SoonerCare Choice
Performance & Health Improvement

Health Access Networks – Independent Evaluation

PHPG

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Oklahoma HealthCare Authority

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EXECUTIVE SUMMARY

A. Introduction

The Oklahoma Health Care Authority (OHCA) contracts with three "Health Access Networks" (HANs), as part of the agency's managed system of care for SoonerCare beneficiaries. The HANs are community-based, integrated networks intended to advance program access, quality and cost-effectiveness goals through their support of affiliated PCMH providers. There are three HANs: University of Oklahoma (OU) Sooner HAN; Partnership for Healthy Central Communities (PHCC) HAN; and Oklahoma State University (OSU) HAN.

The HANs offer care management and care coordination to enrolled SoonerCare members with complex health care needs. The HANs also target members who are frequent, and inappropriate, users of the emergency room.

The OHCA retained the Pacific Health Policy Group (PHPG) in 2018 to conduct an independent evaluation of the HAN system as part of a larger study of the SoonerCare program. PHPG evaluated HAN performance in improving access to care and health outcomes among members who were enrolled in care coordination/care management and had received at least one contact (intervention) from a care manager. The evaluation examined all care-managed members, as well as the subset of members who were Aged, Blind or Disabled (ABD). The ABD population, on average, has greater health needs than the non-ABD population.

PHPG evaluated the impact of HAN interventions on inpatient and emergency room utilization and expenditures, by comparing activity in the twelve months preceding care management to the twelve months following initiation of care management. PHPG also evaluated quality-of-care measures specific to members with asthma and diabetes, two prevalent conditions for which the HANs have developed specialized care management initiatives.

In addition to the quantitative evaluation, PHPG conducted telephone surveys of members enrolled with Central Communities who had received assistance with social service needs, or "social determinants of health" (SDOH) that could pose barriers to care. Respondents were asked about the type of assistance they received and its impact on their well-being or the well-being of their child. Central Communities was selected for this portion of the evaluation because of its longstanding efforts with regard to SDOH; PHPG intends to conduct surveys of other HAN members as part of ongoing evaluation activities.

Finally, PHPG evaluated the cost-effectiveness of HAN care management activities by comparing inpatient and emergency room expenditures pre- and post-initiation of care management. The analysis also took into account the $5.00 per member per month (PMPM) fee paid to the HANs for their care management and other activities.

B. Summary of Findings

PHPG evaluated the impact of care management on 1,178 HAN members who were continuously enrolled for at least 24 months during the period covered by the evaluation (January 2015 – June 2018) and had at least one contact with a care manager between January 2016 and June 2017.

Utilization Impact

HAN members generally used inpatient and emergency room services at significantly lower rates in the twelve months following engagement in care management than in the prior twelve months. This was true both for the entire universe of care-managed members and the ABD subset. More specifically:

- The total universe of care-managed members (regardless of reason) experienced a 17 percent decrease in hospital admissions; the ABD subset experienced a 16 percent decrease
- The total universe of care-managed members experienced a 31 percent decrease in emergency room visits; the ABD subset experienced a 20 percent decrease
- Members with asthma experienced a 51 percent decrease in hospital admissions; the ABD subset experienced a 39 percent decrease
- Members with asthma experienced a 36 percent decrease in emergency room visits; the ABD subset experienced a 29 percent decrease
- Members with diabetes experienced a 19 percent decrease in hospital admissions; the ABD subset experienced a 21 percent decrease
- Members with diabetes experienced a four percent decrease in emergency room visits; the ABD subset experienced a three percent increase
- Members classified as "very high utilizers" of the emergency room experienced a 37 percent decrease in ER visits; the ABD subset experienced a 25 percent decrease
- Within this same population, the number of members with 10 or more ER visits in a twelve-month period declined from 48 to 24, while the number with zero ER visits rose from three to 83

> ***"I now know how to handle (my son's) asthma attacks better and we have not gone to the ER as much. This has helped a lot."***

Quality-of-Care

PHPG evaluated the impact of care management on quality-of-care for members with asthma and diabetes. Quality-of-care measures were calculated in accordance with Healthcare Effectiveness Data and Information Set (HEDIS®) specifications, as applicable.

Among members with asthma, PHPG found that percentage with at least one asthma-controlling medication was nearly unchanged, declining by two percent. The number of asthma-controlling medications (prescriptions) per member declined by one percent.

Among members with diabetes, PHPG found that the percentage receiving an LDL-C (cholesterol) screen rose by one percent and the percentage receiving medical attention for nephropathy (kidney function) rose by 12 percent. Conversely, the percentage receiving an HbA1c test was unchanged and the percentage receiving an eye exam declined by five percent.

Overall, no clear trend was identified with respect to quality-of-care measures. This represents an opportunity for improvement through additional member and provider education.

Social Determinants of Health

PHPG surveyed 31 members enrolled in Central Communities (or parents/caretakers of minors) who had received SDOH-related assistance, such as with food, clothing, housing/rent and child care. Respondents gave high marks to their care manager for the relevance and quality of assistance provided. Eighty-seven percent stated the help was "very important" to them and 97 percent stated they were "very satisfied" with the help they received.

"My son's school was not going to let him graduate and she helped me to navigate the school system and get him back on track. I couldn't have done it without her; I was ready to give up."

Ninety-one percent reported that the help received made it easier for them to take care of their own (or their child's) health. The most common reasons cited were that the assistance addressed food insecurity and/or generally aided the member in coping with life challenges.

Care Management Cost-Effectiveness

PHPG evaluated HAN cost-effectiveness by comparing inpatient and ER expenses for care-managed members during the twelve months prior to, and following initiation of care management. PHPG also included the $5.00 PMPM cost for care-managed members in the post-engagement calculation.

Costs were $3.2 million lower in the twelve months following engagement, even after accounting for the $5.00 PMPM fee. The documented savings demonstrate that HAN care management activities are cost-effective and contributing toward improved outcomes for their highest-need members.

1. HAN EVALUATION PURPOSE & SCOPE

A. Introduction

SoonerCare Program

The Oklahoma Health Care Authority (OHCA) is committed as an organization to improving the health and quality of life of SoonerCare members in a cost-effective manner. The OHCA's vision is to effect cultural and behavior changes resulting in healthier Oklahomans, a stable and coordinated provider network and improved outcomes achieved through a focus on preventive care and care coordination.

The OHCA administers the Medicaid program, known as SoonerCare, within a service delivery and care management structure intended to make the most efficient use of public resources to achieve these program goals. SoonerCare operates under a "Section 1115 Research and Demonstration Waiver" from the federal government, which permits the State to provide health and support services to most SoonerCare members through an accountable, or "managed" system of care. The managed care portion of SoonerCare is known as "SoonerCare Choice".

The heart of the SoonerCare Choice managed care system is the Patient Centered Medical Home (PCMH). Under the PCMH model, SoonerCare Choice members select a primary care provider responsible for meeting essential program access and quality of care standards. There were 908 PCMH providers participating in the program in December 2018.

Health Access Networks

In 2010, the OHCA expanded upon the PCMH model by contracting with three "Health Access Networks", or HANs. The HANs are community-based, integrated networks intended to advance program access, quality and cost-effectiveness goals by offering greater care coordination support to affiliated PCMH providers.

The three HANs are: University of Oklahoma (OU) Sooner HAN; Partnership for Healthy Central Communities (PHCC) HAN; and Oklahoma State University (OSU) HAN. Each HAN is a non-profit, administrative entity that works with affiliated providers to coordinate and improve the quality of care provided to SoonerCare Choice members. The HANs receive a nominal $5.00 per member per month (PMPM) payment.

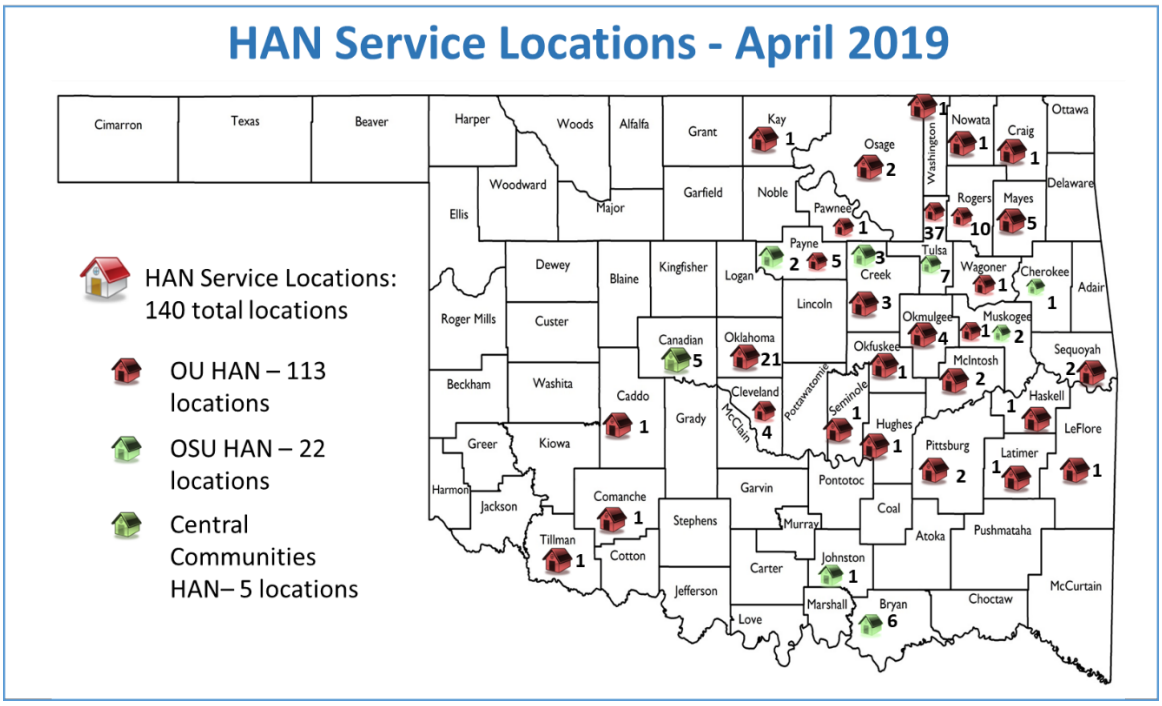
The HANs offer care management and care coordination to enrolled SoonerCare Choice members with complex health care needs. The HANs also work to establish new initiatives to address complex medical, social and behavioral health issues. For example, the HANs have implemented evidence-based protocols for care management of Aged, Blind and Disabled (ABD) members with, or at risk for, complex/chronic health conditions such as asthma and

diabetes. The HANs also target members who are frequent, and inappropriate, users of the emergency room.

In October 2018, total HAN enrollment was 176,323. OU Sooner HAN served approximately 87 percent of the members, followed by OSU HAN with 11 percent and PHCC HAN with two percent. The three HANs in aggregate provided care management to approximately 10,000 members with significant physical, behavioral health and/or social service needs.

The HANs historically have operated in only a portion of the State and have been classified by the federal Centers for Medicare and Medicaid Services (CMS) as a "pilot" program. CMS recently approved statewide expansion of the HANs and the OHCA is collaborating with the HANs to expand geographic coverage and the number of members who receive care management services.

The HANs currently are affiliated with PCMH providers practicing at 140 locations in 34 counties.



B. HAN Evaluation

Evaluation Purpose

The OHCA's overarching goal for the SoonerCare program is to address the health care needs of Oklahomans through provision of high quality, accessible and cost-effective care. The OHCA employs an agency-wide strategic planning process to advance this vision.

The current five-year strategic plan was developed in 2018 and identified the need for a durable OHCA Performance & Health Improvement structure to support quality-related initiatives. The strategic plan also committed to evaluating and tracking agency progress over time.

The OHCA tracks performance across multiple categories that capture the range of agency activities. Two of the most critical are[1]:

- Access to Care, including primary and preventive health services; and
- Care Management, including for chronic conditions prevalent in the SoonerCare population, such as asthma, diabetes, heart failure and hypertension.

Access and Prevention

Access to care is a basic expectation for managed care programs and is fundamental to improving member health and outcomes. If access to primary and preventive care is restricted due to a lack of providers or available appointments, members are more likely to go to the emergency room for services that are better suited to a doctor or nurse practitioner's office. Members also are at greater risk of having medical programs go undetected at an early stage, resulting in higher acuity and costlier treatment, including a greater likelihood of hospitalization.

The OHCA's Patient Centered Medical Homes and Health Access Networks have front-line responsibility for ensuring access to preventive and primary care services. For example, the OHCA has partnered with the HANs to identify and reach-out to members who are frequent users of the emergency room for non-emergent care. The HANs counsel these members and help to connect them to a Patient Centered Medical Home.

Chronic Care Management

Chronic diseases are among the costliest of all health problems. Providing care to individuals with chronic diseases, many of whom meet the federal disability standard, has placed a significant burden on state Medicaid budgets. The federal Centers for Disease Control estimates that total expenditures related to treating selected major chronic conditions in

[1] Other categories include mental health & substance use disorder treatment, long term care and administration & cost containment.

Oklahoma will reach nearly $10.5 billion in 2020. The estimated portion attributable to SoonerCare members will be more than $1.2 billion (state and federal).

The OHCA's objective is to ensure that all SoonerCare members with chronic conditions have access to care management. The Health Access Networks support this objective by providing care management to members with complex/chronic health needs.

The OHCA monitors Performance and Health Improvement to identify favorable or unfavorable trends at both the agency level and with respect to key partners, including the Health Access Networks. The OHCA, through its PHIP strategy, uses evaluation findings to identify priority areas for improvement and assess whether interventions are having the intended impact on performance.

Independent Evaluator

The OHCA has retained the Pacific Health Policy Group (PHPG) to conduct an independent evaluation of the SoonerCare program overall, as well as targeted reviews of major program components, including the Health Access Networks. PHPG is a national consulting firm that specializes in the development and evaluation of health care programs serving publicly-funded populations, including Medicaid beneficiaries.

Evaluation Scope and Methodology

The majority of members served by PCMH providers are healthy children and adolescents. Although the HANs support the activities of aligned PCMH providers across all members, much of their activity is directed toward the subset of members with complex/chronic health care needs and members facing barriers to care. The HANs are responsible for identifying these members and offering care coordination/care management appropriate to the members' needs.

Members with Complex/Chronic Health Care Needs

PHPG examined HAN performance in improving access to care and health outcomes among members with complex/chronic health care needs who were enrolled in care coordination/care management and had received at least one contact (intervention) from a care manager.

The three HANs provided PHPG with care management files that identified member date of enrollment, reason for enrollment and contact/intervention history. PHPG selected members with at least one care management contact between January 2016 and July 2017.

PHPG also obtained SoonerCare paid claims data for January 2015 through June 2018 and eligibility data for July 2015 through June 2018. The eligibility data was used to restrict the evaluation universe to members who had been enrolled continuously[2] in the twelve months

[2] Defined as being enrolled for at least 11 of the 12 months, to allow for brief lapses in coverage due to late re-certification by the member.

preceding and twelve months following the date of the member's first care management contact.

Although the HANs care manage members with a wide variety of conditions, all three have developed specialized programs for members with asthma and two have developed specialized programs for members with diabetes. In addition, the OHCA has asked the HANs to target members who are aged, blind and disabled[3] (ABD) in recognition that a high percentage have chronic conditions and complex needs.

PHPG stratified the evaluation in accordance with these priority groups. Specifically, PHPG evaluated HAN performance with respect to:

- All members enrolled in care management, regardless of condition (total members and ABD subset)
- Members enrolled for care management of asthma (total members and ABD subset)
- Members enrolled for care management of diabetes (total members and ABD subset)

The number of cases evaluated is presented below. Although the table breaks-out case counts by HAN, the evaluation was conducted in the aggregate and was not HAN-specific.

Evaluation Universe – Members with Complex/Chronic Health Needs

HAN	Asthma	Diabetes	Other	Total
Central Comm.	5	--	65	70
OSU HAN	39	32	326	397
OU SoonerHAN	250	168	293	711
Total	**294**	**200**	**684**	**1,178**

PHPG evaluated the impact of HAN interventions on inpatient and emergency room utilization and expenditures, by comparing activity in the twelve months preceding care management to the twelve months following initiation of care management. PHPG also evaluated quality-of-care measures specific to members with asthma and diabetes, as described in greater detail in the next chapter.

Very High Emergency Room Utilizers

PHPG evaluated HAN interventions with members identified as very high utilizers of the emergency room. High emergency room utilization can indicate barriers to care or that a member has underlying needs that have not been addressed adequately by his or her PCMH. High utilization also can be due to a member's lack of understanding as to the importance of seeing the PCMH for non-emergent care.

The OHCA permits each HAN to set a threshold for intervening due to very high emergency room utilization. On average, the members in this category (across the HANs) visited the ER

[3] ABD Medicaid only (not eligible for Medicare)

at an annualized rate of nearly 10 visits per year, prior to intervention. PHPG compared utilization pre- and post-intervention.

The number of cases evaluated is presented below. Once again, although the table breaks-out case counts by HAN, the evaluation was conducted in the aggregate and was not HAN-specific.

Evaluation Universe – Very High ER Utilizers

HAN	Count
Central Communities	79
OSU HAN	22
OU SoonerHAN	436
Total	**537**

Social Determinants of Health

PHPG also conducted a targeted review of the efforts of Central Communities HAN to assist members with social determinants of health (SDOH). In many cases, social determinants (e.g., food or housing insecurity) can present barriers to care if left unaddressed.

PHPG identified 104 members in the Central Communities care management database who had received assistance with SDOH. In some cases, the member received assistance; in other cases, a parent/caretaker received help on behalf of a child, who was the actual SoonerCare member.

PHPG conducted telephone interviews with 33 of the households, inquiring about the type and effectiveness of SDOH assistance received through the HAN. Although qualitative in nature, the respondents provided useful insights into the importance of the assistance in overcoming barriers to care.

This portion of the evaluation was limited to Central Communities, to allow for testing and refinement of the survey instrument. PHPG intends to conduct similar surveys of members in the remaining two HANs as part of ongoing evaluation activities.

2. HAN EVALUATION FINDINGS

A. Introduction

This chapter contains evaluation findings by focus area. Results are presented first for members in the asthma and diabetes subgroups. The third section presents findings for members who are very high ER utilizers. The fourth section includes findings from PHPG's targeted evaluation of Central Communities' SDOH outreach. Except for the SDOH analysis, results are provided both for members in total and for the ABD member subset.

The final section contains data for all care-managed members, regardless of reason for engagement. The section includes an analysis of HAN cost effectiveness that takes into account both the savings achieved by the HANs in care managing members and the monthly $5.00 per member per month payment made by the OHCA for each member enrolled with a HAN.

B. Members with Asthma (Total and ABD Subset)

PHPG evaluated the impact of HAN care management on 294 members (68 ABD and 226 other) assigned to a care manager due to having asthma, either alone or in combination with other conditions. Care management interventions typically included a combination of member education, assistance with medical appointments and addressing barriers to care.

PHPG calculated inpatient hospital and emergency room utilization and expenditures for these members during the twelve months prior to, and twelve months following initiation of care management. PHPG also evaluated two quality-of-care measures related to use of asthma-controlling prescriptions[4].

Inpatient Hospital Utilization

The table on the following page presents inpatient utilization data separately for all care-managed members and for the ABD subset. As it shows, hospital admissions declined by over 50 percent for all members and nearly 39 percent for ABD members in the twelve-month period following initiation of care management. Expenditures also declined, although by a smaller percentage.

[4] All quality-of-care measures in this chapter were calculated in accordance with Healthcare Effectiveness Data and Information Set (HEDIS®) specifications, where applicable. HEDIS is a comprehensive set of standardized performance measures designed to measure health care provider performance.

Members with Asthma – Hospital Utilization Trend

All Members	Prior 12 Months	Subsequent 12 Months	Percentage Change
Inpatient Admissions	201	99	-50.7%
Expenditures	$648,511	$391,041	-39.7%
Admissions per 1,000 Member Months[5]	62.2	30.6	**-50.7%**
ABD Members Only	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Inpatient Admissions	67	41	-38.8%
Expenditures	$246,092	$229,363	-6.8%
Admissions per 1,000 Member Months	89.6	54.8	**-38.8%**

Emergency Room Utilization

The table below presents ER utilization data for all care-managed members and the ABD subset. As it shows, ER visits declined by nearly 36 percent for all members and approximately 29 percent for ABD members in the twelve-month period following initiation of care management. Expenditures also declined by similar percentages.

Members with Asthma – ER Visit Trend

All Members	Prior 12 Months	Subsequent 12 Months	Percentage Change
ER Visits	1,404	901	-35.8%
Expenditures	$736,022	$501,052	-31.9%
Visits per 1,000 Member Months[6]	434.1	278.6	**-35.8%**
ABD Members Only	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
ER Visits	368	261	-29.1%
Expenditures	$220,570	$175,184	-20.6%
Visits per 1,000 Member Months	492.0	348.9	**-29.1%**

[5] Admissions per 1,000 member months represents the number of members, out of a population of 1,000, who are admitted to the hospital in an average month.
[6] Visits per 1,000 member months represents the number of members, out of a population of 1,000, who visit the ER in an average month.

Quality-of-Care

PHPG evaluated quality-of-care with respect to member use of asthma-controlling medications. The table below presents information on the number and percentage of members with at least one asthma-controlling medication, as well as the average number of prescriptions per member. As it shows, the rates remained relatively steady across the pre- and post-intervention time periods. (Information is for all members – ABD and non-ABD.)

Members with Asthma – Asthma Controlling Medications

Members with at least one asthma-controlling medication	Prior 12 Months	Subsequent 12 Months	Change
Members	239	235	(4)
Percent of Total	81.3%	79.9%	-1.7%
Number of asthma-controlling medications	**Prior 12 Months**	**Subsequent 12 Months**	**Change**
Total Prescriptions	1,670	1,451	(219)
Average Prescriptions per Member	5.7	4.9	-0.8

C. Members with Diabetes (Total and ABD Subset)

PHPG evaluated the impact of HAN care management on 200 members (143 ABD and 57 other) assigned to a care manager due to having diabetes, either alone or in combination with other conditions. Similar to members with asthma, diabetes care management interventions typically included a combination of member education, assistance with medical appointments and addressing barriers to care.

PHPG calculated inpatient hospital and emergency room utilization and expenditures for these members during the twelve months prior to, and twelve months following initiation of care management. PHPG also evaluated four quality-of-care measures related to treatment of persons with diabetes.

Inpatient Hospital Utilization

The table below presents inpatient utilization data for all care-managed members and the ABD subset. As it shows, hospital admissions declined by over 19 percent for all members and nearly 21 percent for ABD members in the twelve-month period following initiation of care management. Expenditures also declined by similar percentages.

Members with Diabetes – Hospital Utilization Trend

All Members	Prior 12 Months	Subsequent 12 Months	Percentage Change
Inpatient Admissions	237	191	-19.4%
Expenditures	$1,799,144	$1,430,826	-20.5%
Admissions per 1,000 Member Months	107.7	86.8%	**-19.4%**
ABD Members Only	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Inpatient Admissions	192	152	-20.8%
Expenditures	$1,555,403	$1,061,699	-31.7%
Admissions per 1,000 Member Months	122.1	96.6	**-20.8%**

Emergency Room Utilization

The table below presents ER utilization data for all care-managed members and the ABD subset. As it shows, ER visits were relatively flat, declining by four percent for all members and increasing by three percent for ABD members in the twelve-month period following initiation of care management[7]. Expenditures rose modestly over the same period.

Members with Diabetes – ER Visit Trend

All Members	Prior 12 Months	Subsequent 12 Months	Percentage Change
ER Visits	818	784	-4.2%
Expenditures	$686,005	$689,287	0.5%
Visits per 1,000 Member Months	371.8	356.4	**-4.2%**
ABD Members Only	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
ER Visits	535	550	2.8%
Expenditures	$473,989	$512,089	8.0%
Visits per 1,000 Member Months	340.1	349.7	**2.8%**

Quality-of-Care

Diabetes quality-of-care was evaluated through four measures related to the testing/early detection or treatment of diabetes-related complications. Specifically:

- Members receiving an LDL-C test (cholesterol screening)
- Members receiving an HbA1c test (blood sugar screening)
- Members receiving medical attention for nephropathy (kidney function)
- Members receiving a retinal eye exam

The table on the following page presents findings for the measures. As it illustrates, LDL-C and HbA1c activity was stable, while retinal eye exams declined slightly. The most significant change was for nephropathy treatment, which increased by nearly 12 percent. (Information is for all members – ABD and non-ABD.)

[7] Although not presented in the charts, PHPG also analyzed trends at six-months pre- and post-intervention. ER utilization declined 20.4 percent for all members and 13.9 percent for ABD members during this narrower timeframe. The results suggest care management affected ER utilization in the short term but the impact subsidized over time.

Members with Diabetes – Quality-of-Care Measures

Members Receiving LDL-C Test	Prior 12 Months	Subsequent 12 Months	Change
Members	130	131	1
Percent of Total	65.0%	65.5%	0.7%
Members Receiving HbA1c Test	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Members	160	160	--
Percent of Total	80.0%	80.0%	--
Members Receiving Medical Attention for Nephropathy	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Members	85	95	10
Percent of Total	42.5%	47.5%	11.8%
Members Receiving Retinal Eye Exam	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Members	76	72	(4)
Percent of Total	38.0%	36.0%	-5.3%

D. Very High ER Utilizers (Total and ABD Subset)

PHPG evaluated the impact of HAN care management on 537 members (173 ABD and 364 other) assigned to a care manager due to very high ER utilization. Care management interventions typically included a combination of member education about proper use of the ER, assistance with medical appointments and addressing barriers to care.

PHPG calculated emergency room utilization and expenditures for these members during the twelve months prior to, and twelve months following initiation of care management. ER use was measured in terms of visits per 1,000 member months and corresponding expenditures, as well as by visit "tiers" (members with 10 or more visits; members with six or more visits; members with three or more visits; and members with no visits).

Emergency Room Utilization

The table below presents ER utilization data in terms of total visits and visits per 1,000 member months for all care-managed members and the ABD subset. As it shows, ER visits declined by 37 percent for all members and 25 percent for ABD members in the twelve-month period following initiation of care management. Expenditures also declined by similar percentages.

Very High ER Utilizers – ER Visit Trend

All Members	Prior 12 Months	Subsequent 12 Months	Percentage Change
ER Visits	4,672	2,933	-37.2%
Expenditures	$2,772,525	$1,860,529	-32.9%
Visits per 1,000 Member Months	790.9	496.5	**-37.2%**
ABD Members Only	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
ER Visits	2,049	1,536	-25.0%
Expenditures	$1,357,110	$1,033,286	-23.9%
Visits per 1,000 Member Months	346.9	260.0	**-25.0%**

The tables on the following page present average ER visit rates and ER visit activity by "tier" for all members. As they show, the average number of ER visits per member declined from nearly nine in the twelve-month period prior to engagement to fewer than six in the subsequent twelve months. The percentage of members with three, six or 10 or more visits in a twelve-month period also dropped significantly, while over 15 percent of members registered zero visits in the twelve months after initiation of care management.

Very High ER Utilizers – Average Visits per Member

All Members	Prior 12 Months	Subsequent 12 Months	Percentage Change
Visits	4,672	2,933	-37.2%
Average per Member	8.7	5.5	-37.2%

Very High ER Utilizers – Members by Visit "Tier"

Members with 10 or More Visits	Prior 12 Months	Subsequent 12 Months	Percentage Change
Members	48	24	-50.0%
Percentage	8.9%	4.5%	
Members with 6 or More Visits	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Members	326	167	-48.8%
Percentage	60.7%	31.1%	
Members with 3 or More Visits	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Members	480	301	-37.3%
Percentage	8.9%	4.5%	
Members with No Visits	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Members	3	83	2,666.7%
Percentage	0.6%	15.5%	

E. Members with Social Determinant of Health (SDOH) Needs

PHPG identified 104 members in the Central Communities care management database who had received assistance with SDOH, as indicated by care manager notes. This included assistance provided directly to an adult member or to the enrolled child of a parent/caretaker.

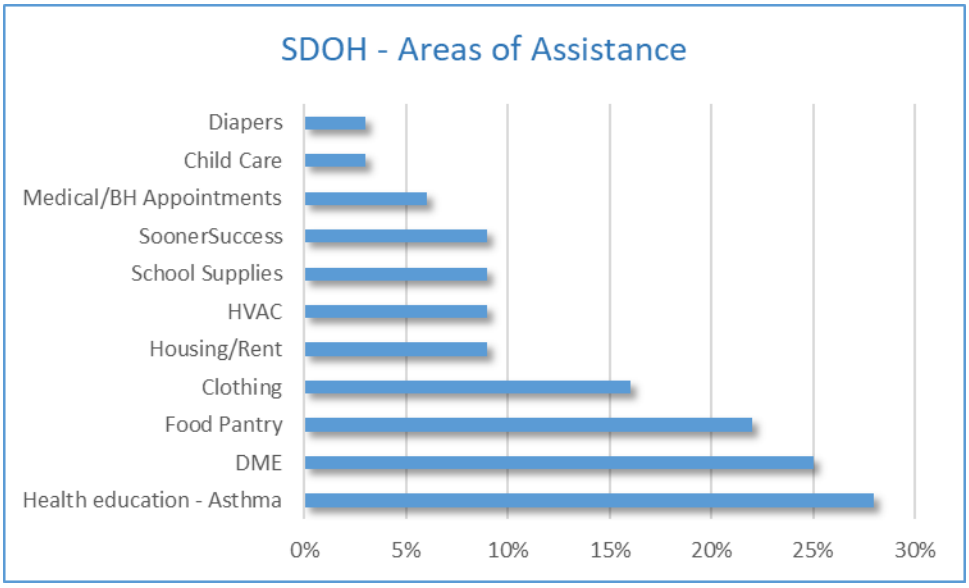
PHPG conducted a telephone survey with 33 of the members in November 2018. The survey explored respondent awareness of the HAN and care manager, the nature of assistance received and the value of this assistance in addressing social service needs and/or reducing barriers to care. Due to the small sample size, results should be considered "qualitative" in nature.

Awareness of HAN

Only five of the respondents reported being familiar with the name "Central Communities" and only two recalled being helped by a Central Communities care manager. However, when given the name of their care manager, 31 of 33 reported knowing and interacting with this individual, suggesting that members identify much more strongly with the person helping them than the HAN itself.

Assistance Provided

Respondents reported receiving help in a variety of areas, some of which had a clinical component. The chart below presents the areas of assistance cited by respondents (multiple responses allowed).



Satisfaction with Assistance

Respondents gave high marks to their care manager for the relevance and quality of assistance provided. Eighty-seven percent stated the help was "very important" to them and 97 percent stated they were "very satisfied" with the help they received.

Ninety-one percent reported that the help received made it easier for them to take care of their own (or their child's) health. The most common reasons cited were that the assistance addressed food insecurity and/or generally aided the member in coping with life challenges.

A representative sample of respondent comments is presented below.

I now know how to handle (my son's) asthma attacks better and we have not gone to the ER as much. This has helped a lot.

My son's school was not going to let him graduate and she helped me navigate the school system to get him back on track. I couldn't have done it without her, I was ready to give up.

She helped us get (my child's) doctor to do lab work in his office instead of going to the lab. It has to be done every three months so this helped us a lot.

Having the diapers given to us for (our daughter) is a huge help. She goes through so many a day that we could not keep up buying them ourselves.

She got us tickets to things going on in our community which was so good. Got us plugged into the community.

F. All Care-Managed Members

PHPG evaluated the impact of HAN care management across all 1,715 care-managed members identified for the evaluation (640 ABD and 1,075 other), including the populations presented in previous sections.

PHPG calculated inpatient hospital and emergency room utilization and expenditures for these members during the twelve months prior to, and twelve months following initiation of care management. PHPG also evaluated HAN cost effectiveness, taking into account both the savings achieved through reductions in utilization and the cost associated with the $5.00 PMPM HAN payment.

Inpatient Hospital Utilization

The table below presents inpatient utilization data for all care-managed members, regardless of reason for engagement, and the ABD subset. As it shows, hospital admissions declined by over 17 percent for all members and over 16 percent for ABD members in the twelve-month period following initiation of care management. Expenditures declined by even greater percentages.

All Care-Managed Members – Hospital Utilization Trend

All Members	Prior 12 Months	Subsequent 12 Months	Percentage Change
Inpatient Admissions	1,568	1,299	-17.2%
Expenditures	$7,731,444	$5,850,746	-24.3%
Admissions per 1,000 Member Months	83.1	68.9	**-17.2%**
ABD Members Only	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
Inpatient Admissions	847	708	-16.4%
Expenditures	$5,339,453	$4,152,400	-22.2%
Admissions per 1,000 Member Months	120.3	100.6	**-16.4%**

Emergency Room Utilization

The table below presents ER utilization data for all care-managed members, regardless of reason for engagement, and the ABD subset. As it shows, ER visits declined by 31 percent for all members and more than 20 percent for ABD members in the twelve-month period following initiation of care management. Expenditures also declined by similar percentages.

All Care-Managed Members – ER Visit Trend

All Members	Prior 12 Months	Subsequent 12 Months	Percentage Change
ER Visits	8,341	5,752	-31.0%
Expenditures	$5,215,645	$3,798,645	-27.2%
Visits per 1,000 Member Months	442.1	304.9	**-31.0%**
ABD Members Only	**Prior 12 Months**	**Subsequent 12 Months**	**Percentage Change**
ER Visits	3,509	2,795	-20.3%
Expenditures	$2,506,557	$2,030,218	-19.0%
Visits per 1,000 Member Months	498.4	397.0	**-20.3%**

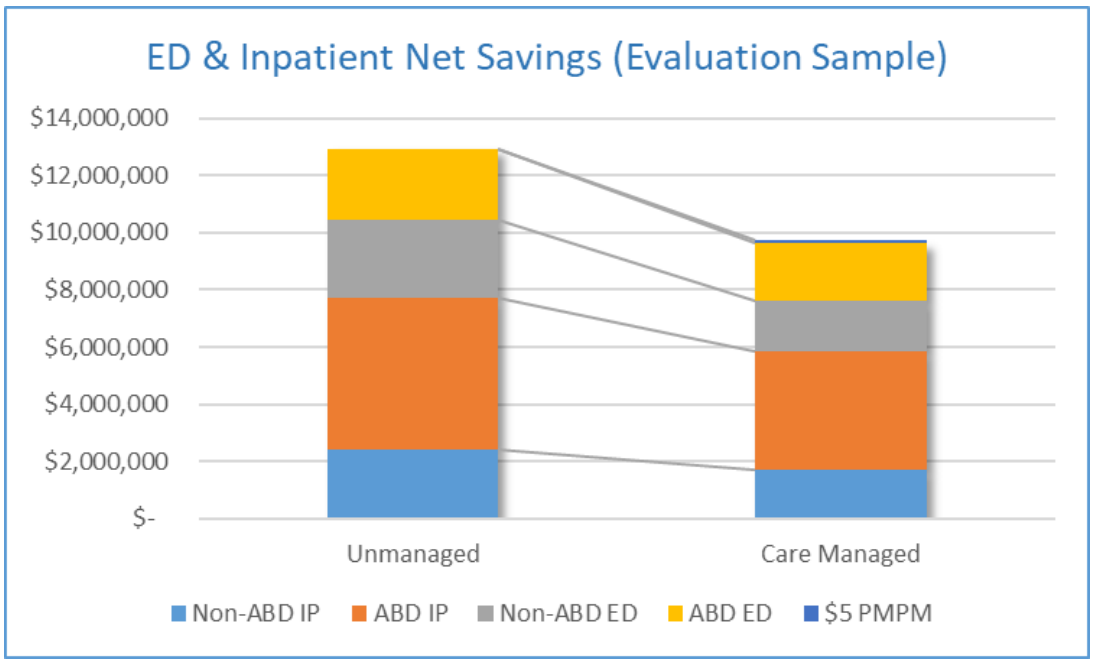
HAN Cost-Effectiveness

PHPG evaluated HAN cost-effectiveness by comparing inpatient and ER expenses for care-managed members during the twelve months prior to, and following initiation of care management. PHPG also included the $5.00 PMPM cost for care-managed members in the post-engagement calculation.

The chart on the following page presents the pre- and post-care management cost comparison. As it illustrates, costs were $3.2 million lower in the twelve months following engagement, even after accounting for the $5.00 PMPM fee.

It should be noted that the analysis was limited to inpatient and ER costs and did not examine other service costs pre- and post-engagement. The analysis also was restricted to members in care management and did not include other HAN members, i.e., those enrolled but not receiving care management during the period of the evaluation.

The documented savings demonstrate that HAN care management activities are cost-effective and contributing toward improved outcomes for their highest-need members.


ED & Inpatient Net Savings (Evaluation Sample)
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$-
Unmanaged
Care Managed
Non-ABD IP
ABD IP
Non-ABD ED
ABD ED
$5 PMPM