** *94.5%*
B. No	**3** *6.5%*	**5** *3.4%*	**8** *4.1%*	**3** *5.5%*
C. Don't know/not sure	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
26) I'm going to mention a few areas where Nurse Care Managers sometimes try to help members improve their health by changing behaviors. For each, tell me if your Nurse Care Manager spoke to you, and if so, whether you changed your behavior as a result.				

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
(a) Smoking less or using other tobacco products less				
A. N/A - not discussed	**2** *1.9%*	**45** *13.8%*	**47** *10.9%*	**13** *12.7%*
B. Discussed - no change	**5** *4.7%*	**22** *6.8%*	**27** *6.3%*	**1** *1.0%*
C. Discussed - temporary change	**4** *3.8%*	**7** *2.2%*	**11** *2.6%*	**0** *0.0%*
D. Discussed - continuing change	**29** *27.4%*	**57** *17.5%*	**86** *20.0%*	**16** *15.7%*
E. Don't know/not sure/no response	**2** *1.9%*	**9** *2.8%*	**11** *2.6%*	**7** *6.9%*
F. Not applicable	**64** *60.4%*	**185** *56.9%*	**249** *57.8%*	**65** *63.7%*
(b) Moving around more or getting more exercise				
A. N/A - not discussed	**4** *3.8%*	**49** *15.1%*	**53** *12.3%*	**16** *15.7%*
B. Discussed - no change	**8** *7.5%*	**31** *9.5%*	**39** *9.0%*	**4** *3.9%*
C. Discussed - temporary change	**2** *1.9%*	**6** *1.8%*	**8** *1.9%*	**1** *1.0%*
D. Discussed - continuing change	**34** *32.1%*	**154** *47.4%*	**188** *43.6%*	**45** *44.1%*
E. Don't know/not sure/no response	**3** *2.8%*	**12** *3.7%*	**15** *3.5%*	**7** *6.9%*
F. Not applicable	**55** *51.9%*	**73** *22.5%*	**128** *29.7%*	**29** *28.4%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
(c) Changing your diet				
A. N/A - not discussed	**5** *4.7%*	**51** *15.7%*	**56** *13.0%*	**14** *13.7%*
B. Discussed - no change	**4** *3.8%*	**20** *6.2%*	**24** *5.6%*	**6** *5.9%*
C. Discussed - temporary change	**1** *0.9%*	**4** *1.2%*	**5** *1.2%*	**2** *2.0%*
D. Discussed - continuing change	**49** *46.2%*	**186** *57.2%*	**235** *54.5%*	**52** *51.0%*
E. Don't know/not sure/no response	**3** *2.8%*	**10** *3.1%*	**13** *3.0%*	**8** *7.8%*
F. Not applicable	**44** *41.5%*	**54** *16.6%*	**98** *22.7%*	**20** *19.6%*
(d) Managing and taking your medications better				
A. N/A - not discussed	**7** *6.6%*	**44** *13.5%*	**51** *11.8%*	**10** *9.8%*
B. Discussed - no change	**0** *0.0%*	**1** *0.3%*	**1** *0.2%*	**1** *1.0%*
C. Discussed - temporary change	**0** *0.0%*	**2** *0.6%*	**2** *0.5%*	**0** *0.0%*
D. Discussed - continuing change	**62** *58.5%*	**204** *62.8%*	**266** *61.7%*	**62** *60.8%*
E. Don't know/not sure/no response	**4** *3.8%*	**8** *2.5%*	**12** *2.8%*	**6** *5.9%*
F. Not applicable	**33** *31.1%*	**66** *20.3%*	**99** *23.0%*	**23** *22.5%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
(e) Making sure to drink enough water throughout the day				
A. N/A - not discussed	**27** *25.5%*	**108** *33.2%*	**135** *31.3%*	**30** *29.4%*
B. Discussed - no change	**2** *1.9%*	**18** *5.5%*	**20** *4.6%*	**5** *4.9%*
C. Discussed - temporary change	**0** *0.0%*	**2** *0.6%*	**2** *0.5%*	**1** *1.0%*
D. Discussed - continuing change	**44** *41.5%*	**122** *37.5%*	**166** *38.5%*	**41** *40.2%*
E. Don't know/not sure/no response	**3** *2.8%*	**16** *4.9%*	**19** *4.4%*	**8** *7.8%*
F. Not applicable	**30** *28.3%*	**59** *18.2%*	**89** *20.6%*	**17** *16.7%*
(f) Drinking or using other substances less				
A. N/A - not discussed	**2** *1.9%*	**83** *25.5%*	**85** *19.7%*	**32** *31.4%*
B. Discussed - no change	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
C. Discussed - temporary change	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**1** *1.0%*
D. Discussed - continuing change	**1** *0.9%*	**8** *2.5%*	**9** *2.1%*	**2** *2.0%*
E. Don't know/not sure/no response	**2** *1.9%*	**12** *3.7%*	**14** *3.2%*	**7** *6.9%*
F. Not applicable	**101** *95.3%*	**222** *68.3%*	**323** *74.9%*	**60** *58.8%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
27 - 31) Comparison to NCM program	*(Insufficient data to report)*	*(Question discontinued)*	*(Question discontinued)*	*(Question discontinued)*
32 - 33) Dropouts	*(Insufficient data to report)*	*(Question moved to follow-up survey)*	*(Question moved to follow-up survey)*	
A. Not aware of program/did not know was enrolled	*N/A - follow-up survey only*			**0** *0.0%*
B. Did not understand purpose of the program				**0** *0.0%*
C. Did not wish to self-manage care/receive health education				**0** *0.0%*
D. Satisfied with doctor/current health care access without program				**1** *16.7%*
E. Dislike health coach				**0** *0.0%*
F Changed doctors				**1** *16.7%*
G. Disenrolled by doctor				**0** *0.0%*
H. Disenrolled by health coach				**0** *0.0%*
I. Disenrolled by other				**0** *0.0%*
J. Have not health needs at this time				**2** *33.3%*
K. Other				**1** *16.7%*
L. Don't know/not sure				**1** *16.7%*

Survey Questions (numbering based on initial survey)	Initial Survey			Six-Month Follow-up
	2/15 - 4/15	5/15 - 4/16	Aggregate	
34 - 35) Opt outs	*(Insufficient data to report)*	*(Question discontinued)*	*(Question discontinued)*	*(Question discontinued)*
52) Race (multiple categories allowed)				
A. White or Caucasian	**81** *75.0%*	**214** *63.9%*	**295** *66.6%*	**81** *75.0%*
B. Black or African American	**9** *8.3%*	**66** *19.7%*	**75** *16.9%*	**9** *8.3%*
C. Asian	**2** *1.9%*	**1** *0.3%*	**3** *0.7%*	**2** *1.9%*
D. Native Hawaiian or other Pacific Islander	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*	**0** *0.0%*
E. American Indian	**6** *5.6%*	**32** *9.6%*	**38** *8.6%*	**6** *5.6%*
F. Hispanic or Latino	**10** *9.3%*	**20** *6.0%*	**30** *6.8%*	**10** *9.3%*
G. Other/Declined to Answer	**0** *0.0%*	**2** *0.6%*	**2** *0.5%*	**0** *0.0%*

APPENDIX C – DETAILED PARTICIPANT EXPENDITURE DATA

Appendix C includes detailed expenditure data for SoonerCare CCU participants. The exhibits are listed below.

Exhibit	***Description***
C-1	All Participants
C-2	Participants with Asthma as most Expensive Diagnosis
C-3	Participants with CAD as most Expensive Diagnosis
C-4	Participants with COPD as most Expensive Diagnosis
C-5	Participants with Diabetes as most Expensive Diagnosis
C-6	Participants with Heart Failure as most Expensive Diagnosis
C-7	Participants with Hypertension as most Expensive Diagnosis

Exhibit C-1 – Detailed Expenditure Data – All CCU Participants

	CCU Detail - All Participants							
Category of Service	Pre-Engagement: 1-12 Months (Accumulated Total)	Pre-Engagement: 1-12 Months (FY15 Total)	Engaged Period: 3 to 12 Months (Accumulated Total)	Engaged Period: 3 to 12 Months (FY15 Total)	Engaged Period: 13 to 24 Months (FY15 Total)	Percent Change (Pre Accum/ Engage Accum)	Percent Change (FY15 Pre Engage/FY 3-12 Engaged)	Percent Change (FY15 3-12 Engage/FY15 13-24 Engage)
Member Months	5,554	2,567	5,501	2,537	2,059			
Aggregate Expenditures								
Inpatient Services	$3,446,518	$1,223,691	$2,754,234	$1,091,562	$788,645			
Outpatient Services	$1,336,755	$474,646	$1,036,849	$365,864	$318,264			
Physician Services	$1,713,030	$608,327	$1,596,499	$563,591	$489,933			
Prescribed Drugs	$1,672,155	$593,885	$1,522,843	$537,488	$467,378			
Psychiatric Services	$492,907	$175,094	$399,247	$140,941	$122,521			
Dental Services	$41,711	$14,816	$40,550	$14,314	$12,444			
Lab and X-Ray	$294,402	$104,580	$296,610	$104,708	$91,024			
Medical Supplies and Orthotics	$300,254	$106,652	$212,933	$75,164	$65,347			
Home Health and Home Care	$106,202	$37,726	$136,089	$48,042	$41,763			
Nursing Facility	$56,169	$19,954	$12,950	$4,572	$3,971			
Targeted Case Management	$31,365	$13,081	$47,940	$19,103	$13,665			
Transportation	$278,056	$98,761	$286,502	$101,127	$87,797			
Other Practitioner	$44,216	$15,708	$62,979	$22,234	$19,307			
Other Institutional	$216	$77	$77	$27	$24			
Other	$23,587	$8,379	$12,401	$4,378	$3,803			
Total	**$9,837,542**	**$3,495,376**	**$8,418,703**	**$3,093,115**	**$2,525,885**			
PMPM Expenditures								
Inpatient Services	$620.55	$476.70	$500.68	$430.26	$383.02	-19.3%	-9.7%	-11.0%
Outpatient Services	$240.68	$184.90	$188.48	$144.21	$154.57	-21.7%	-22.0%	7.2%
Physician Services	$308.43	$236.98	$290.22	$222.15	$237.95	-5.9%	-6.3%	7.1%
Prescribed Drugs	$301.07	$231.35	$276.83	$211.86	$226.99	-8.8%	-8.4%	7.1%
Psychiatric Services	$88.75	$68.21	$72.58	$55.55	$59.50	-18.2%	-18.6%	7.1%
Dental Services	$7.51	$5.77	$7.37	$5.64	$6.04	-1.8%	-2.2%	7.1%
Lab and X-Ray	$53.01	$40.74	$53.92	$41.27	$44.21	1.7%	1.3%	7.1%
Medical Supplies and Orthotics	$54.06	$41.55	$38.71	$29.63	$31.74	-28.4%	-28.7%	7.1%
Home Health and Home Care	$19.12	$14.70	$24.74	$18.94	$20.28	29.4%	28.8%	7.1%
Nursing Facility	$10.11	$7.77	$2.35	$1.80	$1.93	-76.7%	-76.8%	7.0%
Targeted Case Management	$5.65	$5.10	$8.71	$7.53	$6.64	54.3%	47.8%	-11.9%
Transportation	$50.06	$38.47	$52.08	$39.86	$42.64	4.0%	3.6%	7.0%
Other Practitioner	$7.96	$6.12	$11.45	$8.76	$9.38	43.8%	43.2%	7.0%
Other Institutional	$0.04	$0.03	$0.01	$0.01	$0.01	-176.3%	-64.0%	7.1%
Other	$4.25	$3.26	$2.25	$1.73	$1.85	-46.9%	-47.1%	7.0%
Total	**$1,771.25**	**$1,361.66**	**$1,530.40**	**$1,219.20**	**$1,226.75**	**-13.6%**	**-10.5%**	**0.6%**

	Forecasted (FC) Costs	Actual % of FC
First 12 Months	**$1,977.02**	**77.4%**
Months 13-24	**$2,014.30**	**60.9%**

Exhibit C-2 – Detailed Expenditure Data – Participants w/Asthma as Most Expensive Diagnosis

	CCU Detail - Asthma							
Category of Service	Pre-Engagement: 1-12 Months (Accumulated Total)	Pre-Engagement: 1-12 Months (FY15 Total)	Engaged Period: 3 to 12 Months (Accumulated Total)	Engaged Period: 3 to 12 Months (FY15 Total)	Engaged Period: 13 to 24 Months (FY15 Total)	Percent Change (Accumulated/ Accumulated)	Percent Change (FY15 Pre Engage/FY 3-12 Engaged)	Percent Change (FY15 3-12 Engage/FY15 13-24 Engage)
Member Months	532	195	602	221	196			
Aggregrate Expenditures								
Inpatient Services	$342,927	$122,081	$213,637	$75,583	$65,988			
Outpatient Services	$243,940	$86,896	$152,235	$53,893	$47,043			
Physician Services	$218,648	$77,790	$186,132	$65,811	$57,524			
Prescribed Drugs	$115,405	$41,005	$111,856	$39,497	$34,553			
Psychiatric Services	$117,590	$41,862	$85,367	$30,202	$26,316			
Dental Services	$7,468	$2,655	$3,138	$1,109	$971			
Lab and X-Ray	$35,739	$12,698	$32,257	$11,461	$9,950			
Medical Supplies and Orthotics	$39,017	$13,947	$13,358	$4,746	$4,116			
Home Health and Home Care	$1,053	$374	$1,159	$412	$357			
Nursing Facility	-	-	-	-	-			
Targeted Case Management	-	-	$354	$126	$109			
Transportation	$47,552	$16,895	$23,539	$8,363	$7,259			
Other Practitioner	$4,104	$1,458	$11,926	$4,236	$3,676			
Other Institutional	-	-	-	-	-			
Other	-	-	-	-	-			
Total	**$1,173,444**	**$417,662**	**$834,957**	**$295,438**	**$257,863**			
PMPM Expenditures								
Inpatient Services	$644.60	$626.06	$354.88	$342.01	$336.68	-44.9%	-45.4%	-1.6%
Outpatient Services	$458.53	$445.62	$252.88	$243.86	$240.02	-44.8%	-45.3%	-1.6%
Physician Services	$410.99	$398.92	$309.19	$297.79	$293.49	-24.8%	-25.4%	-1.4%
Prescribed Drugs	$216.93	$210.28	$185.81	$178.72	$176.29	-14.3%	-15.0%	-1.4%
Psychiatric Services	$221.03	$214.68	$141.81	$136.66	$134.27	-35.8%	-36.3%	-1.8%
Dental Services	$14.04	$13.62	$5.21	$5.02	$4.95	-62.9%	-63.2%	-1.2%
Lab and X-Ray	$67.18	$65.12	$53.58	$51.86	$50.77	-20.2%	-20.4%	-2.1%
Medical Supplies and Orthotics	$73.34	$71.53	$22.19	$21.47	$21.00	-69.7%	-70.0%	-2.2%
Home Health and Home Care	$1.98	$1.92	$1.92	$1.86	$1.82	-2.8%	-2.9%	-2.3%
Nursing Facility	-	-	-	-	-	-	-	-
Targeted Case Management	-	-	$0.59	$0.57	$0.56	-	-	-2.1%
Transportation	$89.38	$86.64	$39.10	$37.84	$37.04	-56.3%	-56.3%	-2.1%
Other Practitioner	$7.71	$7.48	$19.81	$19.17	$18.76	156.8%	156.4%	-2.2%
Other Institutional	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total	**$2,205.72**	**$2,141.85**	**$1,386.97**	**$1,336.82**	**$1,315.63**	**-37.1%**	**-37.6%**	**-1.6%**

	Forecasted (FC) Costs	Actual % of FC
First 12 Months	**$1,852.53**	**74.9%**
Months 13-24	**$1,896.69**	**69.3%**

Exhibit C-3 – Detailed Expenditure Data – Participants w/CAD as Most Expensive Diagnosis

	CCU Detail - CAD							
Category of Service	Pre-Engagement: 1-12 Months (Accumulated Total)	Pre-Engagement: 1-12 Months (FY15 Total)	Engaged Period: 3 to 12 Months (Accumulated Total)	Engaged Period: 3 to 12 Months (FY15 Total)	Engaged Period: 13 to 24 Months (FY15 Total)	Percent Change (Accumulated/ Accumulated)	Percent Change (FY15 Pre Engage/FY 3-12 Engaged)	Percent Change (FY15 3-12 Engage/FY15 13-24 Engage)
Member Months	310	111	304	109	97			
Aggregrate Expenditures								
Inpatient Services	$461,793	$165,066	$531,617	$188,857	$163,675			
Outpatient Services	$190,318	$68,024	$106,328	$37,747	$32,755			
Physician Services	$182,752	$65,320	$204,929	$72,751	$63,229			
Prescribed Drugs	$91,127	$32,569	$166,072	$58,953	$51,308			
Psychiatric Services	$40,692	$14,540	$42,214	$14,991	$14,522			
Dental Services	$269	$96	$8,800	$3,123	$2,713			
Lab and X-Ray	$23,117	$8,260	$18,263	$6,486	$5,634			
Medical Supplies and Orthotics	$15,769	$5,635	$31,940	$11,330	$9,843			
Home Health and Home Care	$11,890	$4,249	$14,433	$5,126	$4,443			
Nursing Facility	-	-	-	-	-			
Targeted Case Management	$2,373	$848	$5,743	$2,038	$1,771			
Transportation	$28,933	$10,338	$38,944	$13,830	$12,001			
Other Practitioner	$12,374	$4,422	$4,465	$1,586	$1,376			
Other Institutional	-	-	-	-	-			
Other	-	-	-	-	-			
Total	**$1,061,407**	**$379,367**	**$1,173,748**	**$416,818**	**$363,270**			
PMPM Expenditures								
Inpatient Services	$1,489.65	$1,487.08	$1,748.74	$1,732.63	$1,687.37	17.4%	16.5%	-2.6%
Outpatient Services	$613.93	$612.83	$349.76	$346.31	$337.68	-43.0%	-43.5%	-2.5%
Physician Services	$589.52	$588.47	$674.11	$667.44	$651.85	14.3%	13.4%	-2.3%
Prescribed Drugs	$293.96	$293.41	$546.29	$540.85	$528.94	85.8%	84.3%	-2.2%
Psychiatric Services	$131.26	$130.99	$138.86	$137.53	$149.71	5.8%	5.0%	8.9%
Dental Services	$0.87	$0.87	$28.95	$28.65	$27.97	3233.7%	3206.7%	-2.4%
Lab and X-Ray	$74.57	$74.41	$60.08	$59.51	$58.09	-19.4%	-20.0%	-2.4%
Medical Supplies and Orthotics	$50.87	$50.77	$105.06	$103.94	$101.47	106.5%	104.7%	-2.4%
Home Health and Home Care	$38.35	$38.28	$47.48	$47.03	$45.81	23.8%	22.9%	-2.6%
Nursing Facility	-	-	-	-	-	-	-	-
Targeted Case Management	$7.65	$7.64	$18.89	$18.70	$18.26	146.8%	144.8%	-2.4%
Transportation	$93.33	$93.14	$128.10	$126.88	$123.72	37.3%	36.2%	-2.5%
Other Practitioner	$39.92	$39.84	$14.69	$14.55	$14.19	-63.2%	-63.5%	-2.5%
Other Institutional	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total	**$3,423.89**	**$3,417.72**	**$3,861.01**	**$3,824.02**	**$3,745.05**	**12.8%**	**11.9%**	**-2.1%**

	Forecasted (FC) Costs	Actual % of FC
First 12 Months	**$3,211.50**	**120.2%**
Months 13-24	**$3,285.02**	**114.0%**

Exhibit C-4 – Detailed Expenditure Data – Participants w/COPD as Most Expensive Diagnosis

	CCU Detail - COPD							
Category of Service	Pre-Engagement: 1-12 Months (Accumulated Total)	Pre-Engagement: 1-12 Months (FY15 Total)	Engaged Period: 3 to 12 Months (Accumulated Total)	Engaged Period: 3 to 12 Months (FY15 Total)	Engaged Period: 13 to 24 Months (FY15 Total)	Percent Change (Accumulated/ Accumulated)	Percent Change (FY15 Pre Engage/FY 3-12 Engaged)	Percent Change (FY15 3-12 Engage/FY15 13-24 Engage)
Member Months	534	196	533	197	174			
Aggregrate Expenditures								
Inpatient Services	$500,032	$178,723	$433,150	$154,153	$131,810			
Outpatient Services	$146,787	$52,462	$103,541	$36,824	$31,517			
Physician Services	$236,654	$84,565	$200,228	$71,241	$60,939			
Prescribed Drugs	$126,676	$45,274	$131,130	$46,636	$39,931			
Psychiatric Services	$54,690	$19,549	$39,077	$13,899	$11,903			
Dental Services	$1,552	$555	$6,183	$2,201	$1,884			
Lab and X-Ray	$56,236	$20,095	$37,409	$13,302	$11,408			
Medical Supplies and Orthotics	$47,372	$16,928	$37,083	$13,194	$11,297			
Home Health and Home Care	$35,696	$12,756	$36,577	$13,007	$11,140			
Nursing Facility	$15,593	$5,573	$2,831	$1,007	$863			
Targeted Case Management	$1,841	$658	$1,990	$707	$607			
Transportation	$38,298	$13,685	$36,105	$12,830	$11,013			
Other Practitioner	$2,642	$944	$1,900	$675	$579			
Other Institutional	$216	$77	$0	$0	$0			
Other	$17,942	$6,412	$1,788	$636	$545			
Total	**$1,282,227**	**$458,256**	**$1,068,992**	**$380,312**	**$325,436**			
PMPM Expenditures								
Inpatient Services	$936.39	$911.85	$812.66	$782.50	$757.53	-13.2%	-14.2%	-3.2%
Outpatient Services	$274.88	$267.66	$194.26	$186.92	$181.13	-29.3%	-30.2%	-3.1%
Physician Services	$443.17	$431.45	$375.66	$361.63	$350.22	-15.2%	-16.2%	-3.2%
Prescribed Drugs	$237.22	$230.99	$246.02	$236.73	$229.49	3.7%	2.5%	-3.1%
Psychiatric Services	$102.41	$99.74	$73.32	$70.56	$68.41	-28.4%	-29.3%	-3.0%
Dental Services	$2.91	$2.83	$11.60	$11.17	$10.82	299.2%	294.7%	-3.1%
Lab and X-Ray	$105.31	$102.53	$70.19	$67.52	$65.57	-33.4%	-34.1%	-2.9%
Medical Supplies and Orthotics	$88.71	$86.37	$69.57	$66.98	$64.93	-21.6%	-22.5%	-3.1%
Home Health and Home Care	$66.85	$65.08	$68.62	$66.02	$64.02	2.7%	1.4%	-3.0%
Nursing Facility	$29.20	$28.43	$5.31	$5.11	$4.96	-81.8%	-82.0%	-2.9%
Targeted Case Management	$3.45	$3.36	$3.73	$3.59	$3.49	8.3%	7.0%	-2.9%
Transportation	$71.72	$69.82	$67.74	$65.13	$63.29	-5.5%	-6.7%	-2.8%
Other Practitioner	$4.95	$4.82	$3.57	$3.43	$3.33	-27.9%	-28.8%	-2.9%
Other Institutional	-	-	-	-	-	-	-	-
Other	$33.60	$32.71	$3.35	$3.23	$3.13	-90.0%	-90.1%	-2.9%
Total	**$2,400.77**	**$2,337.65**	**$2,005.61**	**$1,930.52**	**$1,870.32**	**-16.5%**	**-17.4%**	**-3.1%**

	Forecasted (FC) Costs	Actual % of FC
First 12 Months	**$2,385.02**	**84.1%**
Months 13-24	**$2,426.77**	**77.1%**

Exhibit C-5 – Detailed Expenditure Data – Participants w/Diabetes as Most Expensive Diagnosis

Category of Service	CCU Detail - Diabetes							
	Pre-Engagement: 1-12 Months (Accumulated Total)	Pre-Engagement: 1-12 Months (FY15 Total)	Engaged Period: 3 to 12 Months (Accumulated Total)	Engaged Period: 3 to 12 Months (FY15 Total)	Engaged Period: 13 to 24 Months (FY15 Total)	Percent Change (Accumulated/ Accumulated)	Percent Change (FY15 Pre Engage/FY 3-12 Engaged)	Percent Change (FY15 3-12 Engage/FY15 13-24 Engage)
Member Months	1,419	517	1,257	463	411			
Aggregrate Expenditures								
Inpatient Services	$989,330	$352,330	$771,302	$273,665	$237,912			
Outpatient Services	$386,147	$137,612	$362,906	$128,850	$111,777			
Physician Services	$495,940	$176,608	$399,999	$141,914	$123,386			
Prescribed Drugs	$453,232	$161,499	$477,424	$169,489	$147,117			
Psychiatric Services	$140,385	$49,995	$69,472	$24,649	$21,402			
Dental Services	$13,052	$4,653	$14,862	$5,279	$4,582			
Lab and X-Ray	$59,036	$21,032	$81,769	$29,005	$25,218			
Medical Supplies and Orthotics	$56,765	$20,213	$40,036	$14,212	$12,346			
Home Health and Home Care	$37,419	$13,336	$34,981	$12,413	$10,762			
Nursing Facility	$32,928	$11,725	$10,158	$3,604	$3,132			
Targeted Case Management	$11,265	$4,010	$10,446	$3,705	$3,221			
Transportation	$70,704	$25,185	$115,521	$41,003	$35,608			
Other Practitioner	$9,144	$3,258	$10,052	$3,564	$3,101			
Other Institutional	-	-	-	-	-			
Other	$708	$253	$2,277	$809	$701			
Total	**$2,756,056**	**$981,710**	**$2,401,205**	**$852,161**	**$740,267**			
PMPM Expenditures								
Inpatient Services	$697.20	$681.49	$613.61	$591.07	$578.86	-12.0%	-13.3%	-2.1%
Outpatient Services	$272.13	$266.17	$288.71	$278.29	$271.96	6.1%	4.6%	-2.3%
Physician Services	$349.50	$341.60	$318.22	$306.51	$300.21	-9.0%	-10.3%	-2.1%
Prescribed Drugs	$319.40	$312.38	$379.81	$366.07	$357.95	18.9%	17.2%	-2.2%
Psychiatric Services	$98.93	$96.70	$55.27	$53.24	$52.07	-44.1%	-44.9%	-2.2%
Dental Services	$9.20	$9.00	$11.82	$11.40	$11.15	28.5%	26.7%	-2.2%
Lab and X-Ray	$41.60	$40.68	$65.05	$62.65	$61.36	56.4%	54.0%	-2.1%
Medical Supplies and Orthotics	$40.00	$39.10	$31.85	$30.70	$30.04	-20.4%	-21.5%	-2.1%
Home Health and Home Care	$26.37	$25.79	$27.83	$26.81	$26.18	5.5%	3.9%	-2.3%
Nursing Facility	$23.21	$22.68	$8.08	$7.78	$7.62	-65.2%	-65.7%	-2.1%
Targeted Case Management	$7.94	$7.76	$8.31	$8.00	$7.84	4.7%	3.2%	-2.0%
Transportation	$49.83	$48.71	$91.90	$88.56	$86.64	84.4%	81.8%	-2.2%
Other Practitioner	$6.44	$6.30	$8.00	$7.70	$7.54	24.1%	22.1%	-2.0%
Other Institutional	-	-	-	-	-	-	-	-
Other	$0.50	$0.49	$1.81	$1.75	$1.71	263.0%	256.8%	-2.3%
Total	**$1,942.25**	**$1,898.86**	**$1,910.27**	**$1,840.52**	**$1,801.14**	**-1.6%**	**-3.1%**	**-2.1%**

	Forecasted (FC) Costs	Actual % of FC
First 12 Months	**$1,857.42**	**102.8%**
Months 13-24	**$1,894.11**	**95.1%**

Exhibit C-6 – Detailed Expenditure Data – Participants w/Heart Failure as Most Expensive Diagnosis

	CCU Detail - Heart Failure							
Category of Service	Pre-Engagement: 1-12 Months (Accumulated Total)	Pre-Engagement: 1-12 Months (FY15 Total)	Engaged Period: 3 to 12 Months (Accumulated Total)	Engaged Period: 3 to 12 Months (FY15 Total)	Engaged Period: 13 to 24 Months (FY15 Total)	Percent Change (Accumulated/ Accumulated)	Percent Change (FY15 Pre Engage/FY 3-12 Engaged)	Percent Change (FY15 3-12 Engage/FY15 13-24 Engage)
Member Months	61	25	28	12	10			
Aggregrate Expenditures								
Inpatient Services	$14,936	$5,349	$5,002	$1,788	$1,570			
Outpatient Services	$45,703	$16,356	$2,752	$984	$863			
Physician Services	$24,153	$8,650	$9,432	$3,372	$2,960			
Prescribed Drugs	$113,974	$40,742	$29,759	$10,638	$9,342			
Psychiatric Services	$2,418	$865	$1,112	$397	$349			
Dental Services	-	-	-	-	-			
Lab and X-Ray	$731	$261	$1,208	$432	$379			
Medical Supplies and Orthotics	$19,138	$6,849	$11,978	$4,281	$3,759			
Home Health and Home Care	-	-	-	-	-			
Nursing Facility	-	-	-	-	-			
Targeted Case Management	-	-	-	-	-			
Transportation	-	-	-	-	-			
Other Practitioner	-	-	-	-	-			
Other Institutional	-	-	-	-	-			
Other	-	-	-	-	-			
Total	**$221,054**	**$79,073**	**$61,242**	**$21,891**	**$19,222**			
PMPM Expenditures								
Inpatient Services	$244.85	$213.96	$178.65	$149.01	$156.98	-27.0%	-30.4%	5.4%
Outpatient Services	$749.24	$654.26	$98.27	$81.96	$86.35	-86.9%	-87.5%	5.4%
Physician Services	$395.96	$346.02	$336.85	$280.98	$295.98	-14.9%	-18.8%	5.3%
Prescribed Drugs	$1,868.43	$1,629.68	$1,062.81	$886.48	$934.19	-43.1%	-45.6%	5.4%
Psychiatric Services	$39.64	$34.59	$39.73	$33.11	$34.91	0.2%	-4.3%	5.4%
Dental Services	-	-	-	-	-	-	-	-
Lab and X-Ray	$11.99	$10.46	$43.13	$35.97	$37.89	259.7%	244.0%	5.3%
Medical Supplies and Orthotics	$313.73	$273.94	$427.80	$356.78	$375.94	36.4%	30.2%	5.4%
Home Health and Home Care	-	-	-	-	-	-	-	-
Nursing Facility	-	-	-	-	-	-	-	-
Targeted Case Management	-	-	-	-	-	-	-	-
Transportation	-	-	-	-	-	-	-	-
Other Practitioner	-	-	-	-	-	-	-	-
Other Institutional	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total	**$3,623.83**	**$3,162.90**	**$2,187.23**	**$1,824.29**	**$1,922.24**	**-39.6%**	**-42.3%**	**5.4%**

	Forecasted (FC) Costs	Actual % of FC
First 12 Months	**$3,557.10**	**61.5%**
Months 13-24	**$3,616.17**	**53.2%**

Exhibit C-7 – Detailed Expenditure Data – Participants w/Hypertension as Most Expensive Diagnosis

	CCU Detail - Hypertension							
Category of Service	Pre-Engagement: 1-12 Months (Accumulated Total)	Pre-Engagement: 1-12 Months (FY15 Total)	Engaged Period: 3 to 12 Months (Accumulated Total)	Engaged Period: 3 to 12 Months (FY15 Total)	Engaged Period: 13 to 24 Months (FY15 Total)	Percent Change (Accumulated/ Accumulated)	Percent Change (FY15 Pre Engage/FY 3-12 Engaged)	Percent Change (FY15 3-12 Engage/FY15 13-24 Engage)
Member Months	1,316	481	1,312	484	430			
Aggregrate Expenditures								
Inpatient Services	$948,361	$339,008	$451,553	$160,424	$138,089			
Outpatient Services	$256,898	$91,827	$243,545	$86,519	$74,474			
Physician Services	$441,703	$157,904	$478,100	$169,866	$146,203			
Prescribed Drugs	$488,030	$174,455	$371,524	$131,992	$113,650			
Psychiatric Services	$99,128	$35,411	$140,679	$49,945	$43,025			
Dental Services	$13,296	$4,752	$2,401	$853	$757			
Lab and X-Ray	$104,579	$37,379	$119,140	$42,322	$36,426			
Medical Supplies and Orthotics	$41,684	$14,899	$29,550	$10,497	$9,037			
Home Health and Home Care	$18,470	$6,601	$45,898	$16,303	$14,029			
Nursing Facility	$7,767	$2,776	-	-	-			
Targeted Case Management	$3,016	$1,078	$18,359	$6,522	$5,612			
Transportation	$81,812	$29,247	$62,193	$22,097	$19,009			
Other Practitioner	$10,098	$3,609	$22,697	$8,062	$6,939			
Other Institutional	-	-	77.54675	27.54675	$24			
Other	$1,676	$599	$256	$91	$78			
Total	**$2,516,519**	**$899,546**	**$1,985,973**	**$705,521**	**$607,352**			
PMPM Expenditures								
Inpatient Services	$720.64	$704.80	$344.17	$331.45	$321.14	-52.2%	-53.0%	-3.1%
Outpatient Services	$195.21	$190.91	$185.63	$178.76	$173.19	-4.9%	-6.4%	-3.1%
Physician Services	$335.64	$328.28	$364.41	$350.96	$340.01	8.6%	6.9%	-3.1%
Prescribed Drugs	$370.84	$362.69	$283.17	$272.71	$264.30	-23.6%	-24.8%	-3.1%
Psychiatric Services	$75.33	$73.62	$107.23	$103.19	$100.06	42.3%	40.2%	-3.0%
Dental Services	$10.10	$9.88	$1.83	$1.76	$1.76	-81.9%	-82.2%	-0.1%
Lab and X-Ray	$79.47	$77.71	$90.81	$87.44	$84.71	14.3%	12.5%	-3.1%
Medical Supplies and Orthotics	$31.67	$30.97	$22.52	$21.69	$21.02	-28.9%	-30.0%	-3.1%
Home Health and Home Care	$14.04	$13.72	$34.98	$33.68	$32.63	149.3%	145.4%	-3.1%
Nursing Facility	$5.90	$5.77	-	-	-	-	-	-
Targeted Case Management	$2.29	$2.24	$13.99	$13.48	$13.05	510.6%	501.2%	-3.1%
Transportation	$62.17	$60.80	$47.40	$45.65	$44.21	-23.7%	-24.9%	-3.2%
Other Practitioner	$7.67	$7.50	$17.30	$16.66	$16.14	125.5%	122.0%	-3.1%
Other Institutional	-	-	$0.06	$0.06	$0.06	-	-	-3.1%
Other	$1.27	$1.25	$0.20	$0.19	$0.18	-84.7%	-84.9%	-3.1%
Total	**$1,912.25**	**$1,870.16**	**$1,513.70**	**$1,457.69**	**$1,412.45**	**-20.8%**	**-22.1%**	**-3.1%**

	Forecasted (FC) Costs	Actual % of FC
First 12 Months	**$1,988.50**	**76.1%**
Months 13-24	**$2,030.59**	**70.0%**