



OKLAHOMA
Health Care Authority

SoonerCare Section 1115 Waiver Evaluation

DEMONSTRATION YEARS 21 – 23 (CY 2016 – 2018)

Prepared by the Pacific Health Policy Group for:
State of Oklahoma
Oklahoma Health Care Authority

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INDEPENDENT EVALUATION

The independent evaluation of the SoonerCare Demonstration was conducted by The Pacific Health Policy Group (PHPG). PHPG is solely responsible for the analysis and findings presented in this report.

PHPG wishes to acknowledge the cooperation of the Oklahoma Health Care Authority in obtaining the necessary data for completion of the evaluation. PHPG also wishes to acknowledge the contribution of the OHCA's contracted Consumer Assessment of Healthcare Providers and Systems (CAHPS®) surveyor, Escalent, for providing stratified CAHPS data used in evaluating the performance of SoonerCare Health Access Networks.

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A. EXECUTIVE SUMMARY

Introduction

Medicaid is the largest health care provider in the state of Oklahoma. In State Fiscal Year (SFY) 2018, the program provided coverage to over 860,000 Oklahomans, out of a total population of approximately four million (22 percent). The Oklahoma Health Care Authority (OHCA), Oklahoma's Single State Agency for Medicaid, administers SoonerCare, the State's Section 1115(a) Research and Demonstration waiver, which includes SoonerCare Choice managed care and Insure Oklahoma.

The "SoonerCare" Demonstration was originally approved for a five year period commencing on January 1, 1996. The Demonstration has received multiple extensions since expiration of the original five year authority. As a condition of re-approval, the OHCA must arrange for an independent evaluation of the program at the conclusion of each extension period.

The evaluation findings presented in this report are for the three year extension period beginning January 1, 2016 and ending on December 31, 2018. The OHCA retained the Pacific Health Policy Group (PHPG) to conduct the independent evaluation in accordance with a design approved by the federal Centers for Medicare and Medicaid Services (CMS).

SoonerCare Choice Program

The OHCA's overarching goals for the SoonerCare Choice program are to meet the health care needs of Oklahomans through provision of high quality, accessible and cost effective care. The OHCA seeks to achieve these goals through two beneficiary-centered initiatives: Health Access Networks (HANs) and the SoonerCare Health Management Program (HMP).

The Demonstration operates statewide under an enhanced Primary Care Case Management (PCCM) model in which the OHCA contracts directly with primary care providers to serve as patient centered medical homes (PCMH) for SoonerCare Choice members. These providers serve as the foundation for both the HAN and HMP initiatives.

SoonerCare Health Access Networks

SoonerCare Health Access Networks are non-profit, administrative entities that work with affiliated providers to coordinate and improve the quality of care provided to SoonerCare Choice members. The HANs employ care managers to provide telephonic and in-person care management and care coordination to SoonerCare Choice members with complex health care needs who are enrolled with affiliated PCMH providers. 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 ABD members with, or at risk for, complex/chronic health conditions, as well as TANF and related members with asthma and diabetes, among other conditions.

The OHCA contracts with three HANs: University of Oklahoma (OU) Sooner HAN; Partnership for Healthy Central Communities (PHCC) HAN; and Oklahoma State University (OSU) HAN. The HANs began operations in 2010 with combined enrollment of approximately 25,000. In December 2018, combined HAN enrollment was 172,950.

SoonerCare Health Management Program

The SoonerCare Health Management Program (HMP) is an initiative under the Demonstration developed to offer care management to SoonerCare Choice members most at-risk for chronic disease and other adverse health events. The program is administered by the OHCA and is managed by a vendor selected through a competitive procurement. The program is authorized to operate statewide.

The SoonerCare HMP serves SoonerCare Choice beneficiaries ages four through 63 who have one or more chronic illnesses and are at high risk for adverse outcomes and increased health care expenditures. The program is holistic, rather than disease-specific, but prominent conditions of members in the program include asthma, cardiovascular disease, chronic obstructive pulmonary disorder, diabetes, heart failure and hypertension.

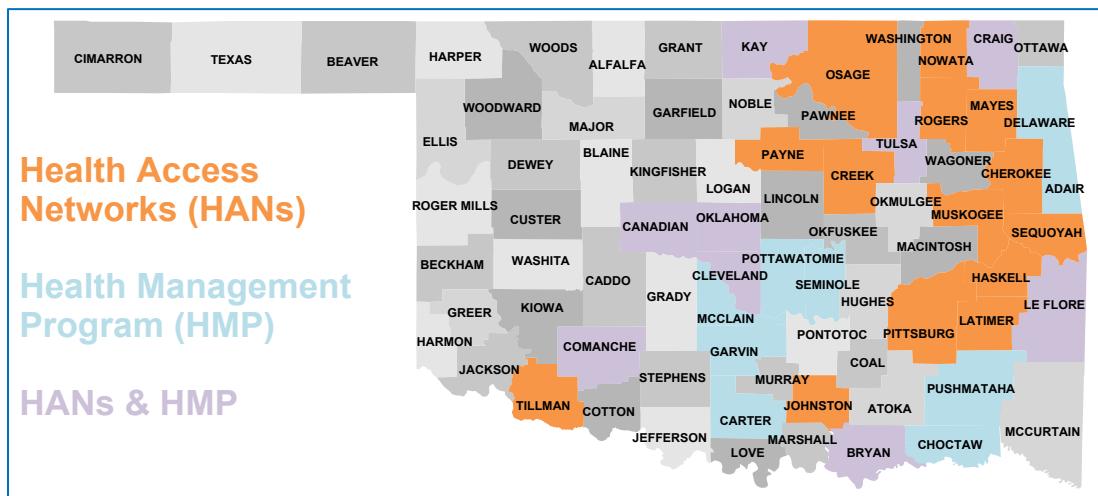
The SoonerCare HMP was implemented in 2008 and has evolved over time. During its first years, individuals were stratified into two levels of care, with the highest-risk segment placed in "Tier 1" and the remainder in "Tier 2." Tier 1 participants received face-to-face nurse care management while Tier 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.

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 enhance beneficiary 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 work closely with practice staff and provide care coordination and health education to participating members. Some health coaches are dedicated to a single practice with one or more providers while others are shared between multiple practice sites within a geographic area. A smaller portion of SoonerCare HMP beneficiaries receive telephonic health coaching. Enrollment during the 2016 – 2018 period averaged approximately 6,000 per year.

Exhibit ES-1 on the following page identifies the counties with one or more HAN-affiliated PCMH providers in December 2018, as well as counties in which one or more HMP health coaches was embedded in a PCMH practice. Thirty-two out of 77 counties had one or both programs in operation and serving beneficiaries at the conclusion of the three year waiver period. (The PCMH program operates in all 77 counties.)

Exhibit ES-1 – HAN and HMP Counties (December 2018)



Note: Map does not depict counties with telephonic-only HMP beneficiaries.

Retroactive Eligibility

The SoonerCare Demonstration also includes a waiver of retroactive eligibility for a portion of the SoonerCare population. The waiver has been a component of SoonerCare since the program's inception. During the three year period covered by the evaluation, the waiver applied to most SoonerCare Choice beneficiaries, the primary exception being persons eligible due to Aged, Blind or Disabled (ABD) status.

Evaluation Scope and Methodology

The SoonerCare evaluation was organized around a series of hypotheses related to the OHCA's access, quality and cost effectiveness goals. The hypotheses were tested through analysis of 68 discrete performance measures (some with multiple components).

Exhibit ES-2 on the following page summarizes key hypotheses by goal area and waiver component¹.

¹ Some hypotheses have been edited for brevity but are presented in their entirety in the body of the report. The HAN and HMP evaluations also included basic questions about enrollment, which are addressed in the body of the report but omitted from the executive summary.

Exhibit ES-2 – Evaluation Hypotheses

Goal Area	HAN	HMP	Retroactive Eligibility
Access	The implementation and expansion of the HANs will improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs.	Incorporating health coaches into primary care practices will result in increased contact with HMP beneficiaries by the PCP ² (measured through claims encounter data), as compared to baseline, when care management occurred via telephonic or face-to-face contact with a nurse care manager.	The State's (OHCA's) enrollment systems ensure readiness, eligibility and timely enrollment.
Quality	The implementation and expansion of the HANs will improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, with specific focus on the populations at greatest risk, including those with one or more chronic illnesses.	<p><i>Beneficiary Characteristics</i> - The implementation of the HMP, including health coaches and practice facilitation, will result in a change in the characteristics of the beneficiary population enrolled in the HMP (characteristics such as disease burden and comorbidity) compared to baseline³.</p> <p><i>HEDIS</i> - The health coach will improve the quality of care delivered to beneficiaries, as measured by HEDIS.</p> <p><i>Satisfaction</i> - Beneficiaries using HMP services will have high satisfaction and will attribute improvement in health status (if applicable) to the HMP.</p>	

² The OHCA's primary care providers are known as Patient Centered Medical Homes (PCMH). The terms are used interchangeably in the report.

³ The wording of this hypothesis was retained from earlier evaluation periods and refers to the HMP's transition to practice-embedded health coaches. This transition happened several years prior to the period being evaluated in this report. PHPG focused on the appropriateness of the enrolled population over the three years but did not seek to do look-back to the original HMP population, which was enrolled in 2009.

Goal Area	HAN	HMP	Retroactive Eligibility
Cost effectiveness	The implementation and expansion of the HANs will reduce costs associated with the provision of health care services to SoonerCare beneficiaries served by the HANs	<p><i>Hospital Utilization</i> - Beneficiaries using HMP services will have fewer ER visits, hospital admissions and readmissions, as compared to beneficiaries not receiving HMP services (as measured through claims data).</p> <p><i>Expenditures</i> - Per member per month health expenditures for members enrolled in HMP will be lower than would have occurred absent their participation in nurse care management.</p>	

The evaluation was structured to isolate, as much as possible, the discrete impact of the HAN and HMP initiatives with respect to access, quality and cost effectiveness. This was accomplished by stratifying SoonerCare Choice members into three population segments for applicable measures: members enrolled with a SoonerCare HAN PCMH; members enrolled in the SoonerCare HMP; and all other SoonerCare Choice members (comparison group).

Comparison group members were identified using a statistical technique known as propensity score matching (PSM). The PSM analysis controlled for age, gender, place of residence, ethnicity and (where applicable) health status across all measures calculated with paid claims data.

The evaluation used a combination of analytical techniques, as determined by best available data and the presence or absence of a valid comparison group. The evaluation employed nationally-validated measures where appropriate, including: Healthcare Effectiveness Data and Information Set (HEDIS) and Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey data. The evaluation used State-specific measures where a national measure did not exist (e.g., data on enrollment or PCMH status). HEDIS measures were calculated using administrative (paid claims) data extracted from the OHCA's Medicaid Management Information System (MMIS).

A portion of the HEDIS measures included in the evaluation also are part of CMS' schedule of Core Set Measures for children and adults. CMS publishes an annual report of Core Set Measure data for reporting states and identifies the median (50th percentile) rate across states for each measure. PHPG included the 50th percentile rate for federal fiscal years 2016 – 2018, where available, as a point of comparison to the Oklahoma data.

Key Findings – Health Access Networks

SoonerCare HAN beneficiary access to care was evaluated through analysis of HEDIS preventive/ambulatory care measures and CAHPS survey data related to availability of care. Quality of care was evaluated through analysis of HEDIS chronic care measures for asthma, coronary artery disease, COPD, diabetes and hypertension; CAHPS survey data related to satisfaction with care and doctors also was evaluated. Cost effectiveness was evaluated through analysis of emergency room/hospital utilization and per member per month (PMPM) health expenditures. Results in all three evaluation domains were tabulated both for the HAN beneficiary population and a comparison group.

Statistical Analysis

Evaluation findings across the three years generally supported waiver hypotheses. Exhibit ES-3 summarizes results.

Exhibit ES-3 – HAN Evaluation Findings

Hypothesis	Conclusion
Access to Care: The implementation and expansion of the HANs will improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs.	<p><i>Evaluation Findings Supported the Hypothesis</i></p> <p>The SoonerCare HAN and comparison group beneficiary populations both registered HEDIS preventive/ambulatory care compliance rates between 87 and 96 percent across the three years of the evaluation (the rates varied by year and age cohort). SoonerCare HAN beneficiary rates also consistently exceeded a national benchmark rate set at the 50th percentile of all Medicaid-reporting states.</p> <p>SoonerCare HAN and comparison group beneficiaries both reported high levels of satisfaction with access to care, as measured through the CAHPS survey. Over 80 percent reported always or usually being able to get the care/treatment needed. SoonerCare HAN beneficiary rates again exceeded the national benchmark.</p> <p>The SoonerCare HAN and comparison group rates did not differ by a statistically significant amount on the majority of measures, and this could argue against a conclusion that the evaluation supported the hypothesis. However, the compliance and satisfaction rates were very high in absolute terms, and also relative to the national benchmark.</p>
Quality of Care: The implementation and expansion of the HANs will improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, with specific focus on the	<p><i>Evaluation Findings Partially Supported the Hypothesis</i></p> <p>SoonerCare HAN beneficiaries outperformed the comparison group by a statistically significant amount on several chronic care measures, including for diabetes and hypertension, two of the most prevalent chronic conditions within the SoonerCare population. SoonerCare HAN adults also had higher rates of follow-up after hospitalization for a mental illness. Comparison group beneficiaries outperformed their SoonerCare HAN counterparts on several asthma/COPD measures.</p>

Hypothesis	Conclusion
populations at greatest risk, including those with one or more chronic illnesses.	Although the SoonerCare HAN beneficiary population did not stand out from the comparison group on the majority of HEDIS measures, it did consistently outperform the national benchmark. SoonerCare HAN beneficiaries also reported high levels of satisfaction with respect to their health care, health plan (SoonerCare), personal doctor and support addressing social determinants of health.
Cost Effectiveness: The implementation and expansion of the HANs will reduce costs associated with the provision of health care services to SoonerCare beneficiaries served by the HANs	<p>Evaluation Findings Partially Supported the Hypothesis</p> <p>Much of the SoonerCare HANs' focus is on supporting PCMH providers and their ability to offer enhanced access, which is a prerequisite for obtaining the OHCA's highest tier designation. For example, providers at the highest tier must offer extended office hours, including a minimum number of weekend or evening hours to their patients. The HANs also target frequent users of the emergency room through their care management functions.</p> <p>HAN beneficiaries used the emergency room at a lower rate than the comparison group across all three evaluation years, suggesting that the HANs have been effective in supporting beneficiary access to care and changing behaviors among frequent ER users. The difference was statistically significant in all three years.</p> <p>Hospital admission rates showed mixed results, with HAN utilization lower in one year, the comparison group utilization lower in another year and the two groups registering equal utilization rates in the third year. HAN beneficiaries also were more costly than the comparison group on a PMPM basis, with the difference being statistically significant in two out of the three years.</p>

Beneficiary Voices

PHPG conducted interviews in 2018 with SoonerCare HAN beneficiaries who had received assistance from the HAN in overcoming barriers to care. Their comments help to illustrate how the HANs have improved the lives of beneficiaries through their outreach and care management activities.

"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."

Key Findings – Health Management Program

SoonerCare HMP beneficiary access to care was evaluated through analysis of HEDIS preventive/ambulatory care measures. Quality of care was evaluated by analyzing HEDIS chronic care measures for asthma, coronary artery disease, COPD, diabetes and hypertension. Quality of care and the program's impact on beneficiary self-reported health status also was evaluated through surveys conducted with beneficiaries at time of enrollment (baseline) and six-months after completion of the baseline survey. Cost effectiveness was evaluated through analysis of emergency room/hospital utilization and per member per month (PMPM) health expenditures. Results in all three evaluation domains were tabulated both for the HMP beneficiary population and a comparison group.

Statistical Analysis

Evaluation findings across the three years generally supported waiver hypotheses. Exhibit ES-4 summarizes results.

Exhibit ES-4 – HMP Evaluation Findings

Hypothesis	Conclusion
Access to Care: Incorporating health coaches into primary care practices will result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred via telephonic or face-to-face contact with a nurse care manager.	<i>Evaluation Findings Supported the Hypothesis</i> SoonerCare HMP beneficiaries registered nearly universal access to care, with HEDIS compliance rates for both children and adults exceeding 98 percent in each of the evaluation years. Adult SoonerCare HMP beneficiaries, who account for the great majority of enrollment, outperformed the comparison group by a statistically significant amount in all three years. SoonerCare HMP beneficiary compliance rates also were consistently higher than national benchmark rates.
Beneficiary Characteristics: The implementation of the HMP, including health coaches and practice facilitation, will result in a change in the characteristics of the beneficiary population enrolled in the HMP (characteristics such as disease burden and co-	<i>Evaluation Findings Supported the Hypothesis</i> The SoonerCare HMP was developed to serve beneficiaries with complex/chronic health needs who are at risk for adverse health outcomes. Between 75 and 80 percent of the beneficiary population during the three year period had at least two of the prevalent chronic conditions targeted under the program ⁴ ; nearly 20 percent had four or more of the conditions. Approximately 75 percent of SoonerCare HMP beneficiaries had one or more of the prevalent chronic health conditions treated under the

⁴ Asthma, coronary artery disease, COPD, diabetes, heart failure and hypertension.

Hypothesis	Conclusion
morbidity) compared to baseline.	program in combination with a behavioral health co-morbidity. Common co-morbidities included psychosis and major depression.
HEDIS: The health coach will improve the quality of care delivered to beneficiaries.	<p>Evaluation Findings Supported the Hypothesis</p> <p>The SoonerCare HMP beneficiary population outperformed the comparison group by a statistically significant amount in one or more years on nine of the 23 HEDIS quality-of-care measures. The comparison group did not outperform the HMP beneficiary population on any measure. The HMP's strongest results were for measures related to the treatment of COPD, diabetes and hypertension.</p> <p>The HMP beneficiary population also outperformed the national benchmark on all HEDIS measures for which a national benchmark exists.</p>
Satisfaction: Beneficiaries using HMP services will have high satisfaction and will attribute improvement in health status (if applicable) to the HMP.	<p>Evaluation Findings Supported the Hypothesis</p> <p>Survey respondents reported high levels of satisfaction with their health coaches. Over 80 percent reported being very satisfied in each of the three years. Fewer than three percent in any year reported being dissatisfied.</p> <p>Respondents also reported high levels of satisfaction with their experience in the SoonerCare HMP. Over 80 percent reported being very satisfied in each of the three years. Fewer than two percent reported being dissatisfied.</p> <p>A majority of respondents across all years rated their health status as only fair. However, over 40 percent of follow-up survey respondents in 2016 and 2017, and 50 percent in 2018, reported both that their health status had improved and that the SoonerCare HMP had contributed to this improvement.</p>
Hospital Utilization: Beneficiaries using HMP services will have fewer ER visits, hospital admissions and readmissions, as compared to beneficiaries not receiving HMP services (as measured through claims data).	<p>Evaluation Findings were Inconclusive</p> <p>Results were mixed, with SoonerCare HMP beneficiaries registering lower rates of utilization in some instances and comparison group beneficiaries registering lower rates in others. However, with the exception of a higher emergency room visit rate for HMP beneficiaries in 2017, none of the differences were statistically significant.</p>
Expenditures: Per member per month health expenditures for members enrolled in HMP will be lower than would have occurred absent their participation in nurse care management.	<p>Evaluation Findings Supported the Hypothesis</p> <p>SoonerCare HMP beneficiary expenditures were lower than the comparison group across all three evaluation years. The difference was statistically significant in 2016.</p>

Beneficiary Voices

PHPG conducted follow-up interviews in 2018 with SoonerCare HMP beneficiaries who had received at least six months of health coaching through the program. Their comments help to illustrate the program's impact on beneficiary health and quality of life.

"I don't think I'd be here today if it wasn't for SoonerCare and my health coach. She helped me with my depression when my sister died. She would stay on the phone and listen to me. She also helped me to lower my cholesterol to normal and it was very high. My cardiologist was happy about that too!"

"My daughter has a very debilitating disease which she won't get better. Having the support of her nurse coach has helped so much. I used to have to try and get a hold of my doctor or his nurse and it could take days or weeks to hear back. (My health coach) always calls right back and has helped me know when to go to Urgent Care or not. I've called her about side effects from medication and she'll tell me when it is serious and when it isn't. She also put me in touch with a support group for other kids that have the same condition as my daughter. She has another patient she calls with the same thing and she put me in touch with her."

"Having the health coach available to call when I have a question about my husband's trauma is so helpful. I used to have to take him to the ER a lot or try and call his surgeon for basic questions but now I can call her. She also calls the day after she knows that he has a doctor appointment to see how it went. I think this is a great program."

"The Health Management Program really works. Knowing (my health coach) is going to call me and ask if I've been using my nicotine gum and eating better makes me do it. Otherwise, I know I wouldn't stick with it. I love the program and my nurse."

"I wish I knew the name of my coach because she has done so much for me. Before, I didn't believe diet was so important with my high blood pressure. I changed the way I make food and started eating things I am supposed to for my high blood pressure and now I feel so much better and am off my high blood pressure medicine. I can now ride my bike with my youngest girl and I am able to be much more active. I can't thank her enough."

"My health coach has been wonderful...I am bi-polar and I was in a bad downward spiral. My health coach helped me through this period and helped me find a new doctor and get back on my meds. She never rushes or pushes me and I appreciate that. If the program only helps one person, like me, then it is worth it."

Key Findings – Retroactive Eligibility Waiver

The retroactive eligibility waiver was evaluated with respect to access to care. In the absence of prior quarter coverage for eligible persons, it is essential that new applications and recertifications be processed timely and accurately. Evaluation findings across the three years supported the waiver hypothesis. Exhibit ES-5 summarizes results.

Exhibit ES-5 – Retroactive Eligibility Waiver Evaluation Findings

Hypothesis	Conclusion
Access to Care: The State's (OHCA's) enrollment systems ensure readiness, eligibility and timely enrollment.	<p><i>Evaluation Findings Supported the Hypothesis</i></p> <p>During the period covered by the evaluation, the OHCA operated an online eligibility system for applications and beneficiaries subject to the waiver. All new applications and renewals for populations subject to the waiver were processed online. All new applications and redeterminations were processed in real-time.</p>

Implications of Evaluation Findings for Oklahoma and other States

The majority of state Medicaid programs have transitioned to managed care by enrolling at least a portion of their populations into capitated health plans. Oklahoma is one of a minority of states that has elected to implement managed care through a non-traditional model. After terminating its capitated program in 2004, the OHCA began a years-long transition to the SoonerCare Choice program in place during the waiver evaluation period (and still operating today).

SoonerCare Choice seeks to achieve the same access, quality and cost effectiveness objectives common to capitated programs but to do so in a more targeted fashion. The OHCA contracts with the SoonerCare HANs and SoonerCare HMP vendor to offer practice enhancement to affiliated PCMH providers and provide care management to high risk beneficiaries.

The evaluation found that a targeted strategy for care coordination can be effective for improving access to care, beneficiary experience and health outcomes, while controlling program health expenditures. The OHCA model also has the advantage of requiring fewer state dollars for program administration than a typical capitated program, in which both the state and multiple health plans incur administrative expenses to perform overlapping functions. A 2019 PHPG study found Oklahoma to have the fourth lowest administrative cost in the nation.

Contracting with capitated health plans is a proven strategy for implementing managed care. However, the success of the SoonerCare Demonstration offers another viable option to states considering implementation or expansion of managed care, particularly in rural/frontier areas where a capitated program may be difficult to establish.

B. GENERAL BACKGROUND INFORMATION

Medicaid is the largest health care provider in the state of Oklahoma. In State Fiscal Year (SFY) 2018, the program provided coverage to over 860,000 Oklahomans, out of a total population of approximately four million (22 percent). In calendar year 2016 (the most recent year available for statewide data), the program covered 30,490 births out of a statewide total of 52,607 (58 percent).

The Oklahoma Health Care Authority (OHCA), Oklahoma's Single State Agency for Medicaid, administers SoonerCare, the State's Section 1115(a) Research and Demonstration waiver, which includes SoonerCare Choice managed care and Insure Oklahoma (11-W-00048/6). The Demonstration originally was approved to begin operations in January 1996 and has continued to operate through multiple renewal periods. The evaluation findings presented in this report are for Demonstration Years 21 – 23 (January 1, 2016 – December 31, 2018⁵).

1. *Demonstration Goals and Issues to Address*

The OHCA's overarching goals for the SoonerCare Choice program are to meet the health care needs of Oklahomans through provision of high quality, accessible and cost effective care.

The SoonerCare Demonstration was implemented in 1996 to address concerns regarding access and quality of care in a fiscally prudent manner. In the period leading-up to the Demonstration, the State experienced an economic downturn and was forced to reduce benefits and provider reimbursement to meet its obligations under Title XIX.

Access and quality-of-care both suffered, as the number of participating providers declined and beneficiaries were forced to seek primary care in emergency rooms or forego care altogether, due to benefit limits (for adults). The program also lacked any formal care management structure, leaving beneficiaries with chronic conditions to navigate the health care system on their own.

The State responded to this crisis through creation of a new Medicaid agency, the Oklahoma Health Care Authority (OHCA) and through development of the SoonerCare program under Section 1115 Demonstration authority. As described in more detail below, SoonerCare operates as a managed care system by contracting with Patient Centered Medical Homes (PCMH) and arranging for care management of high risk/high need members through Health Access Networks (HANS) and the SoonerCare Health Management Program (HMP).

⁵ The extension period formally covers January 1, 2016 – August 31, 2018. However, many of the evaluation measures, such as those using HEDIS® specifications, are calculated on a calendar year basis. The OHCA therefore directed its evaluator to include all of calendar year 2018 in the evaluation.

2. Demonstration Name and Timeframe

The “SoonerCare” Demonstration (Project Number 11-W-0048/6) was originally approved for a five year period commencing on January 1, 1996⁶. The Demonstration has received multiple extensions since expiration of the original five year authority.

On July 9, 2015 CMS granted a one year extension for the period January 1, 2016 – December 31, 2016. On November 30, 2016, CMS granted another one year extension, carrying the Demonstration to December 31, 2017. On December 29, 2017, CMS granted a final one year extension, carrying the Demonstration to December 31, 2018⁷.

This evaluation covers the entire three year period addressed through the annual extensions, from January 1, 2016 – December 31, 2018.

3. Description of the Demonstration

The OHCA was established to oversee the program’s transition to managed care and implement and administer the SoonerCare Demonstration. The program initially included children in mandatory state plan groups, pregnant women and 1931 low income families. SoonerCare members were enrolled in managed care organizations (MCOs) in three metropolitan areas (Oklahoma City, Tulsa and Lawton) and a primary care case management (PCCM) model in the remainder of the State. In its original design, the PCCM model included a partial capitation payment to cover primary care services and office-based laboratory and radiology services.

The Demonstration has evolved and expanded significantly over the years. The program’s covered populations and major components are described below. They include the core SoonerCare Choice program, Insure Oklahoma, Health Access Networks and the SoonerCare Health Management Program.

Covered Populations (Populations Impacted by the Demonstration)

The Demonstration covers children in mandatory state plan groups, pregnant women and Aged, Blind and Disabled (ABD) members who are not dually-eligible and not receiving long term care, as well as 1931 low-income families and IV-E Foster Care or Adoption Assistance children, the latter with voluntary enrollment. In accordance with Oklahoma Senate Bill 741, the OHCA serves

⁶ The Demonstration’s formal name is “SoonerCare”. However, Oklahoma also uses this title for its entire Medicaid program. To distinguish the populations, the Demonstration also is known as “SoonerCare Choice”, while other Medicaid beneficiaries are referred to as “SoonerCare Traditional” and “SoonerPlan” (family planning benefits-only population).

⁷ On August 31, 2018 CMS approved renewal of the SoonerCare Demonstration for the period August 31, 2018 – December 31, 2023. CMS’ approval truncated the original three year period to be addressed through this evaluation. However, a significant portion of the evaluation (e.g., HEDIS® component) relies on full calendar years to calculate findings. PHPG, in consultation with the OHCA, made the determination to retain the original three year scope for the evaluation.

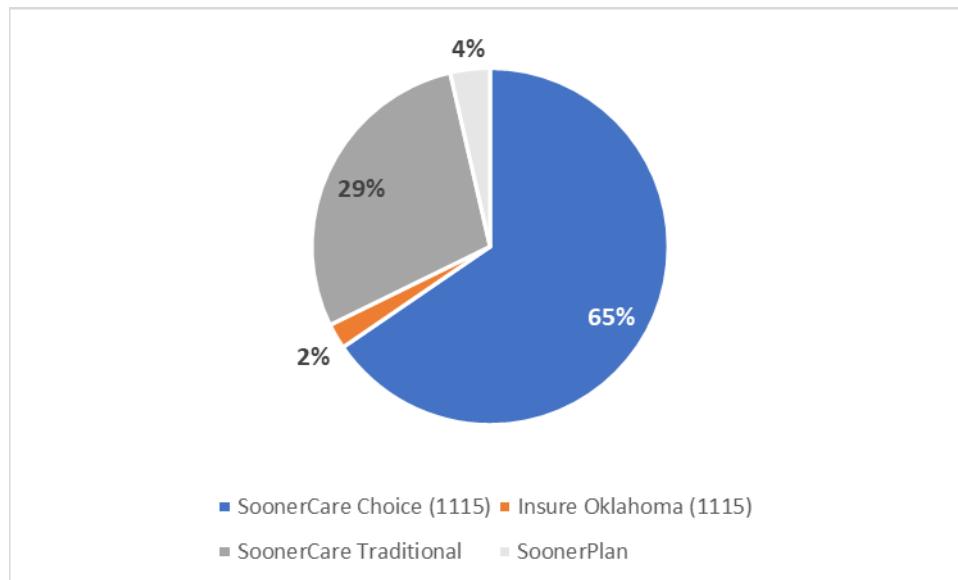
individuals in need of breast or cervical cancer treatment and children with disabilities in accordance with the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA).

During the 2016 – 2018 waiver period, the program also included Insure Oklahoma, a premium assistance program for qualifying low-income residents with incomes above Medicaid limits. (Insure Oklahoma is described in greater detail below.)

The SoonerCare Demonstration covers the majority of Oklahoma Medicaid beneficiaries but does not encompass the entire program. There are two non-Demonstration categories: SoonerCare Traditional and SoonerPlan (persons receiving family planning services only). The SoonerCare Traditional population includes Medicare-Medicaid beneficiaries and long-term care beneficiaries, among others.

In December 2018, the final month of the extension period, SoonerCare Demonstration enrollment stood at 529,789, inclusive of both traditional Medicaid and Insure Oklahoma beneficiaries⁸. Total Medicaid enrollment was 790,732, including 231,828 SoonerCare Traditional members, such as dual eligibles and long-term care recipients, and 29,115 SoonerPlan family planning members. Exhibit 1 below summarizes Medicaid and Insure Oklahoma enrollment in December 2018⁹.

Exhibit 1 – Medicaid and Insure Oklahoma Enrollment (December 2018)



⁸ Total Medicaid enrollment was 790,732, including 231,828 SoonerCare Traditional members, such as dual eligibles and long-term care recipients, and 29,115 SoonerPlan family planning members.

⁹ SoonerCare Choice and IO enrollments were relatively stable from 2016 – 2018, with each declining by 3.6 percent (concurrent with improvement in the state and national economies).

SoonerCare Choice (Core Program)

The Demonstration operates statewide under an enhanced Primary Care Case Management (PCCM) model in which the OHCA contracts directly with primary care providers to serve as patient centered medical homes for SoonerCare Choice members. PCMH providers receive monthly care coordination payments for each beneficiary on their panels¹⁰.

Payments vary depending on the PCMH provider's tier level¹¹ and the mix of children and adults on the provider's panel. Providers also can qualify for "SoonerExcel" performance incentive payments by meeting one or more OHCA-defined quality improvement targets. Aside from care coordination and non-emergency medical transportation, all services furnished in the medical home and by other providers (specialists, hospitals etc.) are reimbursed fee-for-service.

Insure Oklahoma Premium Assistance Program

The OHCA operates the Insure Oklahoma premium assistance program under the authority of the SoonerCare waiver. Insure Oklahoma (IO) offers two ways for individuals to receive premium assistance: Employer Sponsored Insurance (ESI) and Individual Plan (IP) programs.

During the 2016 – 2018 waiver period, the program was open to Oklahomans with household incomes up to 200 percent of the federal poverty level, who worked at an eligible business enrolled in IO-ESI, or Oklahomans making between 48 percent and 100 percent of the federal poverty level who were unemployed, working disabled or had qualifying income.

Individuals in ESI enroll in an IO-participating private health plan through their employer and pay up to 15 percent of the premium. The remaining premium cost is shared between the individual's employer and the state and federal governments. (The individual's premium share is capped at three percent of household income; total cost sharing is capped at five percent of household income.)

Individuals in the IP program, other than American Indians, are responsible for health plan premiums up to four percent of their monthly gross household income. In accordance with Oklahoma Administrative Code 317:45-9-4 and 317:45-11-24, American Indians providing documentation of tribal citizenship are exempt from premium payments.

In December 2018, IO enrollment totaled 18,654. This included 13,632 ESI members and 5,022 IP members¹².

¹⁰ The terms "member" and "beneficiary" are used interchangeably throughout the report.

¹¹ There are three tiers – 1 "Entry Level", 2 "Advanced" and 3 "Optimal".

¹² In January 2020, the most recent month available, Insure Oklahoma enrollment stood at 18,677.

Health Access Networks

SoonerCare Health Access Networks are non-profit, administrative entities that work 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) payment¹³.

The SoonerCare Special Terms and Conditions specify that each HAN must:

- Be organized for the purpose of restructuring and improving the access, quality, and continuity of care to SoonerCare beneficiaries;
- Ensure patients access to all levels of care, including primary, outpatient, specialty, certain ancillary services, and acute inpatient care, within a community or across a broad spectrum of providers across a service region or the state;
- Submit a development plan to the State detailing how the network will reduce costs associated with the provision of health care services to SoonerCare enrollees, improve access to health care services, and enhance the quality and coordination of health care services to SoonerCare beneficiaries;
- Offer core components of electronic medical records, improved access to specialty care, telemedicine, and expanded quality improvement strategies; and,
- Offer care management/care coordination to persons with complex health care needs as specified in the state-HAN provider agreement.

The HANs employ care managers to provide telephonic and in-person care management and care coordination to SoonerCare Choice members with complex health care needs who are enrolled with affiliated PCMH providers. 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 ABD members with, or at risk for, complex/chronic health conditions, as well as TANF and related members with asthma and diabetes, among other conditions.

The OHCA contracts with three HANs: University of Oklahoma (OU) Sooner HAN; Partnership for Healthy Central Communities (PHCC) HAN; and Oklahoma State University (OSU) HAN. The HANs began operations in 2010 with combined enrollment of approximately 25,000. In December 2018, combined HAN enrollment was 172,950. OU Sooner HAN served approximately 87 percent of the members, followed by OSU HAN with 11 percent¹⁴ and PHCC HAN with two percent.

The two larger HANs are affiliated with universities and originated in Tulsa. They both gradually expanded geographically during the waiver period by adding new practices outside of their initial service areas. Most of the expansion was to the east and south. Central Communities is a grassroots organization based in Canadian County, which is to the west of Oklahoma City. HAN

¹³ The HANs pay a portion of the state match, and are capped on the number of beneficiaries for which they can be paid the fee, making the average effective payment less than \$5.00.

¹⁴ OSU enrollment was capped at 23,475 based on available funding. The cap was reached in 2017, resulting in no enrollment growth in 2018.

penetration, by county, and HAN enrollment are presented below in Exhibits 2 (map) and 3 and (table).

Exhibit 2 – HAN Penetration by County – 2018

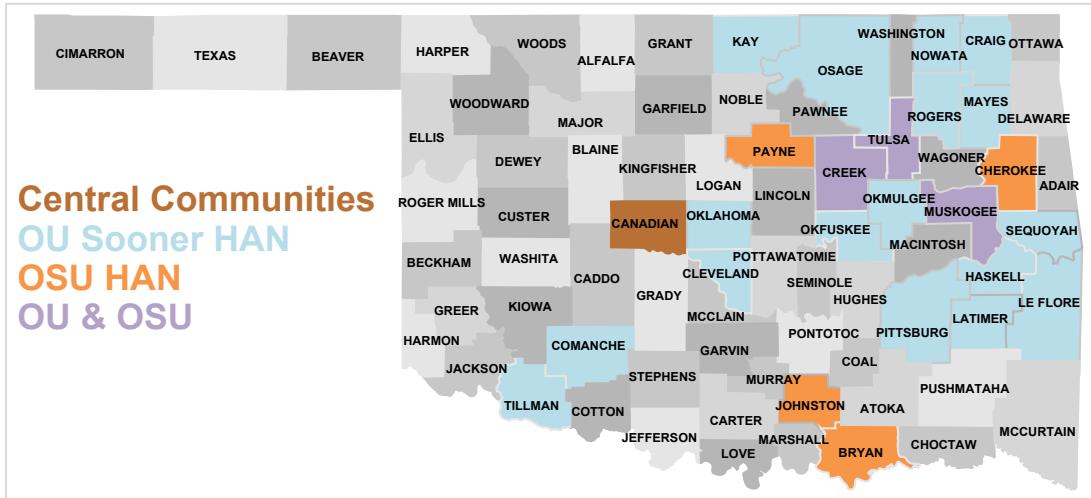
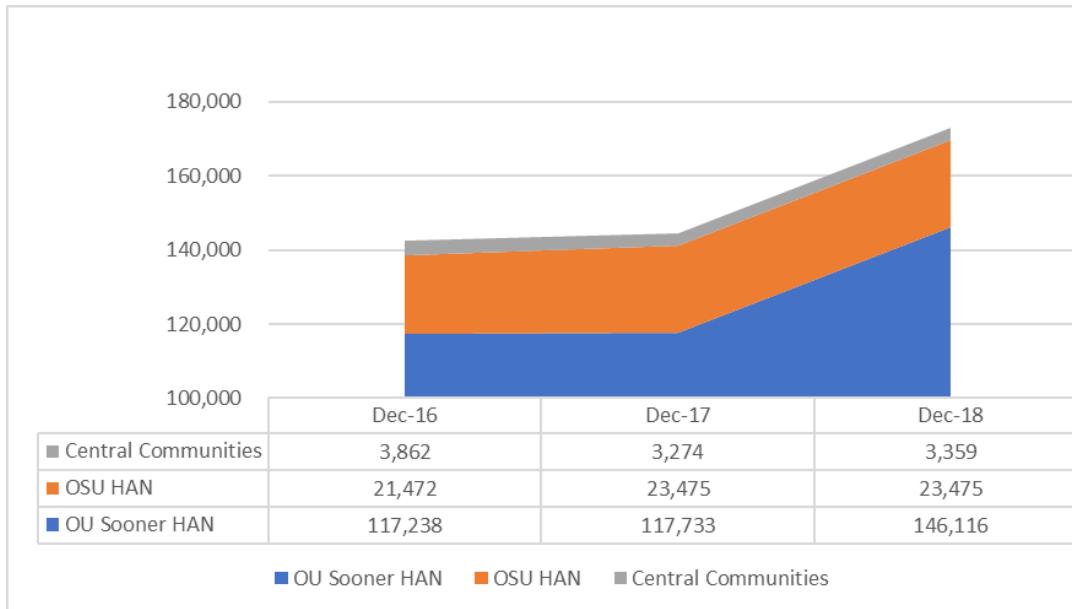


Exhibit 3 – HAN Enrollment – 2016 to 2018



SoonerCare Health Management Program

The SoonerCare Health Management Program (HMP) is an initiative under the Demonstration developed to offer care management to SoonerCare Choice members most at-risk for chronic disease and other adverse health events. The program is administered by the OHCA and is managed by a vendor selected through a competitive procurement. The program is authorized to operate statewide.

The SoonerCare HMP serves SoonerCare Choice beneficiaries ages four through 63 who have one or more chronic illnesses and are at high risk for adverse outcomes and increased health care expenditures. The program is holistic, rather than disease-specific, but prominent conditions of members in the program include asthma, cardiovascular disease, chronic obstructive pulmonary disorder, diabetes, heart failure and hypertension.

The SoonerCare HMP was implemented in 2008 and has evolved over time. During its first five years, individuals 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.

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 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.

To enhance beneficiary 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 either could be dedicated to a single practice with one or more providers or shared between multiple practice sites within a geographic area. This change took effect with implementation of the “second generation” SoonerCare HMP in 2013.

In addition to health coaching, the SoonerCare HMP incorporates Practice Facilitation into each location with an embedded health coach. A practice facilitator nurse assesses the office’s existing processes related to care of patients with chronic conditions. The practice facilitator then undertakes education and academic detailing appropriate to the office’s needs before deployment of the health coach.

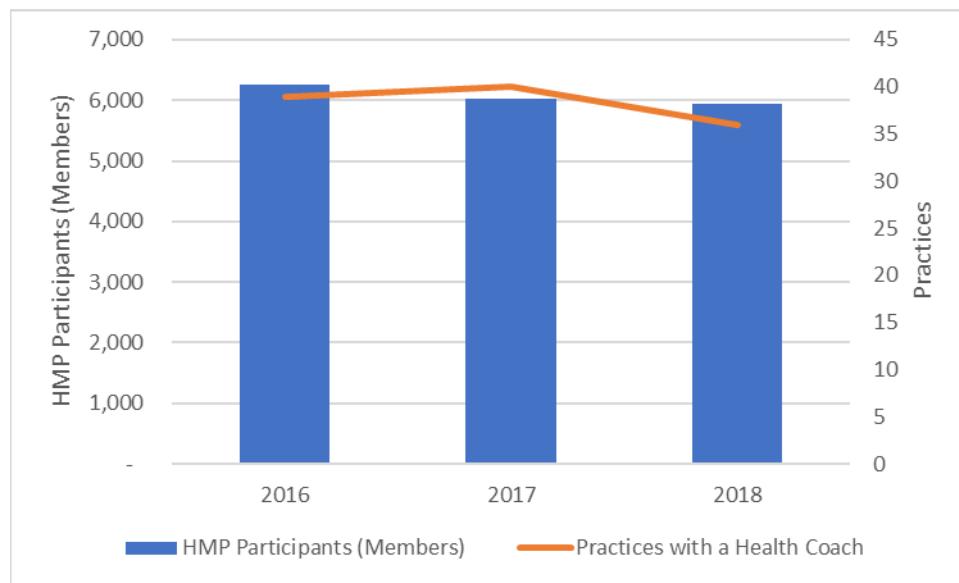
In 2014, the OHCA authorized its vendor to resume telephonic case management (health coaching) and, in limited cases, care coordination in members’ homes. Telephonic health coaches would focus their efforts on engaging new members, actively pursuing members needing

assistance with care transitions and serving high risk members not assigned to a primary care provider with an embedded coach. The majority of health coaching would continue to occur through the embedded health coaches at provider offices.

The OHCA also implemented a Pain Management program within HMP in 2015. The OHCA authorized its vendor to hire practice facilitators and substance use resource specialists dedicated to improving the effectiveness of providers caring for members with chronic pain and opioid drug use. The Pain Management staff assist providers with implementation of a chronic pain management toolkit and principles of proper prescribing. These staff members work both with offices that have an embedded health coach and offices that do not.

During the period covered by the evaluation, SoonerCare HMP enrollment was relatively stable, with approximately 6,000 members participating each year¹⁵. The number of practices with an embedded health coach also was stable, with 39 participating practices in 2016, 40 in 2017 and 36 in 2018 (Exhibit 4).

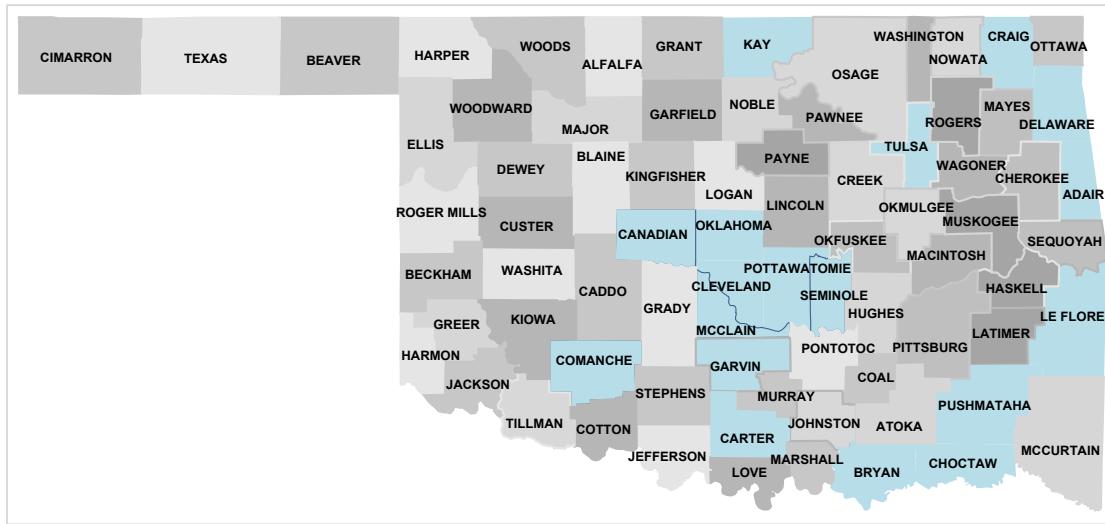
Exhibit 4 – HMP Participants (2016 - 2018)



The participating practices were distributed throughout most of the state, the exception being the sparsely-populated northwestern/panhandle region (Exhibit 5 on the following page).

¹⁵ Members enrolled for at least three months.

Exhibit 5 – Counties with One or More HMP Sites (2018)



Alignment of Care Management Initiatives

The OHCA's objective is to align PCMH, HAN, SoonerCare HMP and internal care management activities, such that all SoonerCare Choice members with complex/chronic conditions have access to care management. This is part of a broader strategy under the SoonerCare Demonstration to advance managed care principles and a statewide Quality Improvement Program through delivery and financing models other than traditional risk-based managed care organizations.

The evaluation includes questions and hypotheses related to the two major SoonerCare Choice care management systems: HANs and SoonerCare HMP. The evaluation design incorporates access, quality, health outcome and cost effectiveness measures relevant to each system.

Retroactive Eligibility

The SoonerCare Demonstration also includes a waiver of retroactive eligibility for a portion of the SoonerCare population. The waiver has been a component of SoonerCare since the program's inception.

During the period covered in the evaluation, the OHCA was permitted to waive retroactive eligibility for the Title XIX/XXI and Demonstration Eligibility groups presented below in Exhibit 6.

Exhibit 6 – Demonstration Retroactive Eligibility Waiver Populations

Population	FPL and/or other Qualifying Criteria
Pregnant women and infants under age 1 1902(a)(10)(A)(i)(IV)	Up to and including 133% FPL
Children 1 – 5 1902(a)(10)(A)(i)(VI)	Up to and including 133% FPL
Children 6 – 18 1902(a)(10)(A)(i)(VII)	Up to and including 133% FPL
IV-E Foster Care or Adoption Assistance children	Automatic Medicaid eligibility
1931 low-income families	73% of the AFDC standard of need
Targeted low-income child	Up to and including 185% FPL
Infants under age 1 through CHIP Medicaid expansion	Above 133% - 185% FPL
Children 1 – 5 through CHIP Medicaid expansion	Above 133% - 185% FPL
Children 6 – 18 through CHIP Medicaid expansion	Above 133% - 185% FPL
Non-IV-E foster care children under age 21 in State or tribal custody	Up to 100% FPL
Non-disabled low-income workers and spouses ages 19 – 64 (IO Individual Plan)	Up to 100% FPL
Working disabled adults ages 19 – 64 (IO Individual Plan)	Up to 100% FPL
Full-time college students ages 19 – 22 (IO Individual Plan)	Up to 100% FPL
Foster parents ages 19 – 64 (IO Individual Plan)	Up to 100% FPL
Qualified employees of not-for-profit businesses ages 19 – 64 (IO Individual Plan)	Up to 100% FPL

The evaluation includes questions related to the SoonerCare enrollment process and the enrollment/disenrollment characteristics of SoonerCare beneficiaries. The evaluation seeks to gauge whether SoonerCare beneficiaries are at risk of incurring health care liabilities that would be covered absent the waiver.

4. Changes to the Demonstration

The SoonerCare HANs expanded during the period addressed in the evaluation, as discussed in the previous section. However, the Demonstration itself did not undergo any changes during the approval period.

5. Population Groups Impacted by the Demonstration

The Demonstration includes the majority of Oklahoma's Medicaid/CHIP population¹⁶. In addition to the populations presented in Exhibit 6, the Demonstration includes the populations presented below in Exhibit 7. These populations received retroactive eligibility during the period covered in the evaluation.

Exhibit 7 – Other Demonstration Populations

Population	FPL and/or other Qualifying Criteria
SSI recipients	Up to SSI limit
Pickle amendment	Up to SSI limit
Early widows/widowers	Up to SSI limit
Disabled adult children (DACs)	Up to SSI limit
1619(b) population	SSI for unearned income and income limit
Aged, blind and disabled	From SSI up to and including 100% FPL
Eligible but not receiving cash assistance	Up to SSI limit
Individuals receiving only optional State supplements	100% SSI FBR + \$41 (SSP)
Breast and cervical cancer prevention and treatment	Up to and including 185% FPL
TEFRA children under 19 years of age without creditable coverage	Disabled according to SSA definition, with gross personal income at or below 200% FPL

¹⁶ The major exclusions are residents of long term care facilities, 1915c waiver recipients and persons dually-eligible for Medicare/Medicaid and persons receiving less than full Title XIX benefits.

C. EVALUATION QUESTIONS AND HYPOTHESES

1. *Quantifiable Targets for Improvement*

The SoonerCare Demonstration's goals focus on improving access and quality of care, while controlling costs. The Demonstration seeks to accomplish these goals through advancement of managed care principles, including enhanced primary care and effective care management of members with, or at risk for, complex/chronic conditions. The Demonstration Special Terms and Conditions include questions and hypotheses selected to evaluate the program's performance in the three goal areas (Access, Quality and Cost Effectiveness).

The OHCA and PHPG have identified measures for each of the evaluation questions and hypotheses that can be expressed as numerical values and can be tracked on a longitudinal basis. The OHCA's target is to document improvement in the trendline, either upward or downward, depending on the specific measure.

The Driver Diagrams presented on the following page in Exhibits 8a and 8b illustrate the relationship between the OHCA's overall goals for SoonerCare Choice and the primary and secondary drivers for achieving these goals.

As depicted in the diagrams, the HAN and HMP initiatives serve as the platforms, or primary drivers, for achieving Demonstration aims with respect to access/quality (Exhibit 8a) and cost effectiveness (Exhibit 8b). Both initiatives are supported by secondary drivers related to changes in preventive/primary care access, utilization of emergency room and inpatient services, provider payment systems and enrollment continuity (for beneficiaries who are subject to the retroactive eligibility waiver).

Exhibit 8a – Driver Diagram (Access and Quality)

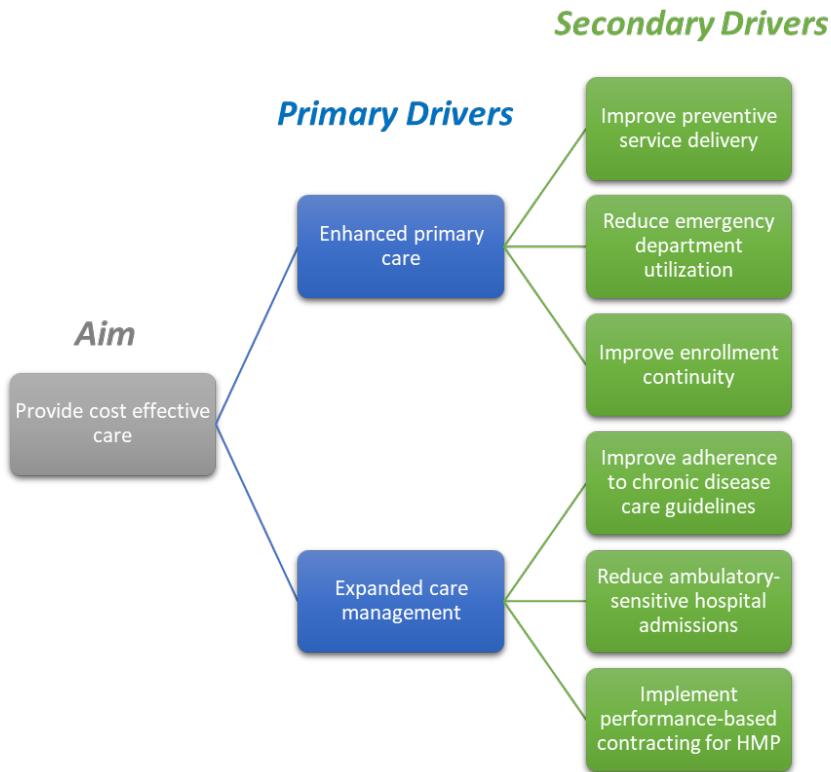
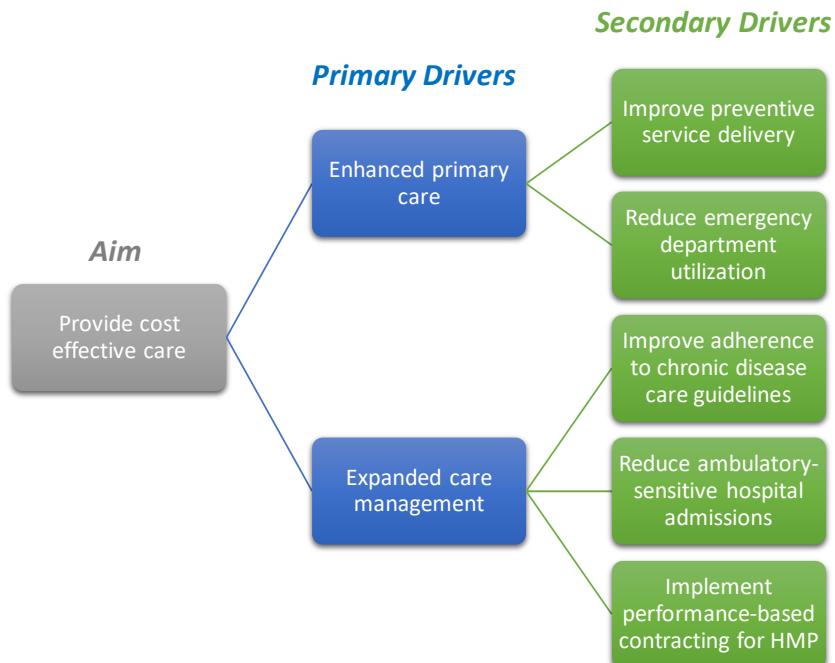


Exhibit 8b – Driver Diagram (Cost Effectiveness)



2. Demonstration Hypotheses

The Demonstration was evaluated through testing of hypotheses related to the HANs, HMP and waiver of retroactive eligibility. Specifically:

1. Evaluation of Health Access Networks

- a. *Impact on Costs*: The implementation and expansion of the HANs will reduce costs associated with the provision of health care services to SoonerCare beneficiaries served by the HANs;
- b. *Impact on Access*: The implementation and expansion of the HANs will improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs;
- c. *Impact on Quality and Coordination*: The implementation and expansion of the HANs will improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, with specific focus on the populations at greatest risk, including those with one or more chronic illnesses; and
- d. *Impact on PCMH Program*: The implementation and expansion of the HANs will enhance the State's Patient Centered Medical Home program by making HAN care management support and practice enhancement available to more providers, as documented through an evaluation of PCP profiles that incorporates a review of utilization, disease guideline compliance and cost.

2. Evaluation of the Health Management Program

- a. *Impact on Enrollment Figures*: The implementation of the HMP, including health coaches and practice facilitation, will result in an increase in enrollment, as compared to baseline;
- b. *Impact on Access to Care*: Incorporating health coaches into primary care practices will result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred via telephonic or face-to-face contact with a nurse care manager;
- c. *Impact on Identifying Appropriate Target Population*: The implementation of the HMP, including health coaches and practice facilitation, will result in a change in the characteristics of the beneficiary population enrolled in the HMP (as measured through claims data to identify characteristics such as disease burden and co-morbidity) compared to baseline¹⁷;

¹⁷ The wording of this hypothesis was retained from earlier evaluation periods and refers to the HMP's transition to practice-embedded health coaches. This transition happened several years prior the period being evaluated in

- d. *Impact on Health Outcomes:* Use of disease registry functions by the health coach will improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures;
 - e. *Impact on Cost/Utilization of Care - ER:* Beneficiaries using HMP services will have fewer ER visits, as compared to beneficiaries not receiving HMP services (as measured through claims data);
 - f. *Impact on Cost/Utilization of Care - Hospital:* Beneficiaries using HMP services will have fewer admissions and readmissions to hospitals, compared to beneficiaries not receiving HMP services (as measured through claims data);
 - g. *Impact on Satisfaction/Experience with Care:* Beneficiaries using HMP services will have high satisfaction and will attribute improvement in health status (if applicable) to the HMP¹⁸; and
 - h. *Impact on Effectiveness of Care:* Per member per month health expenditures for members enrolled in HMP will be lower than would have occurred absent their participation in nurse care management.
3. **Evaluation of Eligibility and Enrollment Systems:** The evaluation will support the hypothesis that the waiver of retroactive eligibility is an appropriate feature of the program, given that the State's (OHCA's) enrollment systems ensure readiness, eligibility and timely enrollment, as measured by:
- a. *Eligibility Determinations:* The number of eligibility determinations made, broken down by type, such as application, transfer and redetermination;
 - b. *Ineligibility Determinations:* The number of individuals determined ineligible, broken down by procedural versus eligibility reasons;
 - c. *Processing Times:* The average processing times, broken down by type, such as application, transfer and redetermination;
 - d. *Rate of Timely Determinations:* The rate of timely eligibility determinations, broken down by completed within five days, 10 days and 30 days;

this report. PHPG focused on the appropriateness of the enrolled population over the three years but did not seek to do look-back to the original HMP population, which was enrolled in 2009.

¹⁸ The SoonerCare STCs state, "Beneficiaries using HMP services will have higher satisfaction compared to beneficiaries not receiving HMP services (as measured through CAHPS survey data)." The OHCA's CAHPS surveyor is not able to identify HMP members within the larger survey universe. In lieu of CAHPS data, the evaluation examined targeted survey data collected by PHPG as part of ongoing HMP evaluation activities. PHPG has added CAHPS survey questions to its targeted survey instrument and will compare HMP members to other beneficiaries in the 2019 – 2023 evaluation.

- e. *Number of Disenrollments:* The number of individuals disenrolled, broken down by procedural versus eligibility reasons;
- f. *Churn Rate:* The internal churn rate (i.e., the number of disenrolled beneficiaries re-enrolling within six months); and
- g. *Accurate Transfer Rate:* The accurate transfer rate (i.e., the number of individuals transferred to Medicaid, CHIP or the Exchange), as applicable, who are determined eligible by the agency.

Alignment of Demonstration Goals and Hypotheses

The OHCA's overarching goals for SoonerCare Choice are to provide accessible, high quality and cost effective care to SoonerCare Choice beneficiaries. The research questions answered by testing Demonstration hypotheses align closely with these goals, as illustrated in Exhibit 9 below.

Exhibit 9 – Alignment of Goals and Hypotheses

Goal	Demonstration Component	Hypothesis/Research Question(s)
<i>Health Access Networks</i>		
Accessible Care	Health Access Network	Will the implementation and expansion of the HANs improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs?
High Quality Care	Health Access Networks	Will the implementation and expansion of the HANs improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, including those with one or more chronic illnesses? Will the implementation and expansion of the HANs enhance the State's Patient Centered Medical Home program by making HAN care management support and practice enhancement available to more providers (as documented through an evaluation of PCP profiles that incorporates a review of utilization, disease guideline compliance and cost)?

Goal	Demonstration Component	Hypothesis/Research Question(s)
		Will beneficiaries enrolled with a HAN PCMH provider have higher satisfaction, compared to beneficiaries enrolled with a non-HAN PCMH (as measured through Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey data)?
Cost Effectiveness	Health Access Networks	Will the implementation and expansion of the HANs reduce cost associated with provision of health care services to SoonerCare beneficiaries served by the HANs?
<i>Health Management Program</i>		
Accessible Care	Health Management Program	<p>Will implementation of the HMP, including health coaches and practice facilitation, result in an increase in enrollment, as compared to baseline?</p> <p>Will incorporating health coaches into primary care practices result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred (exclusively) via telephonic or face-to-face contact with a nurse care manager?</p>
High Quality Care	Health Management Program	<p>Will implementation of the HMP result in a change in the characteristics of the beneficiary population enrolled in the HMP (as measured through population characteristics, including disease burden and co-morbidity obtained through claims and algorithms) compared to baseline?</p> <p>Will the use of disease registry functions by the health coach (along with other coaching activities) improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults</p>

Goal	Demonstration Component	Hypothesis/Research Question(s)
		<p>or CHIPRA Core Set of Children's Healthcare Quality Measures?</p> <p>Will beneficiaries using HMP services have high satisfaction and attribute improvement in health status (if applicable) to the HMP?</p>
Cost Effectiveness	Health Management Program	<p>Will ER and hospital utilization for members enrolled in the HMP be lower than would have occurred absent their participation?</p> <p>Will per member per month health expenditures for members enrolled in the HMP be lower than would have occurred absent their participation?</p>
<i>Waiver of Retroactive Eligibility</i>	<i>Accessible Care</i>	Do the State's (OHCA's) enrollment systems ensure readiness, eligibility and timely enrollment?

Building upon and Expanding Earlier Demonstration Evaluation Findings

The OHCA has contracted with PHPG to evaluate HAN and HMP performance since the implementation of the two initiatives in 2009 (HMP) and 2010 (HANs). These earlier evaluations examined the programs' impact on access, quality and cost during and shortly after their implementation. Since that time, the model-of-care for the HMP has evolved and enrollment in the HANs has expanded significantly.

The earlier evaluations are available on the OHCA website¹⁹ for reference but are not linked formally to the findings in this evaluation. The evolution of the two programs makes it advisable to treat the 2016 – 2018 evaluation as a standalone analysis.

However, the findings in this report are relevant as a baseline for the subsequent evaluation covering the 2019 – 2023 waiver period (now underway). The 2019 – 2023 evaluation will examine the same waiver components (HAN, HMP and retroactive eligibility) in accordance with an evaluation design approved by CMS in November 2019.

¹⁹ <http://www.okhca.org/research.aspx?id=87>

To facilitate linkage of the two evaluations, the OHCA and PHPG have elected to employ the 2019 – 2023 methodology for the 2016 – 2018 evaluation period to the extent feasible. The methodology is described in more detail in Section D.

Promotion of Title XIX Objectives

The Affordable Care Act (ACA) included provisions for Medicaid related to quality of care and delivery systems. Specifically, the ACA anticipates that, “improvements will be made in the quality of care and the manner in which that care is delivered, while at the same time reducing costs.”²⁰

The SoonerCare Demonstration promotes these ideals through the overarching goals of providing accessible, high quality and cost effective care to SoonerCare Choice beneficiaries. The evaluation methodology presented in the next section is designed to measure the Demonstration’s performance in achieving these goals.

²⁰ <https://www.medicaid.gov/about-us/program-history/index.html>

D. EVALUATION METHODOLOGY

1. *Evaluation Design*

Application of 2019 – 2023 Methodology to 2016 – 2018 Evaluation

The SoonerCare evaluation was designed to measure the Demonstration's performance in achieving program goals, while also providing actionable information for improving the program in the future. The evaluation methodology is outlined in detail below.

As discussed in the previous section, the OHCA and PHPG elected to apply the methodology in the CMS-approved evaluation design for the 2019 – 2023 waiver period to the 2016 – 2018 waiver period evaluation (to the extent practicable). The 2019 – 2023 evaluation design includes the same three domains (HAN, HMP and retroactive eligibility) but contains a more comprehensive set of measures and incorporates statistical techniques favored by CMS for ensuring analytical rigor. PHPG's use of the 2019 – 2023 methodology will facilitate comparison and trending of results across the two evaluation periods²¹.

The HAN and HMP measures and methodology align closely with the 2019 – 2023 measures and methodology. The exception is for a small number of measures in the 2019 – 2023 evaluation design that rely on beneficiary and provider surveys that were not conducted in 2016 – 2018.

In addition, data for several measures was collected on a state fiscal year or other non-calendar year basis for inclusion in targeted evaluations of the SoonerCare HAN and HMP conducted by PHPG in 2016 – 2018. Findings are presented again in this report, with the data collection periods noted in the narrative.

Unlike the HAN and HMP components, the 2019 – 2023 methodology for the retroactive eligibility analysis could not be applied to the 2016 – 2018 period. The 2019 – 2023 methodology adheres to CMS guidelines and relies primarily on survey data that was not collected in 2016 – 2018. The populations covered under the waiver also changed significantly between the two waiver periods, making it problematic to trend results.

Appendix 1 of the report contains the formal evaluation design. It includes a table that shows, for each measure, the Demonstration population being evaluated, comparison population (if applicable) and statistical method(s) used in the analysis. The measures also are outlined later in this section.

The HAN and HMP designs include all CMS-approved 2019 – 2023 measures that could be evaluated for the 2016 – 2018 time period. The retroactive eligibility design includes the measures originally approved for the 2016 – 2018 evaluation.

²¹questions primarily addressed IO enrollment, which is described in the Background section of the report. The questions therefore have been omitted from the findings section

Evaluation Design Overview

The evaluation used a combination of analytical techniques, as determined by best available data and the presence or absence of a valid comparison group. The evaluation employed nationally-validated measures where appropriate, including: Healthcare Effectiveness Data and Information Set, or HEDIS and CAHPS. The evaluation used State-specific measures where a national measure did not exist (e.g., data on enrollment or PCMH status).

A portion of the HEDIS measures included in the evaluation also are part of CMS' schedule of Core Set Measures for children and adults. CMS publishes an annual report of Core Set Measure data for reporting states and identifies the median (50th percentile) rate across states for each measure. PHPG included the 50th percentile rate for federal fiscal years 2016 – 2018, where available, as a point of comparison to the Oklahoma data.

States use varying methods to collect Core Set data (i.e., analysis of administrative (paid claims) only versus combination of administrative and medical record data) and the demographic make-up of states differ significantly. Caution therefore should be exercised when comparing national and Oklahoma rates.

The National Committee for Quality Assurance (NCQA) publishes national Medicaid Quality Compass scores (rates) for CAHPS measures, using data provided by reporting Medicaid health plan products. Where available, PPHP compared SoonerCare CAHPS findings to the Medicaid Quality Compass scores, using the NCQA 2018 Medicaid health plan Quality Compass dataset presented by Escalent in its CAHPS reports. PPHP selected the median (50th percentile) as the comparison benchmark.

2. Target and Comparison Populations

HAN and HMP Component of Evaluation

The SoonerCare Choice target populations are HAN and HMP members. The two populations do not overlap; the OHCA reviews enrollment data monthly to identify and resolve any instances of members being co-enrolled in both programs.

The evaluation was structured to isolate, as much as possible, the discrete impact of the HAN and HMP initiatives with respect to access, quality and cost effectiveness. This was accomplished by stratifying SoonerCare Choice members into three population segments for applicable measures: members enrolled with a SoonerCare HAN PCMH; members enrolled in the SoonerCare HMP; and all other SoonerCare Choice members (comparison group).

All three populations were sufficient in size to be evaluated in isolation. HAN enrollment in December 2018 was approximately 169,000, while HMP enrollment was approximately 6,000; the comparison group included approximately 360,000 beneficiaries.

The HAN population closely resembles the comparison group population in terms of demographics. HAN members are primarily non-disabled children, pregnant women, parents and members with disabilities who are not eligible for Medicare. (High risk pregnant women receive care management directly from the OHCA, regardless of HAN status, and therefore are not a focus of the HAN evaluation.)

The HMP population consists primarily of adults and has a higher percentage of ABD members than the comparison group population. The differences were controlled for in the evaluation, including through stratification of the three populations by aid category (ABD or TANF), age cohort and health condition(s). Propensity score matching also was used to account for differences between the HMP population and the comparison group.

The evaluation encompassed the entire universe of members, with the exception of member surveys (CAHPS and program-specific surveys). These were conducted on a randomly-selected representative sample of HAN, HMP and comparison group members.

Comparison Group Method

All SoonerCare Choice members should have access to preventive services through their PCMH, regardless of their status in terms of HAN or HMP enrollment. An in-state comparison group method therefore was used for calculation of HEDIS rates across the three populations. This included both population-wide preventive measures and preventive care measures specific to various chronic health conditions.

The comparison group method also was used for evaluating CAHPS ratings among HAN and comparison group members with respect to access to care. The OHCA's CAHPS vendor was able to stratify CAHPS results for the HAN and comparison group populations, although not for the HMP population.

Finally, the comparison group method was used to evaluate the cost effectiveness of the HAN and HMP models versus the population not enrolled in either program. This included evaluation of inpatient hospital utilization, emergency room utilization and per member per month expenditures.

Beneficiary Surveys

The evaluation assessed member satisfaction with access to care and care management, including the member's perception of care management's impact on health status, through a combination of CAHPS and targeted surveys.

The OHCA's CAHPS contractor surveyed a random sample of SoonerCare beneficiaries; the contractor identified HAN respondents within the response universe and provided beneficiary de-identified data to PHPG for the evaluation.

PHPG attempted to conduct a baseline survey on 100 percent of newly-enrolled HMP participants and a six-month follow-up survey on 100 percent of baseline respondents.

Retroactive Eligibility Waiver Component of Evaluation

The evaluation of the waiver of retroactive eligibility for a portion of the SoonerCare Choice population is distinct from the other portions of the design. PHPG followed CMS guidelines as presented in the Special Terms and Conditions. This included calculation of results for six process measures related to timely and accurate enrollment and disenrollment of beneficiaries subject to the waiver.

3. Evaluation Period

The Demonstration period addressed in the evaluation is calendar year 2016 – 2018. This also served as the default time period for evaluation measures.

As noted earlier, a small number of measures were analyzed previously as part of targeted evaluations of the HAN and HMP conducted by PHPG in 2016 -2018. The measures were evaluated on a state fiscal year or other 12-month cycle. Findings are presented again in this report, with the data collection periods noted in the narrative.

4. Evaluation Measures

Demonstration evaluation measures are listed below, by evaluation component and hypothesis/question. Exhibits 10 through 17 present the measures and their sources (e.g., HEDIS or CAHPS), as applicable. Appendix 1 contains detailed specifications for each measure.

Evaluation of Health Access Networks – Access to Care

HAN performance in improving access to care was evaluated through the research question and measures presented below in Exhibit 10.

Exhibit 10 – HAN Access to Care Measures

Hypothesis/Research Question(s)	Measures	Source
Will the implementation and expansion of the HANs improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs?	<ul style="list-style-type: none">• Children and adolescents' access to PCPs – 12 months to 19 years• Adults' access to preventive/ambulatory health services• Getting needed care – children and adults	<p>HEDIS</p> <p>HEDIS</p> <p>CAHPS</p>

Evaluation of Health Access Networks – Quality of Care

HAN performance in improving quality of care was evaluated through the research questions and measures presented below in Exhibit 11.

Exhibit 11 – HAN Quality of Care Measures

Hypothesis/Research Question(s)	Measures	Source
Will the implementation and expansion of the HANs improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, including those with one or more chronic illnesses?	<ul style="list-style-type: none"> • Number of HAN beneficiaries engaged in care management • Asthma measures <ul style="list-style-type: none"> ○ Asthma Medication Ratio²² ○ Medication management for people with asthma – 75 percent • Cardiovascular (CAD and heart failure) measures <ul style="list-style-type: none"> ○ Persistence of beta-blocker treatment after a heart attack ○ Cholesterol management for patients with cardiovascular conditions – LDL-C test • COPD measures <ul style="list-style-type: none"> ○ 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 <ul style="list-style-type: none"> ○ Percentage of members who had LDL-C test ○ 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 	OHCA HEDIS (all remaining measures)

²² The 2019 – 2023 evaluation design approved by CMS (and adopted by the OHCA for the 2016 – 2018 evaluation to the extent practical) included a HEDIS measure which has since been discontinued: Use of Appropriate Medications for People with Asthma. PHPG replaced this measure with its successor, Asthma Medication Ratio.

Hypothesis/Research Question(s)	Measures	Source
	<p>angiotensin receptor blockers (ACE/ARB therapy)</p> <ul style="list-style-type: none"> • Hypertension measures <ul style="list-style-type: none"> ◦ Percentage of members who had LDL-C test ◦ 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 <ul style="list-style-type: none"> ◦ Follow-up after hospitalization for mental illness – 7 days ◦ Follow-up after hospitalization for mental illness – 30 days 	
Will the implementation and expansion of the HANs enhance the State's Patient Centered Medical Home program by making HAN care management support and practice enhancement available to more providers, as documented through an evaluation of PCP profiles that incorporates a review of utilization, disease guideline compliance and cost?	<ul style="list-style-type: none"> • Number and percentage of HAN-affiliated beneficiaries aligned with a PCMH who has attained the highest level of OHCA accreditation^{23,24} 	OHCA
Will beneficiaries enrolled with a HAN PCMH provider have higher satisfaction, compared to beneficiaries enrolled with a non-HAN PCMH?	<ul style="list-style-type: none"> • Rating of health care – children and adults • Rating of health plan – children and adults • Rating of personal doctor – children and adults • Rating of assistance with SDOH 	CAHPS (first three measures) PHPG targeted survey

²³ The SoonerCare STCs use the term “accreditation”. The OHCA typically uses the term “tier designation” to distinguish SoonerCare PCMH standards from those of national accrediting bodies. The two terms are used interchangeably in the report.

²⁴ The 2019 – 2023 evaluation design approved by CMS (and adopted by the OHCA to the extent practical for the 2016 – 2018 evaluation) defined this measure using PCMH counts by tier, rather than beneficiary counts. However, the largest HAN provides care primarily through university clinics and reports its network data at the clinic, rather than practitioner level. Beneficiary counts were selected as a more accurate measure.

Evaluation of Health Access Networks – Cost Effectiveness

HAN cost effectiveness was evaluated through the research question and measures presented below in Exhibit 12.

Exhibit 12 – HAN Cost Effectiveness Measures

Hypothesis/Research Question(s)	Measures	Source
Will the implementation and expansion of the HANs reduce cost associated with provision of health care services to SoonerCare beneficiaries served by the HANs?	<ul style="list-style-type: none">• Emergency room utilization• Hospital admissions• Per member per month health expenditures	OHCA (MMIS)

Evaluation of Health Management Program – Access to Care

HMP performance in improving access to care was evaluated through the research questions and measures presented in Exhibit 13.

Exhibit 13 – HMP Access to Care Measures

Hypothesis/Research Question(s)	Measures	Source
Will the implementation of the HMP, including health coaches and practice facilitation, result in an increase in enrollment, as compared to baseline?	<ul style="list-style-type: none"> • Number of HMP beneficiaries engaged in health coaching 	OHCA
Will incorporating health coaches into primary care practices result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred (exclusively) via telephonic or face-to-face contact with a nurse care manager?	<ul style="list-style-type: none"> • Children and adolescents' access to PCPs – 12 months to 19 years • Adults' access to preventive/ambulatory health services²⁵ 	HEDIS

²⁵ The 2019 – 2023 evaluation design approved by CMS (and adopted by the OHCA to the extent practical for the 2016 – 2018 evaluation) included a simple measure of PCMH contacts. PHPG replaced this measure with the two HEDIS preventive care measures in order to maximize use of validated measures and to align with the HAN Access to Care evaluation.

Evaluation of Health Management Program – Quality of Care

HAN performance in improving quality of care was evaluated through the research questions and measures presented below in Exhibit 14.

Exhibit 14 – HMP Quality of Care Measures

Hypothesis/Research Question(s)	Measures	Source
Will the implementation of the HMP result in a change in characteristics of the beneficiary population enrolled in the HMP (as measured through population characteristics, including disease burden and co-morbidity obtained through claims and algorithms) as compared to baseline?	<ul style="list-style-type: none"> • Number of chronic conditions • Percentage of members with physical/behavioral health comorbidities 	OHCA (MMIS)
Will the use of disease registry functions by the health coach (along with other coaching activities) improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures? ²⁶	<ul style="list-style-type: none"> • Asthma measures <ul style="list-style-type: none"> ○ Asthma medication ratio ○ Medication management for people with asthma – 75 percent • Cardiovascular (CAD and heart failure) measures <ul style="list-style-type: none"> ○ Persistence of beta-blocker treatment after a heart attack ○ Cholesterol management for patients with cardiovascular conditions – LDL-C test • COPD measures <ul style="list-style-type: none"> ○ 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 	HEDIS (all measures, except as noted)

²⁶ The 2019 – 2023 evaluation design approved by CMS (and adopted by the OHCA to the extent practical for the 2016 – 2018 evaluation) included four Agency for Healthcare Research and Quality (AHRQ) hospital utilization measures (COPD or asthma in older adults admission rate; asthma in younger adults' admission rate; heart failure admission rate; and diabetes short-term complications admission rate). PHPG determined there were too few cases to evaluate reliably and excluded the measures from the analysis.

Hypothesis/Research Question(s)	Measures	Source
	<ul style="list-style-type: none"> • Diabetes measures <ul style="list-style-type: none"> ○ Percentage of members who had LDL-C test ○ 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 ACE/ARB therapy • Hypertension measures <ul style="list-style-type: none"> ○ Percentage of members who had LDL-C test ○ 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 <ul style="list-style-type: none"> ○ Follow-up after hospitalization for mental illness – 7 days ○ Follow-up after hospitalization for mental illness – 30 days • Opioid measures <ul style="list-style-type: none"> ○ Use of opioids at high dosage in persons without cancer ○ Concurrent use of opioids and benzodiazepines • Social Determinants of Health <ul style="list-style-type: none"> ○ Member awareness and use of available SDOH assistance (targeted member survey) ○ Member satisfaction with SDOH assistance (targeted member survey) 	PHPG (targeted survey)
Will beneficiaries using HMP services have high satisfaction and attribute improvement in health status (if applicable) to the HMP?	<ul style="list-style-type: none"> • Overall satisfaction with health coach • Overall satisfaction with HMP • Change in health status (self-reported) • Contribution of HMP to improved health status (if applicable) 	PHPG (targeted survey)

Evaluation of Health Management Program – Cost Effectiveness

HMP cost effectiveness was evaluated through the research questions and measures presented below in Exhibit 15.

Exhibit 15 – HMP Cost Effectiveness Measures

Hypothesis/Research Question(s)	Measures	Source
Will beneficiaries using HMP services have fewer ER visits compared to beneficiaries not receiving HMP services?	<ul style="list-style-type: none"> • Emergency room utilization 	OHCA (MMIS)
Will beneficiaries using HMP services have fewer (admissions and) readmissions compared to beneficiaries not receiving HMP services?	<ul style="list-style-type: none"> • Hospital admission rate • Hospital readmission rate 	OHCA (MMIS)
Will per member per month expenditures health for members enrolled in HMP be lower than would have occurred absent their participation?	<ul style="list-style-type: none"> • Per member per month expenditures²⁷ 	OHCA (MMIS)

²⁷ The 2019 – 2023 evaluation design approved by CMS (and adopted by the OHCA to the extent practical for the 2016 – 2018 evaluation) included an additional step to incorporate HMP administrative calculate total expenditures inclusive of HMP administrative expenses. Telligen health coach FTE costs are reported to the OHCA but the health coaches perform a variety of tasks. In addition to direct care management, the health coaches also are responsible for supporting the practices in which they are embedded and for providing short term assistance to patients referred by the PCMH provider but not enrolled formally into the program. Health coaches also have administrative, documentation and reporting duties. PHPG will collaborate with the OHCA and vendor in the next evaluation cycle to isolate direct care management activities/costs and activities/costs of other personnel supporting the health coaches (e.g., resource specialists) to allow for an accurate accounting of relevant administrative expenses.

Evaluation of Retroactive Eligibility Waiver – Access to Care

The appropriateness of the waiver of retroactive eligibility was evaluated through the research question and measures presented below in Exhibit 16.

Exhibit 16 – Retroactive Eligibility Waiver Appropriateness for Access to Care

Hypothesis/Research Question(s)	Measures	Source
Do the state's enrollment systems ensure readiness, eligibility and timely enrollment?	<ul style="list-style-type: none"> • The number of eligibility determinations made, broken down by type • The number of individuals determined ineligible, broken down by procedural versus eligibility reasons • The average processing times, broken down by type • The rate of timely eligibility determinations, broken down by completed within five days, 10 days and 30 days • The number of individuals disenrolled, broken down by procedural versus eligibility reasons • The internal churn rate (i.e., the number of disenrolled beneficiaries re-enrolling within six months) • The accurate transfer rate (i.e., the number of individuals transferred to Medicaid, CHIP or the Exchange), as applicable, who are determined eligible by the agency 	OHCA (eligibility system)

5. Data Sources

The SoonerCare evaluation was conducted using a variety of data sources, including eligibility/paid claims data and beneficiary and provider survey data.

Eligibility and Paid Claims Data

PHPG analysts were granted access to the OHCA MMIS and worked directly with eligibility and paid claims data for calculation of HEDIS rates, utilization trends and PMPM health expenditures. PHPG has worked within the OHCA MMIS for over a decade and performs routine quality checks to validate the completeness of the claims data, including comparison of month-to-month variance in expenditures by category-of-service, to identify and research potential data gaps. PHPG uses data smoothing and similar techniques to close gaps, if necessary.

PHPG also accounts for incurred but not received (IBNR) claims when performing utilization and expenditure calculations. The paid claims data for calendar years 2016 – 2018 was extracted in January 2020, making it unnecessary to apply claims completion factors to the data in this instance.

Enrollment Data

The OHCA furnished PHPG with enrollment reports for the retroactive eligibility portion of the evaluation. PHPG evaluated monthly trends to document any anomalies for follow-up with the OHCA prior to conducting this portion of the evaluation.

CAHPS Survey

The evaluation included CAHPS 5.0H survey data collected by the OHCA's contracted surveyor, Escalent (previously Morpace). Escalent used a combined, mail/telephone/internet protocol to maximize response rates. Escalent furnished PHPG with respondent de-identified child and adult CAHPS data; the data included flags for respondents whose PCMH providers were affiliated with a HAN.

Escalent conducts separate adult and child surveys in accordance with CAHPS specifications. The adult survey data is taken from the 2018 survey reporting cycle; child data is taken from the 2019 survey reporting cycle. (Data collection for the child survey coincided with the end of the waiver period, making it appropriate for assessing waiver performance.)

PHPG used the data to evaluate beneficiary responses to CAHPS questions, stratified by HAN enrollment status. Although Escalent conducted the surveys, PHPG was solely responsible for calculating and reporting the stratified results.

The most recently-published child and adult SoonerCare CAHPS reports, as well as archived reports, are posted on the OHCA's website²⁸. The reports describe Escalent's methodology in greater detail and provide complete survey findings.

Targeted Surveys

PHPG also conducted targeted surveys of beneficiaries and providers participating in the HMP, to evaluate the program's impact of beneficiary (self-reported) health status and provider care management activities. PHPG's dedicated survey unit conducted both surveys by telephone, although providers also were given the option of completing and returning hard copies of the surveys. The surveys were conducted on a rolling basis and were analyzed for inclusion in annual evaluation reports. The reporting survey periods were:

- March 2016 – February 2017
- March 2017 – February 2018
- March 2018 – February 2019

PHPG has conducted beneficiary and provider surveys in Oklahoma for over a decade using this methodology and has attained high response rates (in excess of 50 percent) with both survey groups. The high response rates have been achieved by conducting surveys both during and after business hours and on weekends. Beneficiaries and providers also are given the option of calling an 800-number to complete a survey at a time of their choosing.

6. Analytic Methods

PHPG applied analytic methods appropriate for each measure, in accordance with guidance provided by CMS for the 2019 – 2023 waiver period evaluation, as applicable. (As discussed earlier, the approved design for 2019 – 2023 was employed for the 2016 – 2018 evaluation to the extent practical.)

The specific analytic methods are summarized below and discussed in greater detail within the findings section.

Statistical Tests

Appendix 1 presents the statistical tests undertaken for each measure.

Both t-tests and propensity score matching were used for evaluating care managed and comparison group populations, with statistically significant results reported based on $p \leq 0.05$. Propensity score matching (PSM) is a statistical matching technique that attempts to estimate the effect of a treatment, policy, or other intervention by accounting for the covariates that predict receiving the treatment. PSM attempts to reduce the bias due to confounding variables that could be found in an estimate of the treatment effect obtained from simply comparing

²⁸ <http://www.okhca.org/research.aspx?id=87>

outcomes among units that received the treatment versus those that did not²⁹. The PSM analysis controlled for age, gender, place of residence and ethnicity across all measures calculated with paid claims data³⁰. This included HEDIS measures as well as emergency room utilization, hospital utilization and per member health expenditures (Exhibit 17).

The PSM analysis was expanded to control for health status when evaluating SoonerCare HMP beneficiary emergency room/hospital utilization and per member health expenditures. This was done to account for the recognized poor health status of HMP beneficiaries relative to the general SoonerCare population.

The OHCA identifies candidates for enrollment into the SoonerCare HMP through use of a data analytics tool that forecasts beneficiary health expenditures over the coming 12-month period based on historical service utilization, diagnoses and other risk factors. The SoonerCare HMP targets individuals whose risk/cost profile places them in the top three-to-five percent of all SoonerCare beneficiaries.

PHPG calculated the average forecasted cost for HMP beneficiaries to set a threshold for the PSM analysis. The forecasted cost variable was used only for the HMP analysis; PHPG did not control for health status within the HAN analysis as HAN beneficiaries are enrolled solely based on who they select as their PCMH provider³¹.

Exhibit 17 – PSM Analysis Components

Component	Description	HAN	HMP
Age	• Actual age, as calculated from DOB	✓	✓
Gender	• Male • Female	✓	✓
Place of Residence	• Urban (Oklahoma City, Tulsa and Lawton metropolitan areas • Rural (Rest-of-State)	✓	✓
Ethnicity	• Latino • Non-Latino A significant portion of the SoonerCare population speaks Spanish as a primary language. Ethnicity was used as a proxy to control for language preference.	✓	✓

²⁹ Rosenbaum, Paul R.; Rubin, Donald B. (1983). "The Central Role of the Propensity Score in Observational Studies for Causal Effects".

³⁰ The PSM analysis was performed separately for the HAN and HMP portions of the evaluation. Eighteen HEDIS measures were analyzed both for HAN and HMP beneficiaries and their respective comparison groups. Because the comparison groups were identified using PSM, comparison group findings (i.e., HEDIS compliance rates) are not identical across the two evaluation domains.

³¹ The HANs include a disproportionate number of university-affiliated PCMH providers, which could skew enrollment toward persons with greater health needs. PHPG did not control for this factor but does discuss it within the findings section of the report.

Component	Description	HAN	HMP
Health Status	Average forecasted costs over the next 12-months for SoonerCare HMP beneficiaries. Calculated separately for each evaluation year. (Forecasts are generated monthly for each beneficiary; overall forecast was based on sum of all monthly forecasts across all beneficiaries, divided by total member months.)		✓

Descriptive statistics also were used to describe the basic features of the data, as well as to present findings for measures that did not have a comparison group, and for measurement across time.

Survey Samples

For all non-CAHPS beneficiary surveys, a repeated measures power analysis was used to determine the appropriate sample size. Effect size estimates used in the power calculation were based on the effect size of prior surveys of a similar nature conducted in the State by PHPG. The attrition rate of the same surveys from prior periods also was used to estimate the necessary sample size.

Isolating Effects of the Demonstration

The SoonerCare Choice Demonstration operates under managed care principles, with PCMH providers, HANs and the HMP performing key managed care functions. SoonerCare Choice members are not co-enrolled for care management in the HAN and HMP, making the care managed populations within these programs unique in their composition.

The evaluation is designed to isolate the effects of the HANs and HMP from other activities through creation of a comparison group comprised of members not enrolled in either program (but still enrolled with a non-HAN affiliated PCMH). As presented in Appendix 1, results for the comparison group were generated wherever applicable.

The demographics of the HAN and comparison group populations are very similar, reflecting the large number of beneficiaries (approximately 173,000 HAN beneficiaries and 357,000 comparison group beneficiaries in December 2018). The HANs also are represented in both urban and rural portions of the State.

The demographics of the HMP population skew older than the comparison group and include more ABD beneficiaries as a percentage of the total enrollment. The specifications for HEDIS measures minimized differences in the evaluation populations, as did the use of propensity score matching to identify an appropriate comparison group universe by measure.

7. Other Additions

None.

E. METHODOLOGICAL LIMITATIONS

The SoonerCare Choice evaluation was designed to yield accurate and actionable findings but does have methodological limitations, most of which are inherent to the Section 1115 demonstrations. These include:

- *Lack of true experimental control groups* – The evaluation design includes a comparison group that serves as a reasonable proxy for the two target populations. However, it is not a true experimental control group. PHPG used propensity score matching and peer grouping, as feasible, to maximize the validity of the comparison group for the evaluation.
- *SoonerCare HMP child/adolescent HEDIS measures* – The SoonerCare HMP beneficiary population is significantly older than the general SoonerCare population; fewer than 10 percent of HMP beneficiaries are children/adolescents versus 65 percent of the general population. The small universe of HMP beneficiaries under the age of 21 posed challenges when calculating rates for diagnosis-specific pediatric measures. PHPG identified the affected measures within the body of the report.
- *Reliance on administrative data* – HEDIS measures account for a significant portion of the evaluation measure set. The OHCA calculates HEDIS rates using administrative data, which limits the accuracy of measures that require a hybrid method to capture fully beneficiary/provider activity. The OHCA accounted for this limitation by selecting measures that can be calculated accurately using administrative data.

F. Results

The results of the SoonerCare Choice evaluation are organized by hypothesis/research question. Findings are presented for each measure pertaining to a hypothesis/research question, followed by summary conclusions that take into consideration the results across all measures. Supporting data for statistical analyses are included in report appendices, as noted within the narrative.

1. HAN Access to Care

Overview

The OHCA, through its contracts with SoonerCare Health Access Networks, requires the HANs to promote improved access to care as part of advancing broader principles of managed care. The OHCA monitors HAN contractual compliance through a quarterly reporting process under which the HANs provide documentation on staffing and updates on activities related to improving access and quality of care. The HANs also submit annual reports summarizing the prior year's activities.

The required access activities include, among others:

- Ensuring access to physical health specialty care for beneficiaries with a HAN-affiliated PCMH;
- Ensuring behavioral health network adequacy and availability; and
- Generating care gap lists for the HAN and/or PCMH to use in identifying beneficiaries who are due for a primary care visit or are potential candidates for care management based on underlying health needs.

HAN Access to Care Measures

HAN performance in improving beneficiary access to care was evaluated through two HEDIS measures and one CAHPS measure:

- Children and adolescents' access to PCPs – 12 months to 19 years (HEDIS) – *this measure is reported separately by age cohort: 12 to 24 months; 25 months to 6 years; 7 to 11 years; and 12 to 19 years*
- Adults' access to preventive/ambulatory health services (HEDIS)
- Getting needed care – children and adults (CAHPS)

Children and Adolescents' Access to PCPs – 12 to 24 Months of Age

Measure Description: HEDIS measure. Percentage of beneficiaries 12 months to 24 months of age who had a visit with a PCP during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

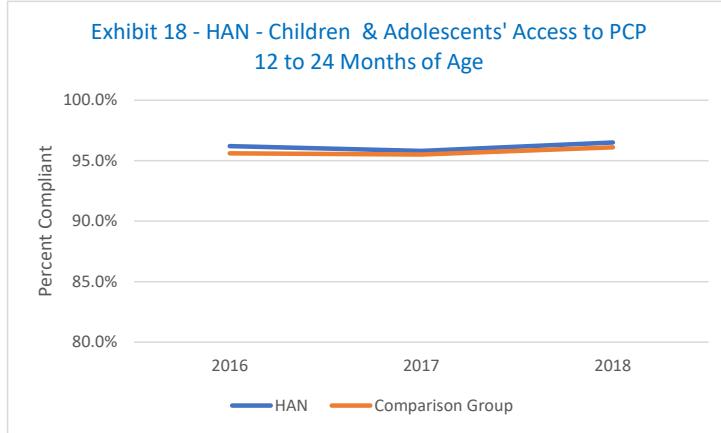
National Benchmark: CMS Child Core Set for federal fiscal years 2016 – 2018.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 95 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for both populations improved slightly over the three years (Exhibit 18).

The HAN beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2016.

The HAN beneficiary and comparison group rates both were consistently higher than the national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	96.2%*	95.8%	96.5%	0.3%
Comparison Group	95.6%	95.5%	96.1%	0.5%
Child Core Set (50 th percentile)	95.2%	95.2%	95.7%	0.5%

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Children and Adolescents' Access to PCPs – 25 Months to 6 Years of Age

Measure Description: HEDIS measure. Percentage of beneficiaries 25 months to six years of age who had a visit with a PCP during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

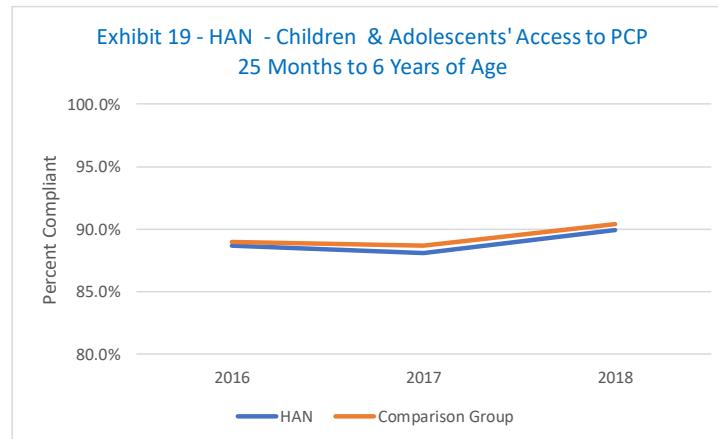
National Benchmark: CMS Child Core Set for federal fiscal years 2016 – 2018.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 90 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for the HAN beneficiary population improved over the three years while the comparison group rate declined in 2017 before rebounding in 2018 (Exhibit 19).

The comparison group rate was higher than the HAN beneficiary rate in two of the three years. The difference was statistically significant in 2017 and 2018.

The HAN beneficiary and comparison group rates both were consistently higher than the national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	88.7%	88.1%*	88.9%*	0.2%
Comparison Group	89.0%	88.7%	90.4%	1.4%
Child Core Set (50 th percentile)	87.7%	87.4%	87.7%	--

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Children and Adolescents' Access to PCPs – 7 to 11 Years of Age

Measure Description: HEDIS measure. Percentage of beneficiaries 7 to 11 years of age who had a visit with a PCP during the measurement year or the year prior to the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

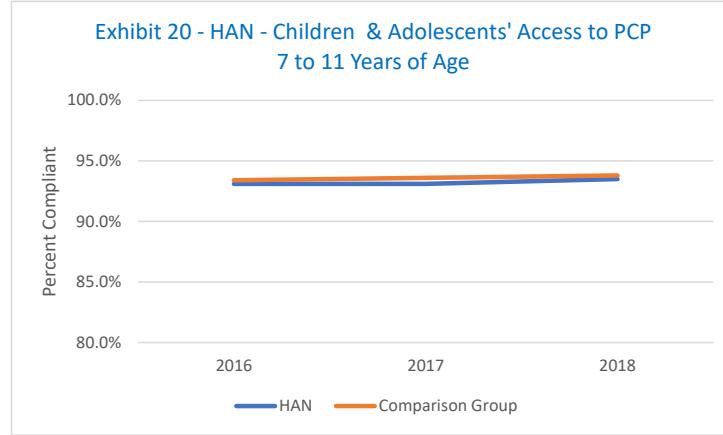
National Benchmark: CMS Child Core Set for federal fiscal years 2016 – 2018.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 90 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for both populations improved slightly over the three years (Exhibit 20).

The comparison group rate was higher than the HAN beneficiary rate in all three years. The difference was statistically significant in 2017.

The HAN beneficiary and comparison group rates both were consistently higher than the national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	93.1%	93.1%*	93.5%	0.4%
Comparison Group	93.4%	93.6%	93.8%	0.4%
Child Core Set (50 th percentile)	87.7%	87.4%	87.7%	--

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Children and Adolescents' Access to PCPs – 12 to 19 Years of Age

Measure Description: HEDIS measure. Percentage of beneficiaries 12 to 19 years of age who had a visit with a PCP during the measurement year or the year prior to the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

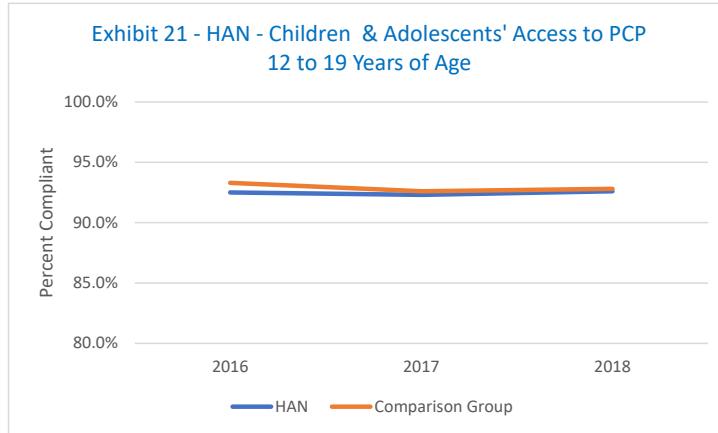
National Benchmark: CMS Child Core Set for federal fiscal years 2016 – 2018.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 90 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for the HAN beneficiary population improved slightly over the three years while the rate for the comparison group declined slightly (Exhibit 21).

The comparison group rate was higher than the HAN beneficiary rate in all three years. The difference was statistically significant in 2016.

The HAN beneficiary and comparison group rates both were consistently higher than the national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	92.5*	92.3%	92.6%	0.1%
Comparison Group	93.3%	92.6%	92.8%	-0.5%
Child Core Set (50 th percentile)	87.7%	87.4%	87.7%	--

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Adults' Access to Preventive/Ambulatory Health Services

Measure Description: HEDIS measure. Percentage of beneficiaries 20 years and older who had an ambulatory or preventive care visit in the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

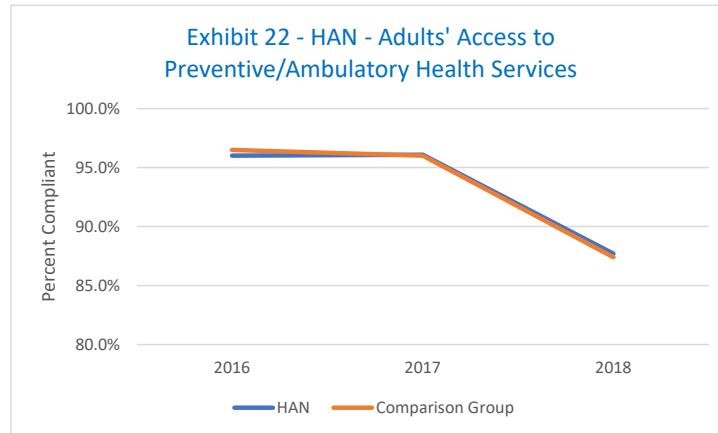
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 95 percent of HAN and comparison group beneficiaries were compliant on this measure in 2016 and 2017; compliance rates for both populations declined in 2018 (Exhibit 22).

The comparison group rate was higher than the HAN beneficiary rate in 2016 while the HAN rate was higher in 2017 and 2018. The difference was not statistically significant in any of the years.

The HAN beneficiary and comparison group rates both were consistently equal to or higher than the national benchmark rate, with the exception of the comparison group rate in 2018.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	96.0%	96.1%	87.7%	-8.3%
Comparison Group	96.5%	96.0%	87.4%	-9.1%
Adult Core Set (50 th percentile)	87.7%	87.4%	87.7%	--

Getting Needed Care – Children and Adults

Measure Description: Percentage of beneficiaries (adults and parents/caretakers of children) who reported “always” getting needed care. “Getting Needed Care” is a composite measure consisting of two questions, the first of which asks about getting necessary care, tests or treatment³² and the second of which asks about getting appointments with specialists as soon as needed³³. The composite is a simple average of the individual measure percentages.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who participated in the CAHPS survey.

Comparison Group: All other CAHPS survey respondents.

Data Source & Time Period: Oklahoma SoonerCare CAHPS survey data. Survey results are for 2018.

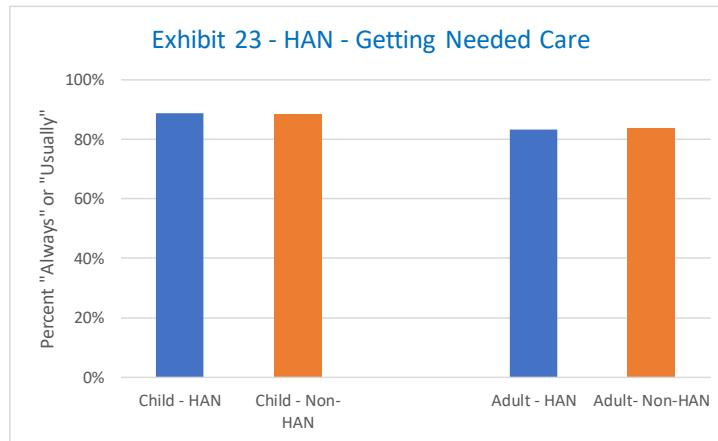
National Benchmark: NCQA national Medicaid health plan Quality Compass performance data (50th percentile).

Statistics: Appendix 3 contains detailed supporting data for the measure, including sample sizes, distribution of responses and testing for statistical significance.

Findings: Over 80 percent of the HAN and non-HAN respondents answered positively, by reporting “always” or “usually” being able to get needed care. The results were better for children than adults (Exhibit 23).

The HAN “always” percentage for children was higher than the comparison group rate while the HAN adult rate was slightly lower. The differences were not statistically significant.

SoonerCare CAHPS rates exceeded the national benchmark rate for adults and equaled the rate for children.



Response	Child-HAN	Child-Non-HAN	Adult-HAN	Adult-Non-HAN
Always	57%	54%	52%	53%
Usually	32%	35%	31%	31%
Combined – Always/Usually	89%	89%	83%	84%
Sometimes	9%	10%	12%	12%
Never	2%	2%	4%	4%
Quality Compass (50 th percentile)	84% always/usually		83% always/usually	

³² In the last 6 months, how often was it easy to get the care, tests, or treatment you (your child) needed?

³³ In the last 6 months, how often did you (your child) get an appointment to see a specialist as soon as you needed?

HAN Access to Care – Summary

The SoonerCare HAN beneficiary and comparison group populations differed by a statistically significant amount on a small number of HEDIS measures/years. However, the two populations were undifferentiated on a majority of the measures (Exhibit 24).

HAN and comparison group beneficiaries both reported high levels of satisfaction with the ability to get needed care for themselves or their children.

The HAN population consistently outperformed the national benchmark across measures and years. (No statistical test was applied to the benchmark analysis.)

Exhibit 24 – HAN Access to Care Measures - Summary

Measure	Source	HAN versus Comparison Group			HAN versus National Benchmark		
		2016	2017	2018	2016	2017	2018
Children/Adolescent Access to PCP – 12-24 Months	HEDIS	✓	---	---	✓	✓	✓
Children/Adolescent Access to PCP – 25 Months-6 Years	HEDIS	---	✗	✗	✓	✓	✓
Children/Adolescent Access to PCP – 7-11 Years	HEDIS	---	✗	---	✓	✓	✓
Children/Adolescent Access to PCP – 12-19 Years	HEDIS	✗	---	---	✓	✓	✓
Adults' Access to Preventive/Ambulatory Health Services	HEDIS	---	---	---	✓	✓	✓
Getting Needed Care - Children	CAHPS			---			✓
Getting Needed Care - Adults	CAHPS			---			---

✓ – HAN exceeds comparison group by statistically significant amount / HAN exceeds national benchmark

✗ – Comparison group exceeds HAN by statistically significant amount / National benchmark exceeds HAN

--- No statistically significant difference between HAN and comparison group / No difference between HAN and national benchmark

2. HAN Quality of Care

Overview

The OHCA, through its contracts with SoonerCare Health Access Networks, requires the HANs to promote improved quality of care by assisting affiliated PCMH providers to obtain higher levels of accreditation³⁴ and by undertaking care coordination/management of beneficiaries “complex health care needs”. The complex health care need population includes individuals who are frequent users of the emergency room, individuals enrolled in the Medicaid pharmacy lock-in program and others with targeted chronic conditions, such as asthma and diabetes, and/or social service needs presenting potential barriers to care (social determinants of health)³⁵.

Care management is defined to encompass outreach, follow-up and education to members and affiliated providers. Required activities include, among others:

- Providing education and care management to beneficiaries who are frequent users of the Emergency Room;
- Providing care coordination and care management to beneficiaries with complex/chronic conditions, such as persons with asthma or diabetes;
- Undertaking care management initiatives to improve health outcomes for targeted populations;
- Establishing multi-disciplinary care management teams and engaging affiliated PCMH providers in discharge planning and care management initiatives;
- Establishing and utilizing disease registry systems to identify candidates for care coordination/care management; and
- Measuring performance to identify opportunities for quality improvement.

The OHCA monitors HAN contractual compliance through a quarterly reporting process under which the HANs provide documentation on staffing and updates on activities related to improving access and quality of care. The HANs also submit annual reports summarizing the prior year's activities.

³⁴ As described earlier, the SoonerCare PCMH program includes three tiers with escalating participation requirements related to access (e.g., office hours) and patient care management (e.g., contacting patients after an emergency room visit): 1 – Entry; 2 – Advanced; and 3- Optimal.

³⁵ In 2016, the HANs also were responsible for care managing network beneficiaries with breast or cervical cancer enrolled in the Oklahoma CARES program and women with high risk pregnancies. In 2017, the OHCA transitioned these members to an internal agency care management function while directing the HANs to target Aged, Blind and Disabled (ABD) beneficiaries with chronic conditions.

Exhibit 25 below presents care manager counts and member-to-care manager ratios by HAN in December 2018, at the conclusion of the waiver period.

Exhibit 25 – HAN Care Manager Counts (December 2018)

Care Managers	Central Communities	OU Sooner HAN	OSU HAN	Combined
Count	2.5	15.0	7.0	24.5
Enrollment	3,359	146,116	23,475	172,950
Members per PCMH	1,344	9,741	3,353	7,059

Notes: Ratios are for all members, not care managed members, and so do not represent average caseloads. OU count does not include three open FTE positions.

HAN Quality of Care Measures

HAN performance in improving quality of care was evaluated through HEDIS, CAHPS and OHCA-specific measures that examined the scope and impact of care management, PCMH practice enhancement and beneficiary satisfaction. Specifically:

Quality and Coordination of Care (HEDIS, except where noted)

- Number of beneficiaries engaged in care management (OHCA-specific measure)
- Asthma measure
 - Asthma medication ratio – *this measure is reported separately by age cohort: 5 to 18 years and 19 to 64 years*
 - 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 test
- 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 test
 - 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 test
 - 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 – *this measure is reported separately by age cohort: 6 to 20 years and 21 years or older*
 - Follow-up after hospitalization for mental illness – 30 days – *this measure is reported separately by age cohort: 6 to 20 years and 21 years or older*

PCMH Enhancement

- Number and percentage of HAN-affiliated beneficiaries aligned with a PCMH who has attained the highest level of OHCA accreditation (OHCA-specific measure)

(PCMH patient compliance with HEDIS chronic disease measures also was included in the evaluation of this hypothesis/question, as PCMH activities have a direct relationship to HEDIS compliance rates.)

Beneficiary Satisfaction (CAHPS, except as noted)

- Rating of health care – children and adults
- Rating of health plan – children and adults
- Rating of personal doctor – children and adults
- Rating of SDOH assistance (PHPG targeted survey)

Number of HAN Beneficiaries Engaged in Care Management

Measure Description: Number of HAN beneficiaries engaged in care management at any point during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who received care management through their HAN.

Comparison Group: Not applicable.

Data Source & Time Period: HAN annual reports for calendar years 2016, 2017 and 2018.

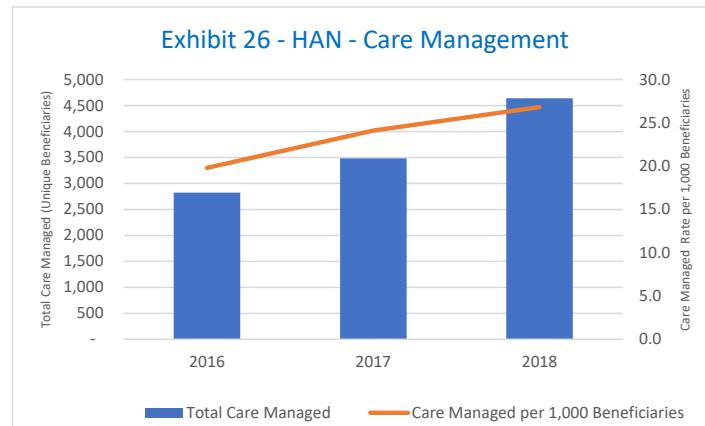
National Benchmark: Not applicable.

Statistics: Descriptive statistics (care management counts).

Findings: The three Health Access Networks are required to provide care management to members with “complex health care needs”.

The number of unique beneficiaries engaged in care management across the three HANs increased by over 64 percent from 2016 to 2018. (Exhibit 26).

Although total HAN enrollment grew during the same period (see Exhibit 2), the number of care managed beneficiaries increased at a greater rate, resulting in a more than 35 percent increase in the number of care managed individuals per 1,000 HAN beneficiaries.



Population ³⁶	2016	2017	2018	% Change 2016 - 2018
Asthma	331	503	363	9.7%
Breast/Cervical Cancer	110	81	--	-100.0%
Diabetes	217	557	602	177.4%
ER High Utilizers	740	692	1,044	41.1%
Hemophilia	24	20	26	8.3%
High Risk OB	835	329	--	-100.0%
Pharmacy Lock-in	36	50	70	94.4%
Other ³⁷	532	1,252	2,534	376.3%
Total	2,825	3,484	4,639	64.2%
<i>Care Managed per 1,000</i>	19.8	24.1	26.8	35.4%

³⁶ Breast/Cervical Cancer and High-Risk OB cases were transitioned from the HANs to internal OHCA care management during 2017.

³⁷ Other includes beneficiaries with chronic physical or behavioral health conditions and beneficiaries with social service needs that present potential barriers to care. At the OHCA's direction, the HANs targeted ABD beneficiaries with chronic conditions, starting in 2017.

Asthma Measure – Asthma Medication Ratio – 5 to 18 Years of Age

Measure Description: Percentage of members five to 18 years of age who were identified as having persistent asthma and had a ratio of controller medications to total asthma medication of 0.50 or greater during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

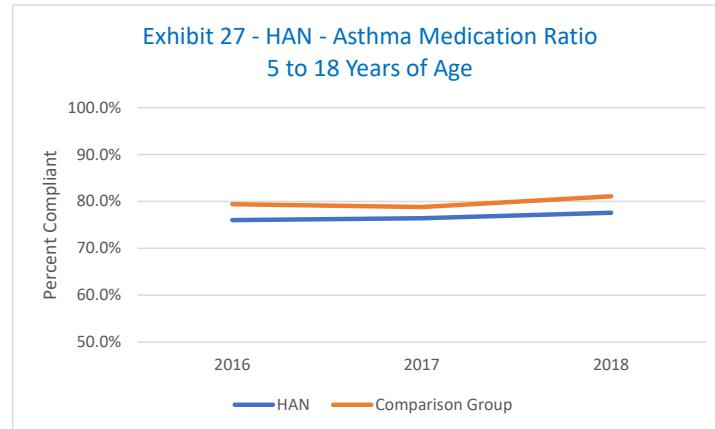
National Benchmark: CMS Child Core Set for federal fiscal year 2018 (first year reported).

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 75 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for both populations improved over the three years (Exhibit 27).

The comparison group rate was higher than the HAN beneficiary rate in all three years. The difference was statistically significant in all three years.

The HAN beneficiary and comparison group rates both were higher than the national benchmark rate in 2018.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	76.0%*	76.4%*	77.6%*	1.6%
Comparison Group	79.4%	78.8%	81.1%	1.7%
Child Core Set (50 th percentile)	--	--	69.6%	--

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Asthma Measure – Asthma Medication Ratio – 19 to 64 Years of Age

Measure Description: Percentage of members 19 to 64 years of age who were identified as having persistent asthma and had a ratio of controller medications to total asthma medication of 0.50 or greater during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

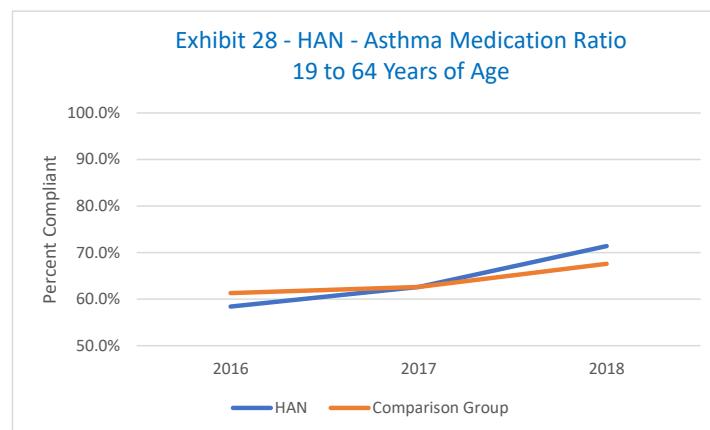
National Benchmark: CMS Adult Core Set for federal fiscal year 2018 (first year reported).

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 50 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for both populations improved over the three years, particularly among HAN beneficiaries (Exhibit 28).

The comparison group rate was higher than the HAN beneficiary rate in 2016, while the HAN beneficiary rate was higher in 2018. The differences were not statistically significant.

The HAN beneficiary and comparison group rates both were higher than the national benchmark rate in 2018.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	58.4%	62.6%	71.4%	13.0%
Comparison Group	61.3%	62.6%	67.6%	6.3%
Adult Core Set (50 th percentile)	--	--	53.1%	--

Asthma Measure – Medication Management for People with Asthma (75 Percent)

Measure Description: Percentage of members five to 64 years of age who were identified as having persistent asthma and were dispensed appropriate asthma controller medications that they remained on for at least 75 percent of their treatment period.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

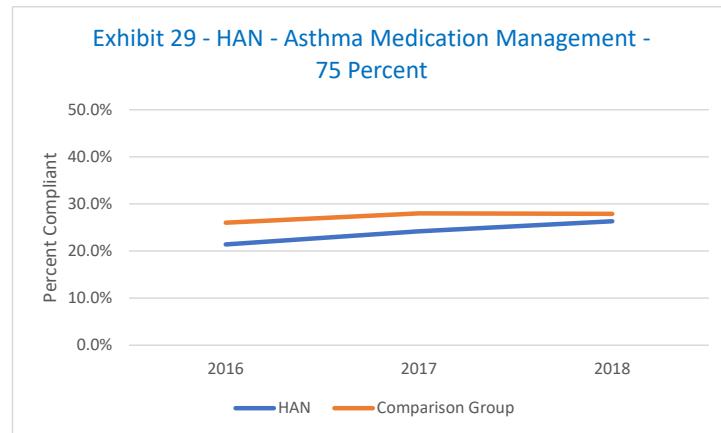
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Fewer than 30 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. However, compliance rates for both populations improved over the three years (Exhibit 29).

The comparison group rate was higher than the HAN beneficiary rate in all three years. The difference was statistically significant in 2016 and 2017.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	21.4%*	24.2%*	26.3%	4.9%
Comparison Group	26.0%	28.0%	27.9%	1.9%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Cardiovascular Measure – Persistence of Beta-Blocker Treatment after a Heart Attack

Measure Description: Percentage of members 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of AMI and who received persistent beta-blocker treatment for six months after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

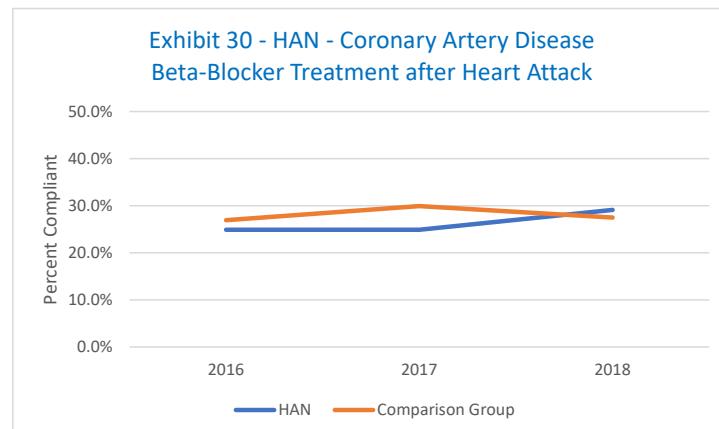
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Fewer than 30 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. The HAN beneficiary rate improved over the three years while the comparison group rate rose from 2016 to 2017 before declining from 2017 to 2018 (Exhibit 30).

The comparison group rate was higher than the HAN beneficiary rate in 2016 and 2017, while the HAN beneficiary rate was higher in 2018. The difference was not statistically significant in any of the years.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	24.9%	24.9%	29.1%	4.2%
Comparison Group	26.9%	29.9%	27.5%	0.6%
National Benchmark	N/A	N/A	N/A	N/A

Cardiovascular Measure – Cholesterol Management for Patients with Cardiovascular Conditions – LDL-C Test

Measure Description: Percentage of members 18 to 75 years of age with cardiovascular disease who had an LDL-C test during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

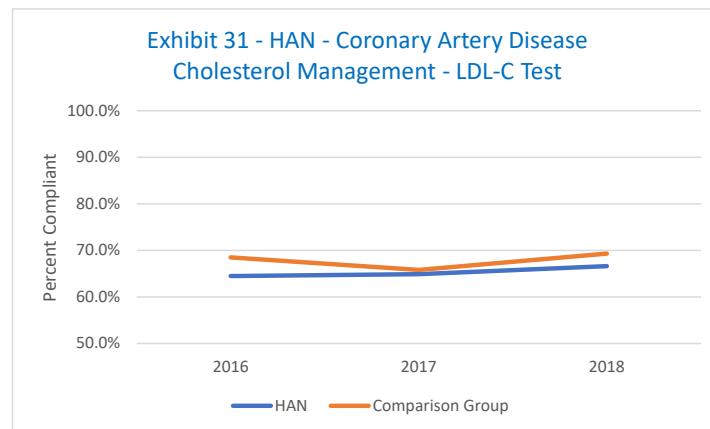
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 60 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates also improved for the HAN beneficiary population over the three years, while the comparison group rate declined in 2017 before rebounding in 2018 (Exhibit 31).

The comparison group rate was higher than the HAN beneficiary rate in all three years. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	64.5%	64.9%	66.6%	2.1%
Comparison Group	68.5%	65.8%	69.3%	0.8%
National Benchmark	N/A	N/A	N/A	N/A

COPD Measure – Use of Spirometry Testing in the Assessment and Diagnosis of COPD

Measure Description: Percentage of members 40 years of age and older with a new diagnosis of chronic obstructive pulmonary disease (COPD) or newly active COPD, who received appropriate spirometry testing to confirm the diagnosis.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

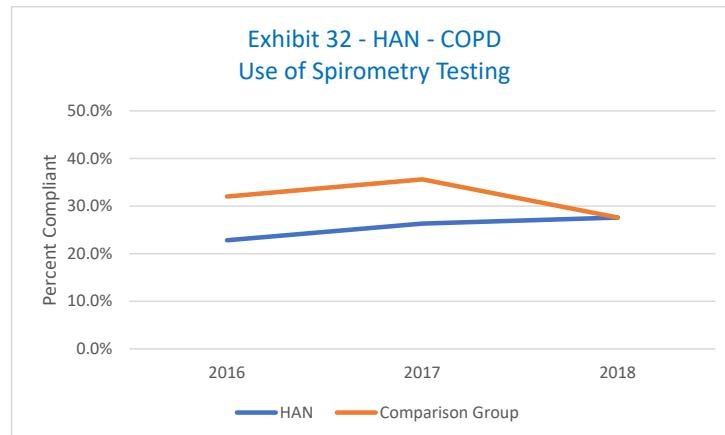
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Fewer than 30 percent of HAN beneficiaries were compliant on this measure across the three evaluation years. However, compliance rates improved for the HAN beneficiary population over the three years (Exhibit 32).

The comparison group rate was higher than the HAN beneficiary rate in 2016 and 2017, while the HAN beneficiary rate equaled the comparison group rate in 2018. The difference was statistically significant in both 2016 and 2017.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	22.8*	26.3*	27.6%	4.8%
Comparison Group	32.0%	35.6%	27.6%	-4.6%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

COPD Measure – Pharmacotherapy Management of COPD Exacerbation – 14 Days

Measure Description: Percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or emergency room visit on or between January 1 to November 30 of the measurement year and who were dispensed a systemic corticosteroid (or there was evidence of an active prescription) within 14 days of the event.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

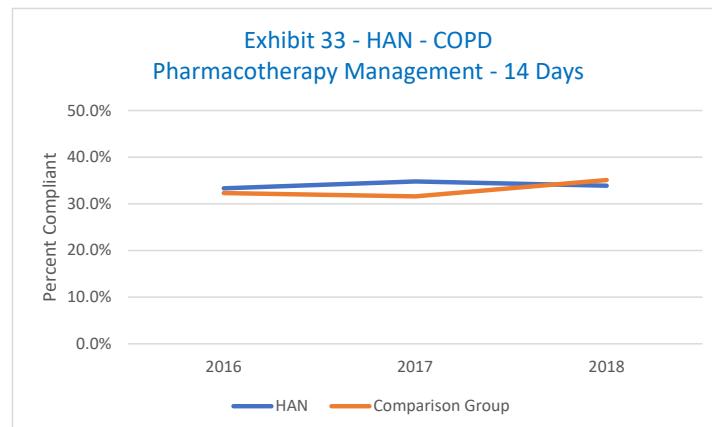
Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Fewer than 40 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rate for the HAN beneficiary population improved in 2017 before declining in 2018. The compliance rate for the comparison group declined in 2017 before rebounding in 2018 (Exhibit 33).

The HAN beneficiary rate was higher in 2016 and 2017, while the comparison group rate was higher in 2018. The difference was not statistically significant in any year. This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	33.3%	34.8%	33.9%	0.6%
Comparison Group	32.3%	31.6%	35.1%	2.8%
National Benchmark	N/A	N/A	N/A	N/A

COPD Measure – Pharmacotherapy Management of COPD Exacerbation – 30 Days

Measure Description: Percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or emergency room visit on or between January 1 to November 30 of the measurement year and who were dispensed a bronchodilator (or there was evidence of an active prescription) within 30 days of the event.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

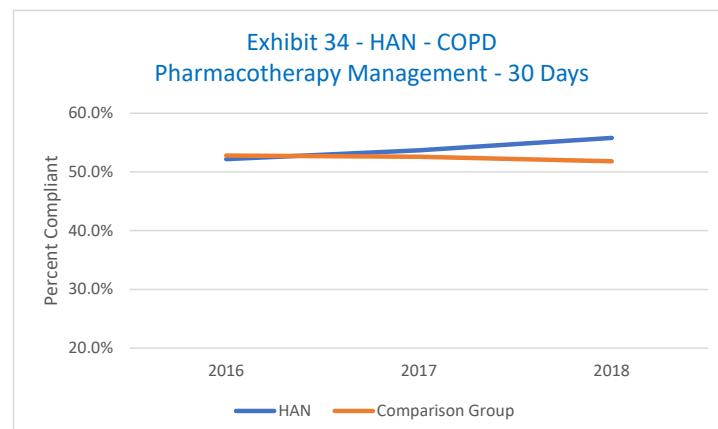
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 50 percent of the HAN beneficiary and comparison group populations were compliant on this measure across the three evaluation years. Compliance rates improved for the HAN beneficiary population over the three years and declined for the comparison group (Exhibit 34).

The comparison group rate was higher than the HAN beneficiary rate in 2016, while the HAN beneficiary rate was higher in 2017 and 2018. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	52.2%	53.7%	55.8%	3.6%
Comparison Group	52.8%	52.6%	51.8%	-1.0%
CMS Core Set (50 th percentile)	N/A	N/A	N/A	N/A

Diabetes Measure – Percentage of Members who had LDL-C Test

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had LDL-C performed.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

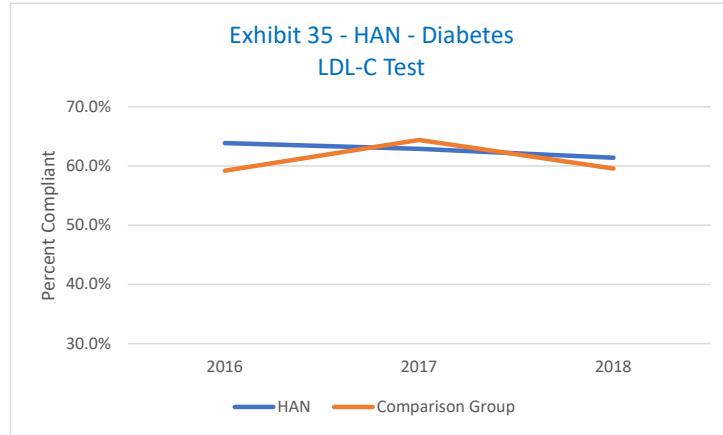
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 60 percent of the HAN beneficiary population was compliant on this measure across the three evaluation years. Compliance rates declined for the HAN beneficiary population over the three years, while compliance rates rose for the comparison group from 2016 to 2017, before dropping in 2018. (Exhibit 35).

The HAN beneficiary rate was higher than the comparison group rate in 2016 and 2018; the comparison group rate was higher in 2017. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	63.9%	62.9%	61.4%	-2.5%
Comparison Group	59.2%	64.4%	59.6%	0.4%
National Benchmark	N/A	N/A	N/A	N/A

Diabetes Measure – Percentage of Members who had Retinal Eye Exam Performed

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had retinal eye exam performed.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

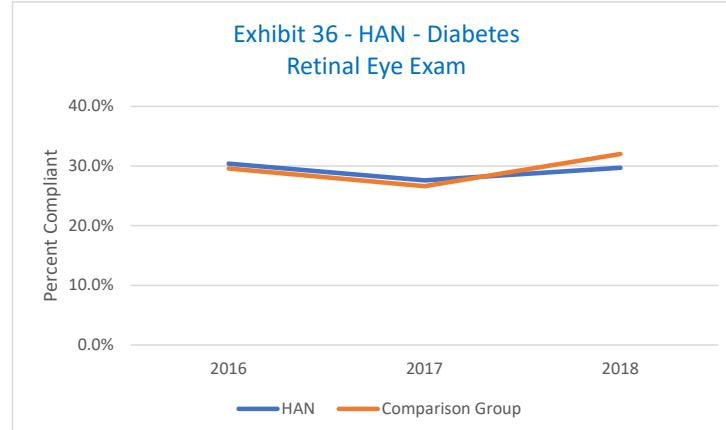
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 30 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rates for both populations declined in 2017 before rebounding in 2018 (Exhibit 36).

The HAN beneficiary rate was higher in 2016 and 2017, while the comparison group rate was higher in 2018. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	30.4%	27.6%	29.7%	-0.7%
Comparison Group	29.6%	26.6%	32.0%	2.4%
National Benchmark	N/A	N/A	N/A	N/A

Diabetes Measure – Percentage of Members who had Hemoglobin A1c (HbA1c) Testing

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had Hemoglobin A1c (HbA1c) testing performed.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

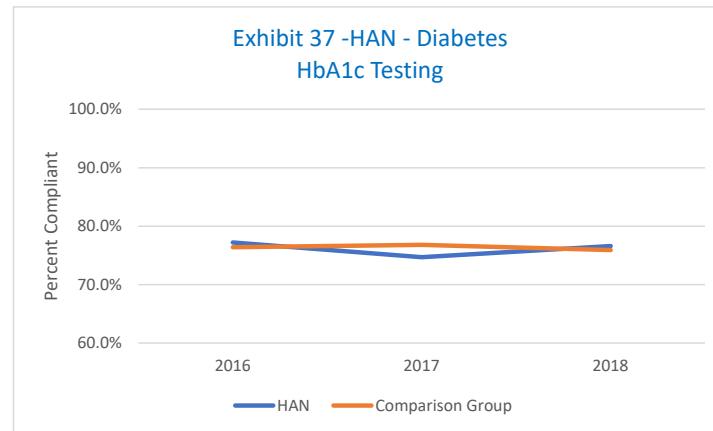
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 70 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rate for HAN beneficiaries declined in 2017 before rebounding in 2018 while the comparison group rate rose from 2016 to 2017 before declining in 2018 (Exhibit 37).

The HAN beneficiary rate was higher in 2016 and 2018, while the comparison group rate was higher in 2017. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	77.2%	74.7%	76.6%	-0.6%
Comparison Group	76.4%	76.8%	75.9%	-0.5%
National Benchmark	N/A	N/A	N/A	N/A

Diabetes Measure – Percentage of Members who Received Medical Attention for Nephropathy

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who received medical attention for nephropathy.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

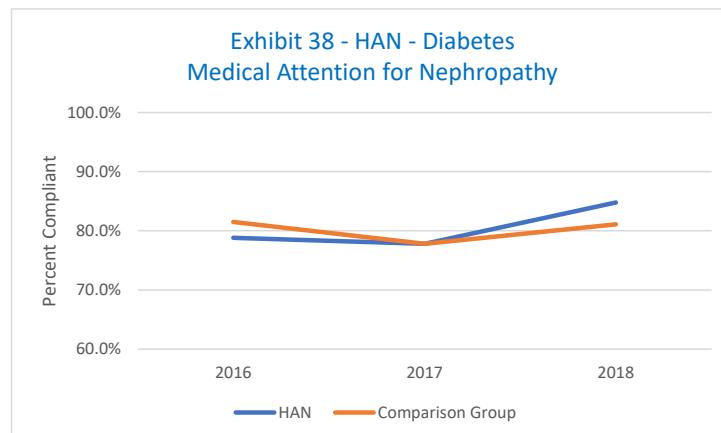
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 80 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rate for both populations declined in 2017 before rebounding in 2018 (Exhibit 38).

The comparison group rate was higher in 2016, while the comparison group rate was higher in 2018. The difference was not statistically significant in either year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	78.8%	77.8%	84.8%	5.6%
Comparison Group	81.5%	77.8%	81.1%	-0.4%
National Benchmark	N/A	N/A	N/A	N/A

Diabetes Measure – Percentage of Members Prescribed ACE/ARB Therapy

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who were prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy).

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

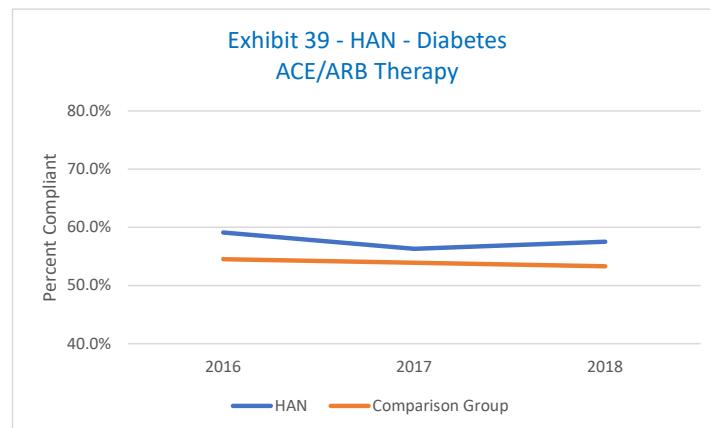
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 50 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rate for both populations declined in 2017. The HAN beneficiary rate rose again in 2018 while the comparison group rate continued to decline (Exhibit 39).

The HAN beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2016 and 2018.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	59.1%*	56.3%	57.5%*	-1.6%
Comparison Group	54.5%	53.9%	53.3%	1.2%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Hypertension Measure – Percentage of Members who had LDL-C Test

Measure Description: Percentage of members 18 years of age and older with hypertension who had an LDL-C test performed.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

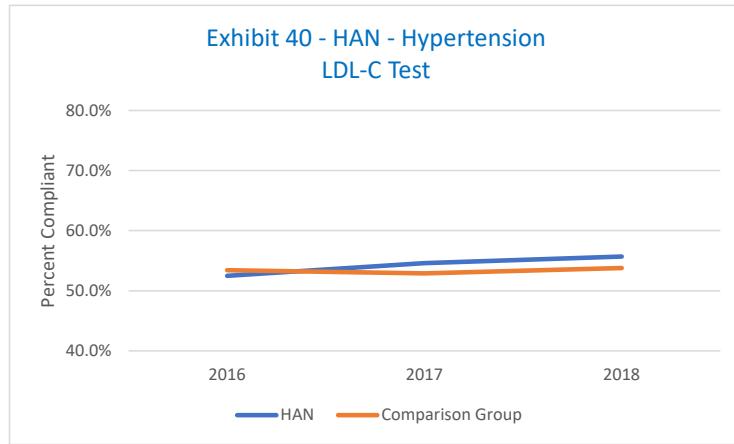
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 50 percent of the HAN beneficiary and comparison group populations were compliant on this measure across the three evaluation years. Compliance rates also improved for the HAN beneficiary population over the three years (Exhibit 40).

The comparison group rate was higher than the HAN beneficiary rate in 2016, while the HAN beneficiary rate was higher in 2017 and 2018. The difference was statistically significant in 2018.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	52.5%	54.6%	55.7%*	3.2%
Comparison Group	53.4%	52.9%	53.8%	0.4%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Hypertension Measure – Percentage of Members Prescribed ACE/ARB Therapy

Measure Description: Percentage of members 18 years of age and older with hypertension who were prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy).

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

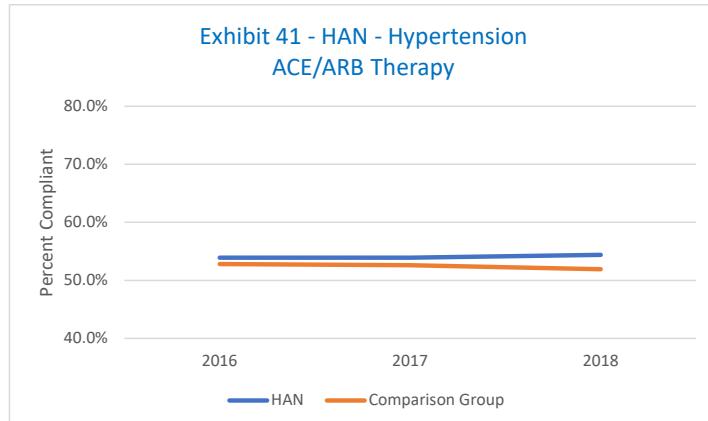
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 50 percent of the HAN beneficiary and comparison group populations were compliant on this measure across the three evaluation years. Compliance rates improved slightly for the HAN beneficiary population over the three years and declined slightly for the comparison group (Exhibit 41).

The HAN beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2018.

This measure did not have a national benchmark rate.



Population/Rate	2016	2017	2018	% Point Change 2016-2018
HAN	53.9%	53.9%	54.4%*	0.5%
Comparison Group	52.8%	52.6%	51.9%	-0.9%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Hypertension Measure – Percentage of Members Prescribed Diuretics

Measure Description: Percentage of members 18 years of age and older with hypertension who were prescribed diuretics.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

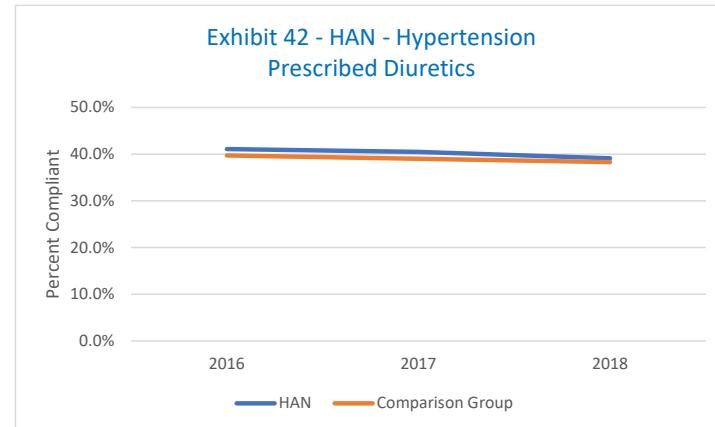
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 40 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rates for both populations declined across the three years (Exhibit 42).

The HAN beneficiary rate was higher than the comparison group rate in all three years. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	41.1%	40.5%	39.1%	-2.0%
Comparison Group	39.7%	39.0%	38.3%	-1.4%
National Benchmark	N/A	N/A	N/A	N/A

Hypertension Measure – Percentage of Members Prescribed ACE/ARB Therapy or Diuretics with Annual Medication Monitoring

Measure Description: Percentage of members 18 years of age and older with hypertension who received at least 180 treatment days of angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy) or diuretics and at least one therapeutic monitoring event for the therapeutic agent during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

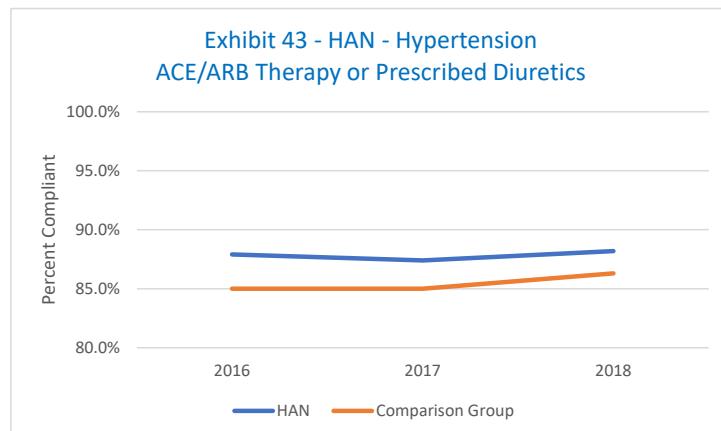
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 80 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rate for HAN beneficiaries declined slightly from 2016 to 2017, while the comparison group rate was flat; the rates for both populations rose from 2017 to 2018 (Exhibit 43).

The HAN beneficiary rate was higher than the comparison group rate in all three years. The difference also was statistically significant in all three years.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	87.9%*	87.4%*	88.2%*	0.3%
Comparison Group	85.0%	85.0%	86.3%	1.3%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Mental Health Measure – Follow-up After Hospitalization for Mental Illness – 7 Days – Members 6 to 20

Measure Description: Percentage of members 6 to 20 years of age who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 7 days after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

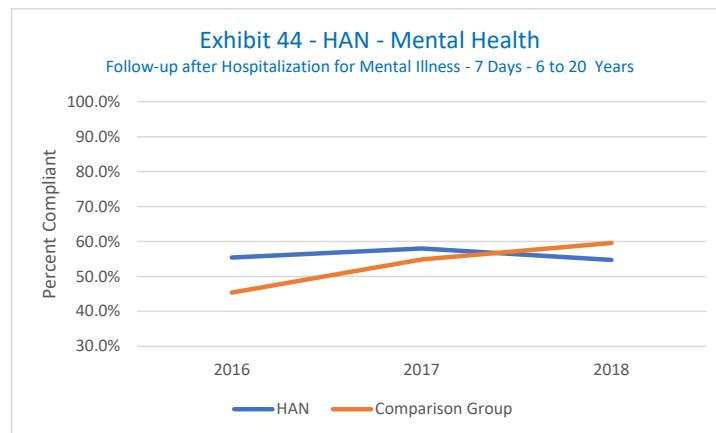
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 50 percent of HAN beneficiaries were compliant on this measure across the three evaluation years; over 50 percent of comparison group beneficiaries were compliant in 2017 and 2018. Compliance rates declined slightly for the HAN beneficiary population while improving for the comparison group (Exhibit 44).

The HAN beneficiary rate was higher than the comparison group rate in 2016 and 2017, while the comparison group rate was higher in 2018. The difference was statistically significant in 2016.

The HAN beneficiary and comparison group rates both were higher than the national benchmark rate in all three years.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	55.4%*	58.0%	54.7%	-0.7%
Comparison Group	45.4%	54.9%	59.6%	14.2%
CMS Core Set (50 th percentile)	44.7%	47.8%	44.7%	--

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Mental Health Measure – Follow-up After Hospitalization for Mental Illness – 7 Days – Members 21 and Older

Measure Description: Percentage of members 21 years of age or older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 7 days after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

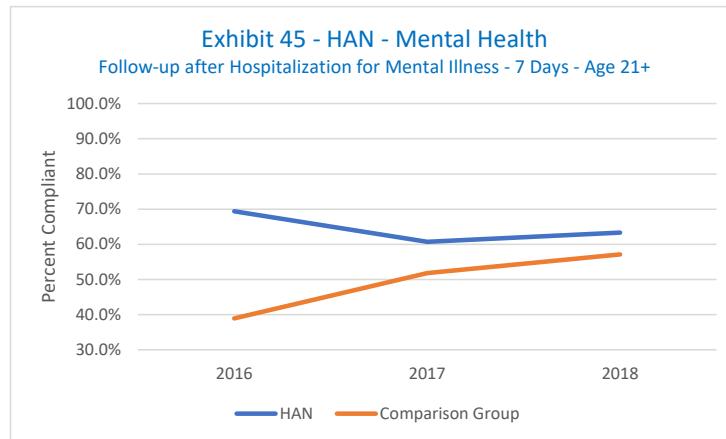
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 60 percent of HAN beneficiaries were compliant on this measure across the three evaluation years; over 50 percent of comparison group beneficiaries were compliant in 2017 and 2018. Compliance rates declined for the HAN beneficiary population declined from 2016 to 2017 before partially rebounding in 2018; compliance rates improved for the comparison group across the three years (Exhibit 45).

The HAN beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2016.

The HAN beneficiary and comparison group rates both were higher than the national benchmark rate in all three years.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	69.4%*	60.7%	63.3%	-6.1%
Comparison Group	38.9%	51.8%	57.1%	18.2%
CMS Core Set (50 th percentile)	38.3%	41.9%	38.0%	-0.3%

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Mental Health Measure – Follow-up After Hospitalization for Mental Illness – 30 Days – Members 6 to 20

Measure Description: Percentage of members 6 to 20 years of age who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 30 days after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

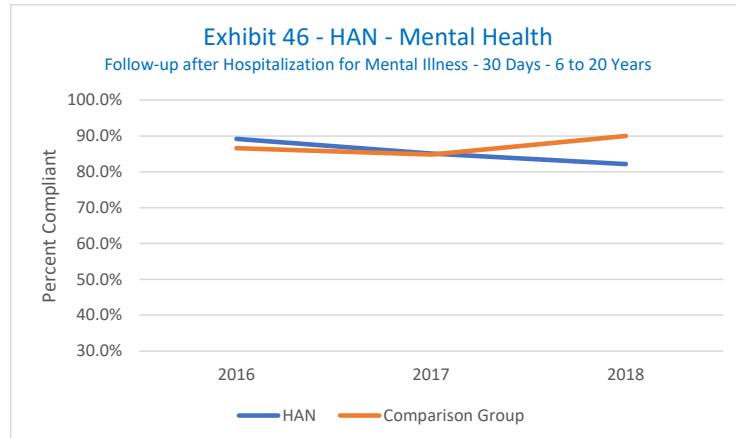
Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 80 percent of HAN and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates declined for the HAN beneficiary population while improving for the comparison group (Exhibit 46).

The HAN beneficiary rate was higher than the comparison group rate in 2016 and 2017, while the comparison group rate was higher in 2018. The difference was statistically significant in 2018.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	89.2%	85.1%	82.2*	-7.0%
Comparison Group	82.6%	84.8%	90.0%	7.4%
CMS Core Set (50 th percentile)	68.0%	69.2%	67.1%	-0.9%

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

The HAN beneficiary and comparison group rates both were higher than the national benchmark rate in all three years.

Mental Health Measure – Follow-up After Hospitalization for Mental Illness – 30 Days – Members 21 and Older

Measure Description: Percentage of members 21 years of age or older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 30 days after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

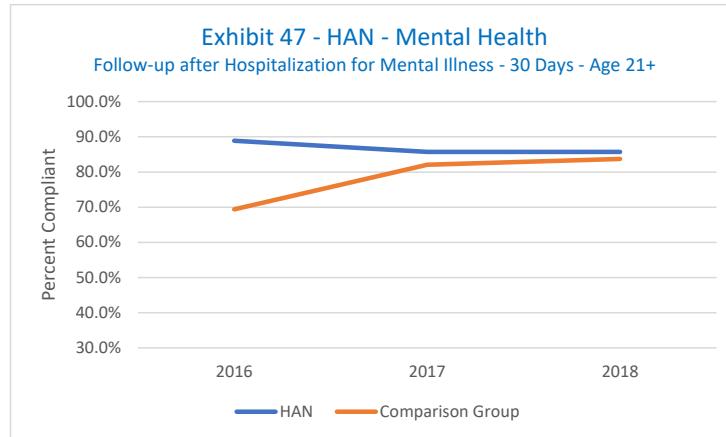
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 80 percent of HAN beneficiaries were compliant on this measure across the three evaluation years. Compliance rates declined for the HAN beneficiary population from 2016 to 2017, before stabilizing, while compliance rates improved across the three years for the comparison group (Exhibit 47).

The HAN beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2016.

The HAN beneficiary and comparison group rates both were higher than the national benchmark rate in all three years.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HAN	88.9%*	85.7%	85.7%	-4.2%
Comparison Group	69.4%	82.1%	83.7%	14.3%
CMS Core Set (50 th percentile)	59.7%	63.6%	58.6%	-1.1%

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Number and Percentage of HAN-Affiliated Beneficiaries Aligned with a PCMH who has Attained the Highest Level of OHCA Accreditation

Measure Description: Number and percentage of beneficiaries aligned with a PCMH who has attained the highest level of OHCA accreditation. The levels, in descending order, are: Level 3 – Optimal; Level 2 – Advanced; and Level 1 – Entry.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year.

Comparison Group: SoonerCare beneficiaries enrolled with a non-HAN PCMH during the measurement year.

Data Source & Time Period: HAN beneficiary counts are taken from HAN annual reports for calendar years 2016 – 2018 and presented in the aggregate. Total beneficiary counts for SFY 2018 are taken from MMIS PCMH roster data; non-HAN figures imputed by removing HAN counts for calendar year 2018. (Time periods differ but PHPG did not consider the difference to be material based on relative stability of year-over-year HAN percentages.)

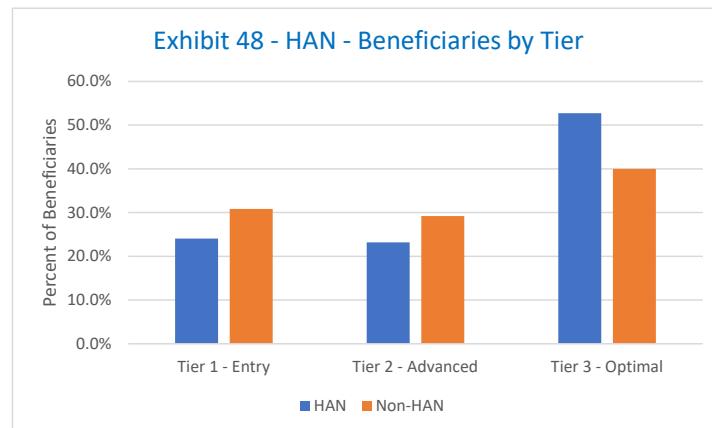
National Benchmark: Not applicable.

Statistics: Descriptive statistics (presented below).

Findings: A majority of HAN beneficiaries in 2016 – 2018 were aligned with a PCMH holding the highest level of accreditation. (Exhibit 48).

The percentages within the three tiers varied only slightly year-over-year. However, HAN beneficiaries in 2018 were more likely than their non-HAN counterparts to be aligned with a PCMH holding the highest level of accreditation.

This measure did not have a national benchmark rate.



Tier/Percent of Population	2016	2017	2018	% Point Change 2016-2018
HAN – Tier 3	53.5%	51.0%	52.7%	-0.8%
HAN – Tier 2	20.1%	22.9%	23.2%	3.1%
HAN – Tier 2	26.4%	26.1%	24.1%	-2.3%
Non-HAN – Tier 3			40.0%	--
Non-HAN – Tier 2			29.2%	--
Non-HAN – Tier 1			30.8%	--

Rating of Health Care – Children and Adults

Measure Description: Beneficiaries (adults and parents/caretakers of children) who rated their health care as 8, 9 or 10 on a scale from 0 to 10, where 0 is the “worst health care possible” and 10 is the “best health care possible”³⁸.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who participated in the CAHPS survey.

Comparison Group: All other CAHPS survey respondents.

Data Source & Time Period: Oklahoma SoonerCare CAHPS survey data. Survey results are for 2018.

National Benchmark: NCQA national Medicaid health plan Quality Compass performance data (50th percentile).

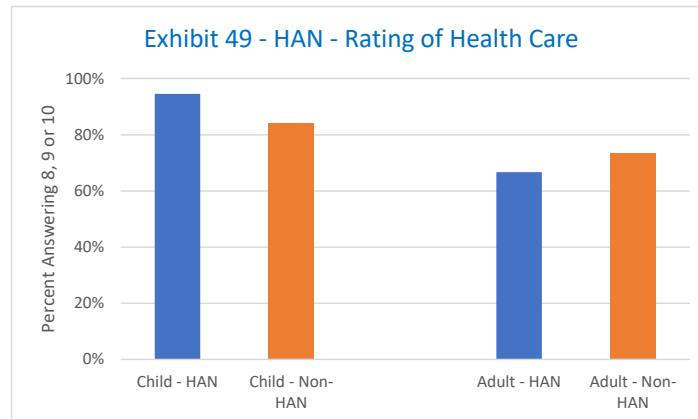
Statistics: Appendix 3 contains detailed supporting data for the measure, including sample sizes, distribution of responses and testing for statistical significance.

Findings: Ninety-five percent of the parents of children with a HAN PCMH rated their child’s health care 8, 9 or 10, versus 84 percent of other parents. The 14-point difference was statistically significant (Exhibit 49).

Adults affiliated with a HAN PCMH were less likely than other adults to rate their health care 8, 9 or 10 but the difference was not statistically significant.

Mean ratings for children with a HAN PCMH were higher than the non-HAN group, while ratings for adults with a HAN PCMH were lower than the non-HAN group. Neither result was statistically significant.

SoonerCare HAN CAHPS “8 – 10” rates exceeded the national benchmark rate for children but not for adults.



Response	Child-HAN	Child-Non-HAN	Adult-HAN	Adult-Non-HAN
8 - 10	95%*	84%	67%	74%
5 - 7	5%	15%	30%	20%
0 - 4	0%	1%	3%	7%
Mean Rating	8.89	8.75	8.15	8.24
Quality Compass 8 – 10 (50 th percentile)	87.27%		74.49%	

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

³⁸ Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your (your child’s) health care in the last 6 months?

Rating of Health Plan – Children and Adults

Measure Description: Beneficiaries (adults and parents/caretakers of children) who rated their health plan as 8, 9 or 10 on a scale from 0 to 10, where 0 is the “worst health plan possible” and 10 is the “best health plan possible”³⁹. “Health plan” in this instance refers to the SoonerCare program.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who participated in the CAHPS survey.

Comparison Group: All other CAHPS survey respondents.

Data Source & Time Period: Oklahoma SoonerCare CAHPS survey data. Survey results are for 2018.

National Benchmark: NCQA national Medicaid health plan Quality Compass performance data (50th percentile).

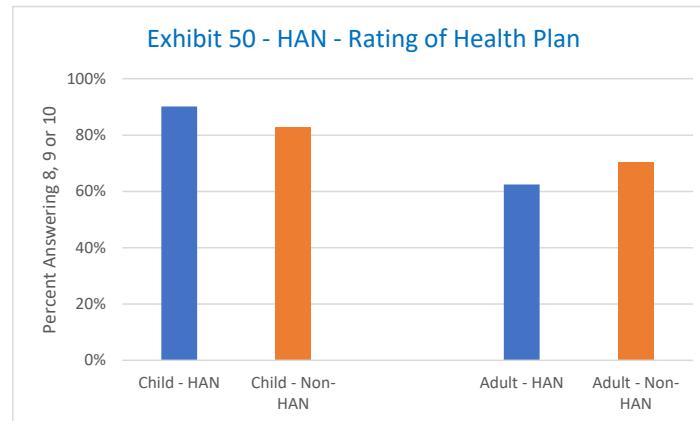
Statistics: Appendix 3 contains detailed supporting data for the measure, including sample sizes, distribution of responses and testing for statistical significance.

Findings: Ninety percent of the parents of children with a HAN PCMH rated their child’s health plan 8, 9 or 10, versus 83 percent of other parents. The seven-point difference was statistically significant (Exhibit 50).

Adults affiliated with a HAN PCMH were less likely than other adults to rate their health care 8, 9 or 10 but the difference was not statistically significant.

Mean ratings for children with a HAN PCMH were higher than the non-HAN group, while ratings for adults with a HAN PCMH were lower than the non-HAN group. The difference among children was statistically significant.

SoonerCare HAN CAHPS “8 – 10” rates exceeded the national benchmark rate for children but not for adults.



Response	Child-HAN	Child-Non-HAN	Adult-HAN	Adult-Non-HAN
8 - 10	90%*	83%	63%	70%
5 - 7	10%	16%	35%	24%
0 - 4	0%	1%	3%	6%
Mean Rating	9.05*	8.74	8.13	8.21
Quality Compass 8 – 10 (50 th percentile)	86.63%		76.40%	

Note: Percentages may not total 100% due to rounding.

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

³⁹ Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your (your child’s) health plan?

Rating of Personal Doctor – Children and Adults

Measure Description: Beneficiaries (adults and parents/caretakers of children) who rated their personal doctor as 8, 9 or 10 on a scale from 0 to 10, where 0 is the “worst personal doctor possible” and 10 is the “best personal doctor possible”⁴⁰. Respondents should typically consider their PCMH provider to be their “Personal doctor”.

Waiver Population: SoonerCare beneficiaries enrolled in a HAN during the measurement year who participated in the CAHPS survey.

Comparison Group: All other CAHPS survey respondents.

Data Source & Time Period: Oklahoma SoonerCare CAHPS survey data. Survey results are for 2018.

National Benchmark: NCQA national Medicaid health plan Quality Compass performance data (50th percentile).

Statistics: Appendix 3 contains detailed supporting data for the measure, including sample sizes, distribution of responses and testing for statistical significance.

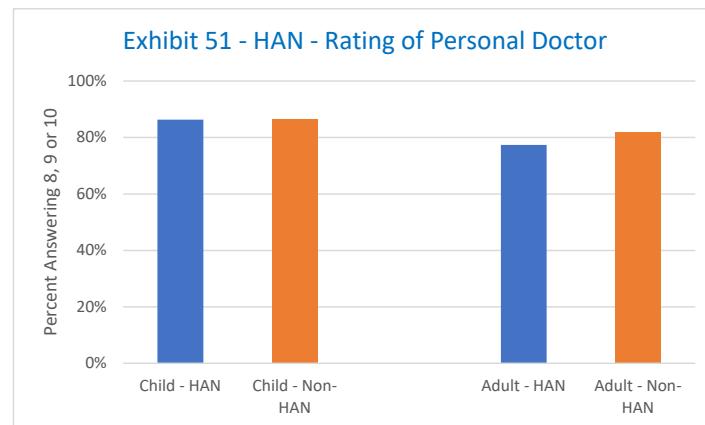
Findings: Eighty-six percent of the parents of children with a HAN PCMH rated their child’s health plan 8, 9 or 10, equal to the rate for other parents. (Exhibit 51).

Adults affiliated with a HAN PCMH were less likely than other adults to rate their health care 8, 9 or 10 but the difference was not statistically significant.

Mean ratings for both children and adults affiliated with a HAN PCMH were slightly lower than ratings for their non-HAN counterparts. Neither result was statistically significant.

SoonerCare HAN CAHPS “8 – 10” rates were below the national benchmark for both children and adults.

Non-HAN adults were slightly above the benchmark.



Response	Child-HAN	Child-Non-HAN	Adult-HAN	Adult-Non-HAN
8 - 10	86%	86%	78%	82%
5 - 7	9%	12%	20%	13%
0 - 4	4%	2%	3%	5%
Mean Rating	8.95	9.02	8.52	8.73
Quality Compass 8 – 10 (50 th percentile)	89.64%		81.59%	

Note: Percentages may not total 100% due to rounding.

⁴⁰ Using any number from 0 to 10, where 0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your (your child’s) personal doctor?

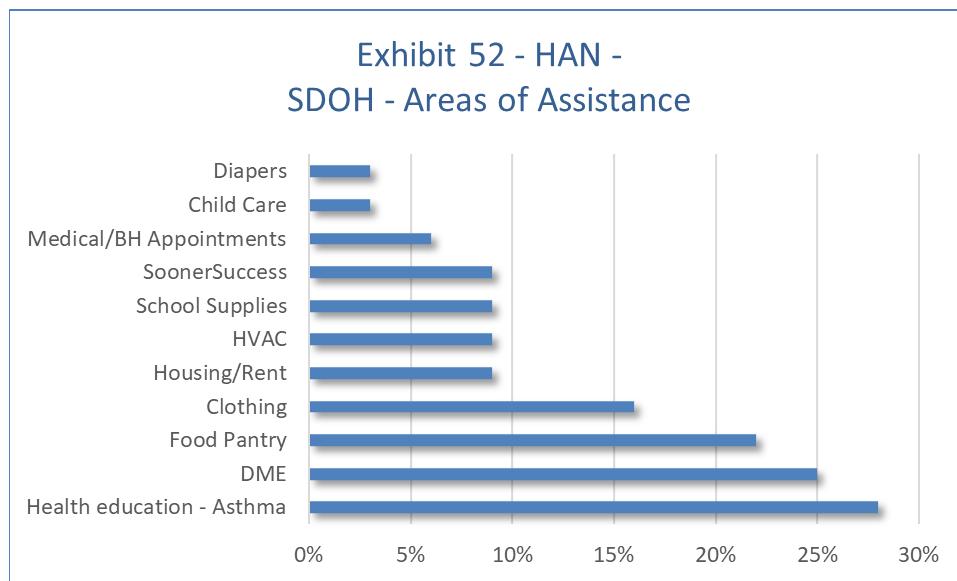
HAN Quality of Care – Social Determinants of Health

The OHCA retained PHPG in 2018 to conduct a targeted evaluation of HAN care management activities, particularly with respect to addressing social determinants of health. PHPG limited the evaluation to Central Communities HAN, with the intent to expand to the other HANs as part of future evaluation activities.

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.

Respondents reported receiving help in a variety of areas, some of which had a clinical component (Exhibit 52).



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."

HAN Quality of Care – Summary

The SoonerCare HAN beneficiary and comparison group populations showed no statistically significant differences for most quality-of-care measures. The HAN beneficiary population did outperform the comparison group with respect to treatment of hypertension and to a lesser extent, diabetes, while the comparison group performed better with respect to treatment of asthma. However, the two populations overall were similar in terms of compliance rates for treatment of chronic conditions (Exhibit 53).

HAN and comparison group beneficiaries both reported high levels of satisfaction with their health care, health plan (i.e., SoonerCare program) and personal doctor. HAN beneficiary satisfaction was higher by a statistically significant amount for children on the health care and health plan measures.

The HAN population outperformed the national benchmark on all HEDIS measures for which a national benchmark exists. HAN beneficiary satisfaction was mixed versus the national benchmark – equal to or higher for three measures and lower on three others – but beneficiary satisfaction in absolute terms was strong.

Exhibit 53 – HAN Quality of Care Measures - Summary

Measure	Source	HAN versus Comparison Group			HAN versus National Benchmark		
		2016	2017	2018	2016	2017	2018
Number of HAN beneficiaries engaged in care management	OHCA	N/A	N/A	N/A	N/A	N/A	N/A
Asthma – Medication Ratio – 5 – 18 Years	HEDIS	X	X	X	N/A	N/A	✓
Asthma – Medication Ratio – 19 – 64 Years	HEDIS	---	---	---	N/A	N/A	N/A
Asthma – Medication Management – 75 Percent	HEDIS	X	X	---	N/A	N/A	N/A
CAD – Persistence of Beta-Blocker Treatment after a Heart Attack	HEDIS	---	---	---	N/A	N/A	N/A
CAD – Cholesterol Management – LDL-C Test	HEDIS	---	---	---	N/A	N/A	N/A
COPD – Use of Spirometry Testing	HEDIS	X	X	---	N/A	N/A	N/A
COPD – Pharmacotherapy Management – 14 Days	HEDIS	---	---	---	N/A	N/A	N/A
COPD – Pharmacotherapy Management – 30 Days	HEDIS	---	---	---	N/A	N/A	N/A
Diabetes – LDL-C Test	HEDIS	---	---	---	N/A	N/A	N/A
Diabetes – Retinal Eye Exam	HEDIS	---	---	---	N/A	N/A	N/A
Diabetes – HbA1c Testing	HEDIS	---	---	---	N/A	N/A	N/A

Measure	Source	HAN versus Comparison Group			HAN versus National Benchmark		
		2016	2017	2018	2016	2017	2018
Diabetes – Medical Attention for Nephropathy	HEDIS	---	---	---	N/A	N/A	N/A
Diabetes – ACE/ARB Therapy	HEDIS	✓	---	✓	N/A	N/A	N/A
Hypertension – LDL-C Test	HEDIS	---	---	✓	N/A	N/A	N/A
Hypertension – ACE/ARB Therapy	HEDIS	---	---	✓	N/A	N/A	N/A
Hypertension – Diuretics	HEDIS	---	---	---	N/A	N/A	N/A
Hypertension – ACE/ARB Therapy or Diuretics with Monitoring	HEDIS	✓	✓	✓	N/A	N/A	N/A
Mental Health – Follow-up after Hospitalization – 7 Days – 6 to 20	HEDIS	✓	---	---	✓	✓	✓
Mental Health – Follow-up after Hospitalization – 7 Days – 21+	HEDIS	✓	---	---	✓	✓	✓
Mental Health – Follow-up after Hospitalization – 30 Days – 6 to 20	HEDIS	---	---	✗	✓	✓	✓
Mental Health – Follow-up after Hospitalization – 30 Days – 21+	HEDIS	✓	---	---	✓	✓	✓
HAN-affiliated Providers - Highest Level of Accreditation	OHCA	N/A	N/A	N/A	N/A	N/A	N/A
Rating of Health Care – Children	CAHPS				✓		
Rating of Health Care – Adults	CAHPS				---		
Rating of Health Plan – Children	CAHPS				✓		
Rating of Health Plan – Adults	CAHPS				---		
Rating of Personal Doctor – Children	CAHPS				---		
Rating of Personal Doctor - Adults	CAHPS				---		
Satisfaction with SDOH	PHPG	N/A	N/A	N/A	N/A	N/A	N/A

✓ – HAN exceeds comparison group by statistically significant amount / HAN exceeds national benchmark

✗ – Comparison group exceeds HAN by statistically significant amount / National benchmark exceeds HAN

--- No statistically significant difference between HAN and comparison group / No difference between HAN and national benchmark

3. *HAN Cost Effectiveness*

Overview

HAN activities related to improving access and quality, if effective, should have an observable impact on beneficiary service utilization and expenditures. Improvement in quality of care should yield better outcomes in the form of fewer emergency room visits and hospitalizations, and lower acute care costs.

HAN Cost Effectiveness Measures

HAN performance in reducing costs associated with provision of health care services was evaluated through a combination of utilization and expenditure measures. Specifically:

- Emergency room utilization (visit) rate
- Inpatient hospital utilization (admission) rate
- Health care expenditures (per member per month)

Emergency Room Utilization

Measure Description: Emergency room visits (for any reason) per 1,000 member months (i.e., the average number of visits per month for every 1,000 beneficiaries).

Waiver Population: SoonerCare beneficiaries with a HAN-aligned PCMH during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed using OHCA MMIS paid claims. Results are for calendar years 2016 – 2018.

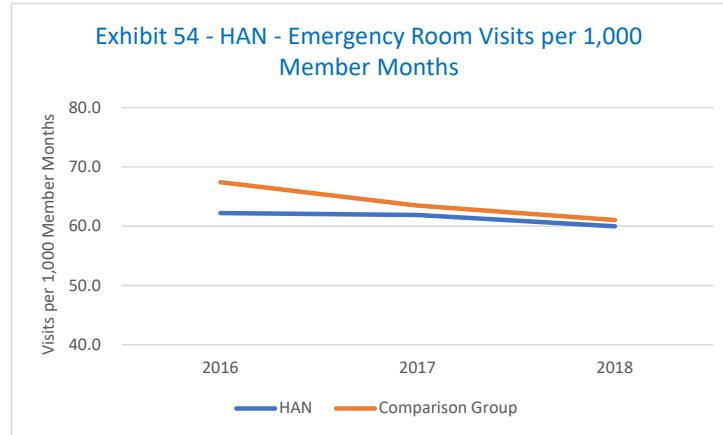
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: The HAN beneficiary and comparison group populations both averaged between 60 and 70 emergency room visits per 1,000 member months. The visit rate declined for both populations across the three years (Exhibit 54).

The HAN beneficiary visit rate was lower than the comparison group rate in all three years. The difference was statistically significant in all three years.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Change 2016-2018
HAN	62.2*	61.9*	60.0*	-3.5%
Comparison Group	67.4	63.5	61.1	-9.3%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Inpatient Hospital Utilization

Measure Description: Hospital admissions (for any reason) per 100,000 member months (i.e., the average number of admissions per month for every 100,000 beneficiaries).

Waiver Population: SoonerCare beneficiaries with a HAN-aligned PCMH during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed using OHCA MMIS paid claims. Results are for calendar years 2016 – 2018.

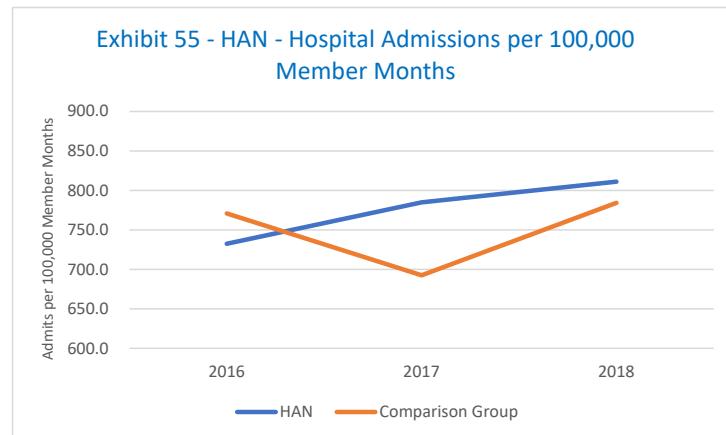
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: The HAN beneficiary hospital inpatient utilization rate increased from 732 to 811 admissions per 100,000 member months from 2016 to 2018. The comparison group rate declined from 771 to 693 admissions per 100,000 member months from 2016 to 2017, before rebounding to 784 admissions per 100,000 member months in 2018 (Exhibit 55).

The HAN beneficiary rate was lower than the comparison group rate in 2016, while the comparison group rate was lower in 2017 and 2018. The difference was statistically significant in 2016 and 2017.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Change 2016-2018
HAN	732.6*	785.0*	811.2	10.7%
Comparison Group	770.8	692.7	784.1	1.8%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Per Member Per Month Expenditures

Measure Description: Average monthly expenditures per member for Medicaid-covered health care services⁴¹.

Waiver Population: SoonerCare beneficiaries with twelve months of continuous enrollment and a HAN-aligned PCMH during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed using OHCA MMIS paid claims. Results are for calendar years 2016 – 2018.

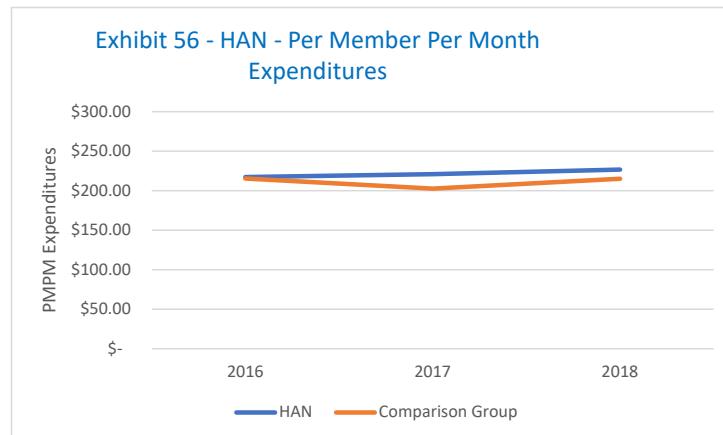
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: HAN beneficiary PMPM expenditures rose from \$217.33 in 2016 to \$226.69 in 2018, a 4.3 percent increase. Comparison group expenditures were nearly flat over the three years, falling from \$215.40 to \$202.69 in 2017, before rebounding to \$214.98 in 2018 (Exhibit 56).

The HAN beneficiary PMPM was higher than the comparison group PMPM in all three years. The difference was statistically significant in 2017 and 2018.

This measure did not have a national benchmark rate.



Population/ PMPM	2016	2017	2018	% Change 2016-2018
HAN	\$217.33	\$220.97*	\$226.69*	4.3%
Comparison Group	\$215.40	\$202.69	\$214.98	-0.2%
National Benchmark	N/A	N/A	N/A	N/A

* HAN rate differs from comparison group rate by a statistically significant amount (95% confidence level)

⁴¹ Findings are based on paid claims and are not adjusted to account for the HANs' nominal case management fee.

HAN Cost Effectiveness – Summary

Findings with respect to HAN cost effectiveness were mixed. The SoonerCare HAN population registered a lower emergency room visit rate in all three years and a lower hospital admission rate in 2016. The comparison group registered lower PMPM expenditures in all three years; the difference was statistically significant in 2017 and 2018 (Exhibit 57).

Exhibit 57 – Cost effectiveness Measures - Summary

Measure	Source	HAN versus Comparison Group			HAN versus National Benchmark		
		2016	2017	2018	2016	2017	2018
Emergency Room Utilization	OHCA	✓	✓	✓	N/A	N/A	N/A
Inpatient Hospital Admissions	OHCA	✓	X	---	N/A	N/A	N/A
PMPM Expenditures	OHCA	---	X	X	N/A	N/A	N/A

✓ – HAN exceeds comparison group by statistically significant amount / HAN exceeds national benchmark

X – Comparison group exceeds HAN by statistically significant amount / National benchmark exceeds HAN

--- No statistically significant difference between HAN and comparison group / No difference between HAN and national benchmark

4. HMP Access to Care

Overview

Traditional case and disease management programs 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. 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.⁴²

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.

The OHCA contracted with the SoonerCare HMP vendor (Telligent) to offer practice facilitation in holistic chronic care management to participating providers. The OHCA also required its vendor to assess and identify beneficiaries with, or at risk for chronic conditions who would benefit from holistic care management. (Beneficiaries aligned with an HMP-participating practice.)

The OHCA established a target number of beneficiaries to be care managed during a contract year and specified that the majority of care management was to occur at the PCMH office. This was to improve the frequency of beneficiary interactions with the care manager and PCMH.

HMP Access to Care Measures

The SoonerCare HMP's performance in improving beneficiary access to care was evaluated through one OHCA-specific measure and two HEDIS measures:

- Number of beneficiaries engaged in health coaching (OHCA-specific)
- Children and adolescents' access to PCPs – 12 months to 19 years (HEDIS)⁴³
- Adults' access to preventive/ambulatory health services (HEDIS)

⁴² Wagner, E.H., "Chronic Disease Management: What Will It Take to Improve Care for Chronic Illness?," *Effective Clinical Practice*, 1:2-4 (1998).

⁴³ This measure typically is reported separately by age cohort: 12 to 24 months; 25 months to 6 years; 7 to 11 years; and 12 to 19 years. However, due to the small number of children/adolescents enrolled in the Health Management Program, PHPG evaluated the 12 months to 19-year old population as a group.

Number of Beneficiaries Engaged in Health Coaching

Measure Description: Number of members engaged in care management for at least three months in a 12-month period.

Waiver Population: SoonerCare beneficiaries enrolled in the SoonerCare HMP during the measurement year who received care management through their health coach.

Comparison Group: Not applicable.

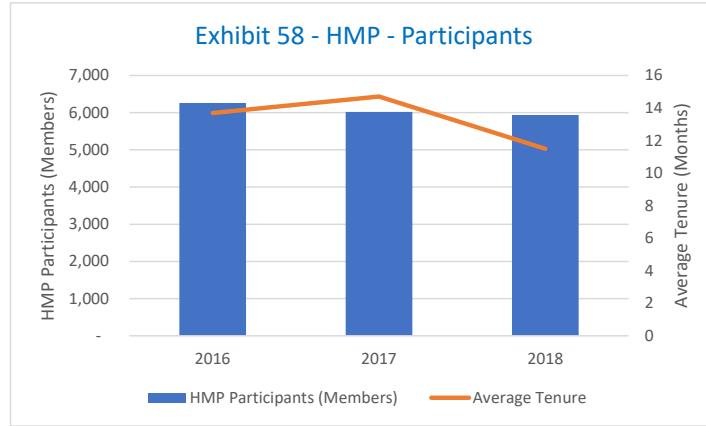
Data Source & Time Period: SoonerCare annual evaluation reports for State Fiscal Years 2016, 2017 and 2018⁴⁴.

National Benchmark: Not applicable.

Statistics: Descriptive statistics (care management counts).

Findings: The OHCA's contract with Telligen during the evaluation period set a target caseload of 5,000 actively engaged beneficiaries⁴⁵. Telligen averaged over 6,000 unduplicated beneficiaries during each year covered by the evaluation. Although these are not point-in-time caseloads, average tenure each year was close to, or exceeded 12 months, suggesting that caseloads remained above the 5,000-beneficiary target (Exhibit 58).

The most common primary diagnosis each year was hypertension, followed by diabetes and asthma.



Primary Diagnosis ⁴⁶	2016	2017	2018	% of Total 2018
Asthma	833	766	747	12.6%
Coronary Artery Disease	147	141	144	2.4%
COPD	569	563	532	9.0%
Diabetes	888	831	810	13.6%
Heart Failure	54	54	54	0.9%
Hypertension	1,638	1,544	1,537	25.9%
Other	2,130	2,119	2,116	35.6%
Total	6,259	6,018	5,940	100.0%
<i>Average Tenure (Months)</i>	13.7	14.7	11.5	

⁴⁴ The OHCA has contracted with PHPG since 2009 to conduct an annual evaluation of the SoonerCare HMP. The evaluations are performed on state fiscal year basis, to align with the Telligen contract year.

⁴⁵ The contract funded up to 7,500 beneficiaries but allowed for 2,500 at any time to be in a "pending status".

⁴⁶ The majority of beneficiaries had multiple chronic conditions. The "primary" diagnosis designation applied to the condition for which a beneficiary incurred the greatest dollar amount in claims.

Children and Adolescents' Access to PCPs – 12 Months to 19 Years of Age⁴⁷

Measure Description: HEDIS measure. Percentage of beneficiaries 12 months to 19 years of age who had a visit with a PCP during the measurement year or the year prior to the measurement year (depending on the age of the beneficiaries).

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

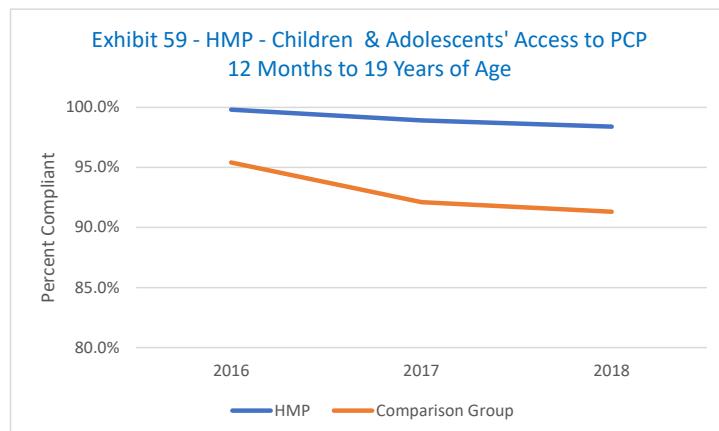
National Benchmark: CMS Child Core Set for federal fiscal years 2016 – 2018.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Nearly 100 percent of HMP beneficiaries and over 90 percent of comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for both populations declined over the three years but remained high (Exhibit 59).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference also was statistically significant in all three years.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	99.8%*	98.9%	98.4%	-1.4%
Comparison	95.4%	92.1%	91.3%	-4.1%
National Benchmark**	N/A	N/A	N/A	--

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

** Child Core Set data is stratified by age cohort within the 12 month – 19 years measure and not usable as a benchmark across the entire age spectrum

⁴⁷ The SoonerCare HMP primarily serves adult beneficiaries. In 2018, only seven percent of HMP beneficiaries were under the age of 21. Findings for all child/adolescent measures therefore should be interpreted with caution.

Adults' Access to Preventive/Ambulatory Health Services

Measure Description: HEDIS measure. Percentage of beneficiaries 20 years and older who had an ambulatory or preventive care visit in the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year who met HEDIS specifications for the measure.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

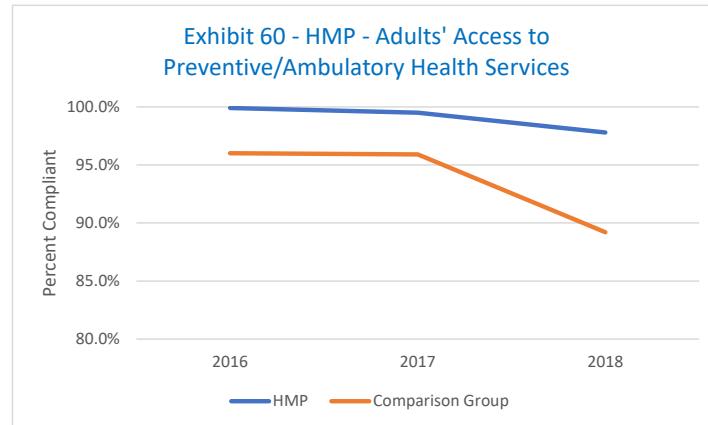
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Nearly 100 percent of HMP beneficiaries and 89 percent or more of comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for both populations declined over the three years but remained high (Exhibit 60).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference also was statistically significant in all three years.

The HMP beneficiary and comparison group rates both were consistently higher than the national benchmark rate.



Note: Y-Axis does not start at zero.

Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	99.9%*	99.5%*	97.8%*	-2.1%
Comparison Group	96.0%	95.9%	89.2%	-6.8%
Adult Core Set (50 th percentile)	87.7%	87.4%	87.7%	--

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

HMP Access to Care – Summary

The SoonerCare HMP population exceeded the comparison group by a statistically significant amount, across all years, on both HEDIS Access to Care measures (Exhibit 61).

The HMP beneficiary population also outperformed the national benchmark across both measures and all three years. (No statistical test was applied to the benchmark analysis.)

Exhibit 61 – HMP Access to Care Measures - Summary

Measure	Source	HMP versus Comparison Group			HMP versus National Benchmark		
		2016	2017	2018	2016	2017	2018
Beneficiaries Engaged in Health Coaching	OHCA	N/A	N/A	N/A	N/A	N/A	N/A
Children/Adolescent Access to PCP – 12 Months to 19 Years	HEDIS	✓	✓	✓	✓	✓	✓
Adults' Access to Preventive/Ambulatory Health Services	HEDIS	✓	✓	✓	✓	✓	✓

✓ – HMP exceeds comparison group by statistically significant amount / HMP exceeds national benchmark

✗ – Comparison group exceeds HMP by statistically significant amount / National benchmark exceeds HMP

--- No statistically significant difference between HMP and comparison group / No difference between HMP and national benchmark

5. HMP Quality of Care

Overview

The SoonerCare HMP uses a combination of data analytics and physician referrals to identify appropriate candidates for health coaching. The program targets persons with multiple physical health conditions (often with behavioral health co-morbidities) who can benefit from holistic care management.

Health coaches employ motivational interviewing and other techniques to engage beneficiaries in better managing their chronic health conditions and adopting healthier lifestyles. Health coaches provide education on the importance of preventive care specific to the beneficiary's condition (e.g., retinal eye exams and HbA1c tests for diabetics) and for general good health (e.g., proper diet and exercise). Coaches also assist beneficiaries in communicating with their PCMH provider and scheduling appointments with specialists and behavioral health providers.

Health coaches make themselves available to beneficiaries by telephone, as well as at the physician's office, in the case of practice-embedded coaches. The SoonerCare HMP vendor also operates a telephonic resource center, through which beneficiaries (or their health coaches) can obtain assistance addressing social service needs (social determinants of health) that could present barriers to care (e.g., food or housing insecurity).

HMP Quality of Care Measures

HMP performance in improving quality of care was evaluated through HEDIS and OHCA-specific measures that examined the scope and impact of care management, and beneficiary satisfaction. Specifically:

Population Characteristics

- Number of chronic conditions (OHCA-specific measure)
- Percentage of beneficiaries with physical/behavioral health co-morbidities

Quality and Coordination of Care (HEDIS, except where noted)

- Asthma measure
 - Asthma medication ratio – *this measure is reported separately by age cohort: 5 to 18 years and 19 to 64 years*
 - 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 test

- 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 test
 - 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 test
 - 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 – *this measure is reported separately by age cohort: 6 to 20 years and 21 years or older*
 - Follow-up after hospitalization for mental illness – 30 days – *this measure is reported separately by age cohort: 6 to 20 years and 21 years or older*
- Opioid Use measures
 - Use of opioids at high dosage in persons without cancer
 - Concurrent use of opioids and benzodiazepines
- Social Determinants of Health (SDOH) measures (OHCA-specific)
 - Member awareness of SDOH available assistance
 - Member satisfaction with SDOH available assistance
- Beneficiary Satisfaction and Health Status measures (OHCA-specific)
 - Overall satisfaction with health coach
 - Overall satisfaction with HMP
 - Change in health status

Number of Chronic Conditions

Measure Description: Percentage of SoonerCare HMP beneficiaries with two or more physical health chronic conditions (Asthma, Coronary Artery Disease, COPD, Diabetes, Heart Failure and/or Hypertension).

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: Not applicable.

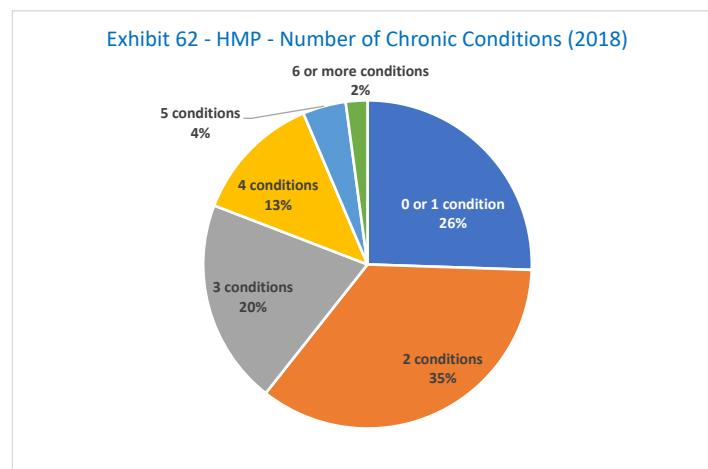
Data Source & Time Period: SoonerCare annual evaluation reports for State Fiscal Years 2016, 2017 and 2018.

National Benchmark: Not applicable.

Statistics: Descriptive statistics (chronic condition diagnosis counts).

Findings: Approximately 75 percent of SoonerCare HMP beneficiaries had two or more of the prevalent chronic health conditions treated under the program. Nearly 20 percent had four or more conditions.

The portion with two or more conditions declined slightly from 2016 to 2018 (Exhibit 62).



Number of Chronic Conditions (% of Beneficiaries)	2016	2017	2018	% Point Change 2016 - 2018
0 or 1 Condition	23.0%	23.7%	25.5%	2.5%
2 Conditions	33.7%	33.9%	35.1%	1.4%
3 Conditions	22.1%	21.3%	20.2%	-1.9%
4 Conditions	12.9%	13.4%	12.8%	-0.1%
5 Conditions	5.9%	5.5%	4.3%	-1.6%
6 Conditions	2.4%	2.2%	2.1%	-0.3%
2 or More Conditions	77.0%	76.3%	74.5%	-2.5%

Percentage of Beneficiaries with Physical/Behavioral Health Co-Morbidities

Measure Description: Percentage of SoonerCare HMP beneficiaries with one or more physical health chronic conditions (Asthma, Coronary Artery Disease, COPD, Diabetes, Heart Failure and/or Hypertension) in combination with a behavioral health condition.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: Not applicable.

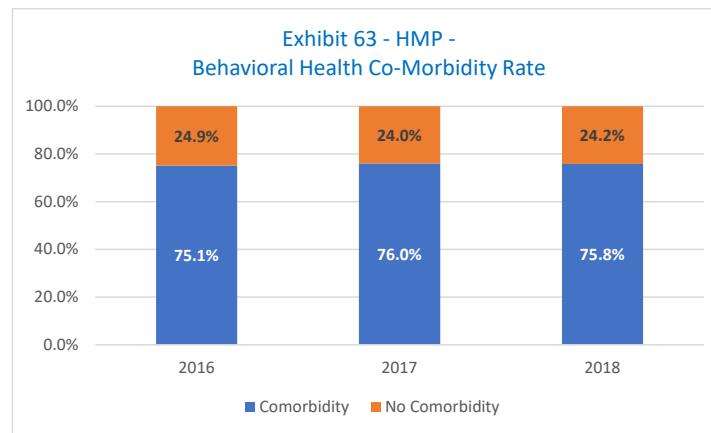
Data Source & Time Period: SoonerCare annual evaluation reports for State Fiscal Years 2016, 2017 and 2018.

National Benchmark: Not applicable.

Statistics: Descriptive statistics (chronic condition and behavioral health condition diagnosis counts).

Findings: Approximately 75 percent of SoonerCare HMP beneficiaries had one or more of the prevalent chronic health conditions treated under the program in combination with a behavioral health co-morbidity. Common comorbidities included psychosis and major depression (Exhibit 63).

Beneficiaries with COPD were most likely to have a co-morbidity. Beneficiaries with asthma were least likely, although their co-morbidity rate was still nearly 70 percent.



Percent with Co-Morbidity by Primary Chronic Condition	2016	2017	2018	% Point Change 2016 - 2018
Asthma	69.9%	69.2%	68.6%	-1.3%
Coronary Artery Disease	78.3%	77.5%	77.8%	-0.5%
COPD	81.3%	81.6%	81.1%	-0.2%
Diabetes	77.0%	78.1%	79.0%	2.0%
Heart Failure	70.3%	70.9%	72.3%	2.0%
Hypertension	76.6%	77.9%	78.3%	1.7%

Asthma Measure – Asthma Medication Ratio – 5 to 18 Years of Age

Measure Description: Percentage of members five to 18 years of age who were identified as having persistent asthma and had a ratio of controller medications to total asthma medication of 0.50 or greater during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

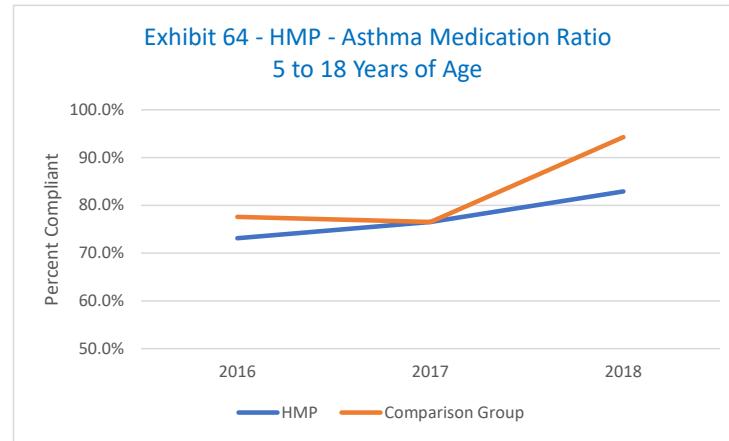
National Benchmark: CMS Child Core Set for federal fiscal year 2018 (first year reported).

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 75 percent of HMP and comparison group beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for both populations improved over the three years (Exhibit 64).

The comparison group rate was equal to or higher than the HMP beneficiary rate in all three years. The difference was not statistically significant in any of the years.

The HMP beneficiary and comparison group rates both were substantially higher than the national benchmark rate in 2018.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	73.1%	76.5%	82.9%	9.8%
Comparison Group	77.6%	76.5%	94.3%	16.7%
Child Core Set (50 th percentile)	--	--	69.6%	--

Asthma Measure – Asthma Medication Ratio – 19 to 64 Years of Age

Measure Description: Percentage of members 19 to 64 years of age who were identified as having persistent asthma and had a ratio of controller medications to total asthma medication of 0.50 or greater during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

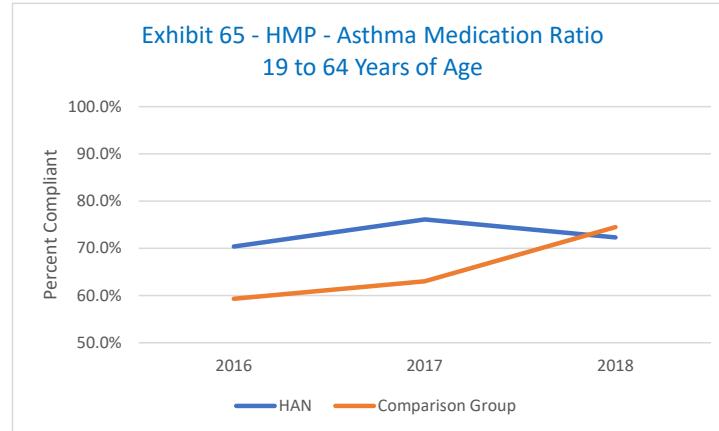
National Benchmark: CMS Adult Core Set for federal fiscal year 2018 (first year reported).

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 70 percent of HMP beneficiaries were compliant on this measure across the three evaluation years. Compliance rates for both populations improved from 2016 to 2017. The HMP beneficiary rate declined from 2017 to 2018, although it remained above the 2016 level; the comparison group rate continued to rise (Exhibit 65).

The HMP beneficiary rate was higher than the comparison group rate in 2016 and 2017, while the comparison group rate was higher in 2018. The differences were not statistically significant.

The HMP beneficiary and comparison group rates both were substantially higher than the national benchmark rate in 2018.



Note: Y-Axis does not start at zero.

Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	70.4%	76.1%	72.3%	1.9%
Comparison Group	59.3%	63.0%	74.5%	15.2%
Adult Core Set (50 th percentile)	--	--	53.1%	--

Asthma Measure – Medication Management for People with Asthma (75 Percent)

Measure Description: Percentage of members five to 64 years of age who were identified as having persistent asthma and were dispensed appropriate asthma controller medications that they remained on for at least 75 percent of their treatment period.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

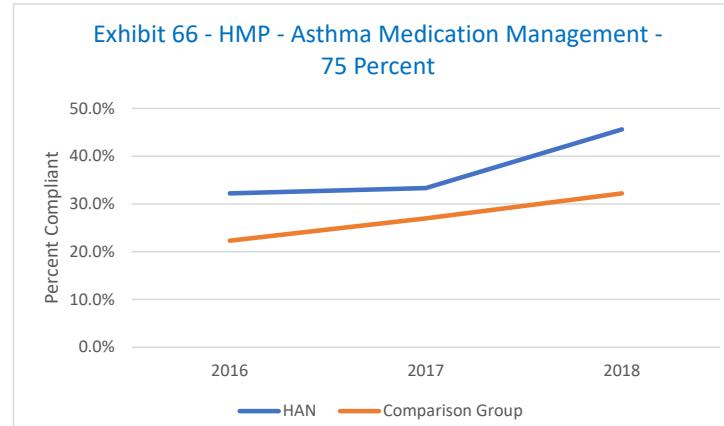
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Fewer than 50 percent of HMP and comparison group beneficiaries were compliant on this measure across the three evaluation years. However, compliance rates for both populations improved over the three years (Exhibit 66).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	32.2%	33.3%	45.6%	13.4%
Comparison Group	22.3%	27.0%	32.2%	9.9%
National Benchmark	N/A	N/A	N/A	N/A

Cardiovascular Measure – Persistence of Beta-Blocker Treatment after a Heart Attack

Measure Description: Percentage of members 18 years of age and older during the measurement year who were hospitalized and discharged from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of AMI and who received persistent beta-blocker treatment for six months after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

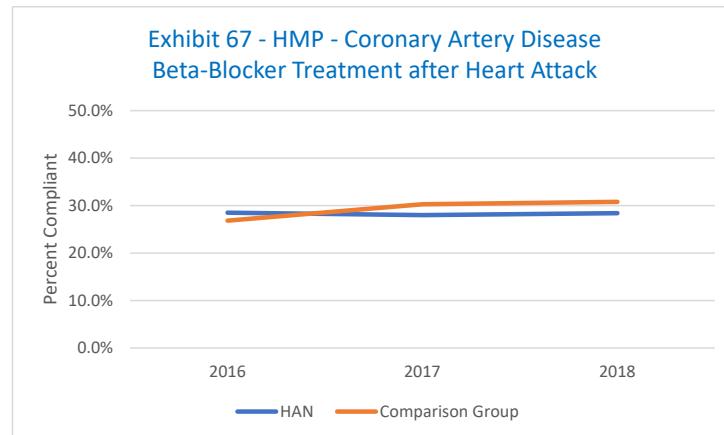
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 30 percent of HMP and comparison group beneficiaries were compliant on this measure across the three evaluation years (Exhibit 67).

The HMP beneficiary rate was higher than the comparison group rate in 2016, while the comparison group rate was higher in 2017 and 2018. The difference was not statistically significant in any of the years.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	28.5%	28.0%	28.4%	-0.1%
Comparison Group	26.8%	30.3%	30.8%	4.0%
National Benchmark	N/A	N/A	N/A	N/A

Cardiovascular Measure – Cholesterol Management for Patients with Cardiovascular Conditions – LDL-C Test

Measure Description: Percentage of members 18 to 75 years of age with cardiovascular disease who had an LDL-C test during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

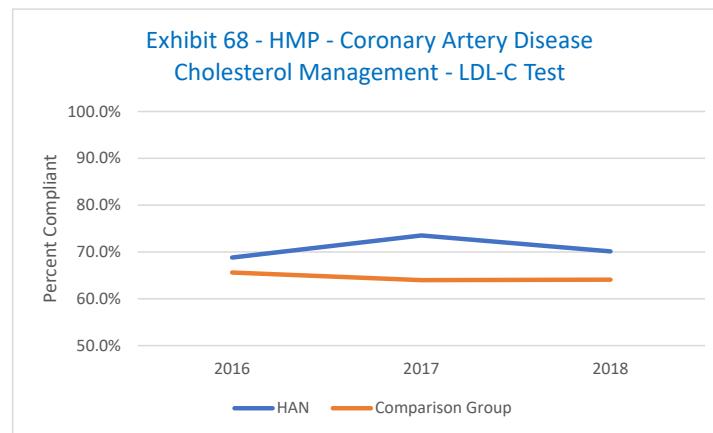
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 70 percent of HMP beneficiaries and over 60 percent of comparison group beneficiaries were compliant on this measure across the three evaluation years. The HMP beneficiary compliance rate improved from 2016 to 2017 before partially declining from 2017 to 2018. The comparison group rate declined from 2016 to 2017 but was nearly unchanged from 2017 to 2018 (Exhibit 68).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2017.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	68.8%	73.5%*	70.1%	2.3%
Comparison Group	65.6%	64.0%	64.1%	-1.5%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

COPD Measure – Use of Spirometry Testing in the Assessment and Diagnosis of COPD

Measure Description: Percentage of members 40 years of age and older with a new diagnosis of chronic obstructive pulmonary disease (COPD) or newly active COPD, who received appropriate spirometry testing to confirm the diagnosis.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

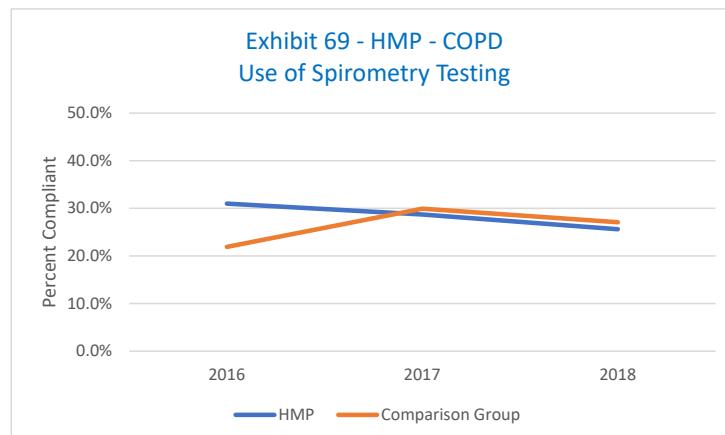
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Thirty-one percent or fewer of HMP and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rates declined for the HMP beneficiary population but improved for the comparison group from 2016 to 2017 before partially falling back in 2018 (Exhibit 69).

The HMP beneficiary rate was higher than the comparison group rate in 2016 while the comparison group rate was higher in 2017 and 2018. The difference was statistically significant in 2016.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	31.0%*	28.7%	25.6%	-5.4%
Comparison Group	21.9%	29.9%	27.1%	5.2%
CMS Core Set (50 th percentile)	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

COPD Measure – Pharmacotherapy Management of COPD Exacerbation – 14 Days

Measure Description: Percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or emergency room visit on or between January 1 to November 30 of the measurement year and who were dispensed a systemic corticosteroid (or there was evidence of an active prescription) within 14 days of the event.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

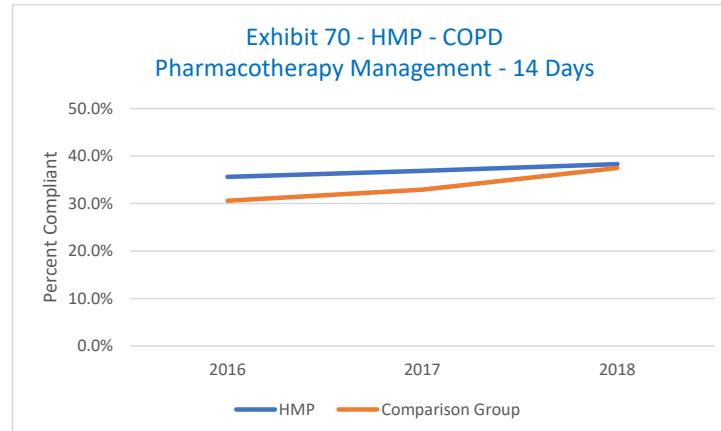
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Fewer than 40 percent of HMP and comparison group beneficiaries were compliant on this measure across the three evaluation years. However, the compliance rates for both populations improved over the three years (Exhibit 70).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	35.6%	36.9%	38.3%	2.7%
Comparison Group	30.6%	32.9%	37.5%	6.9%
National Benchmark	N/A	N/A	N/A	N/A

COPD Measure – Pharmacotherapy Management of COPD Exacerbation – 30 Days

Measure Description: Percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or emergency room visit on or between January 1 to November 30 of the measurement year and who were dispensed a bronchodilator (or there was evidence of an active prescription) within 30 days of the event.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

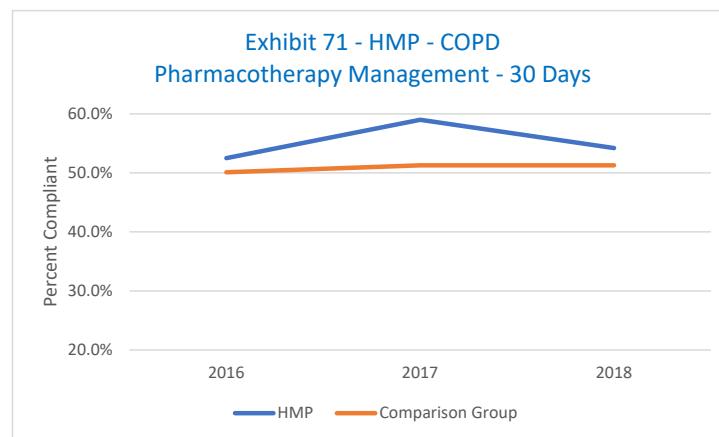
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 50 percent of the HMP beneficiary and comparison group populations were compliant on this measure across the three evaluation years. Compliance rates improved for the HMP beneficiary population from 2016 to 2017 before partially falling back in 2018. Compliance rates for the comparison group improved from 2016 to 2017 before plateauing (Exhibit 71).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2017.

This measure did not have a national benchmark rate.



Note: Y-Axis does not start at zero.

Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	52.5%	59.0%*	54.2%	1.7%
Comparison Group	50.1%	51.3%	51.3%	1.2%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Diabetes Measure – Percentage of Members who had LDL-C Test

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had LDL-C performed.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

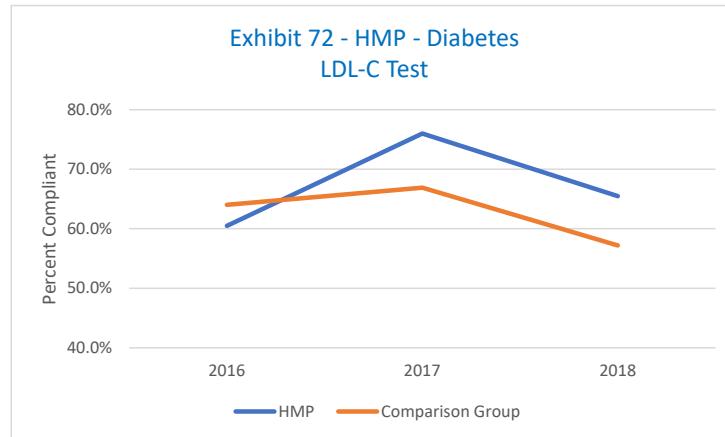
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 60 percent of the HMP beneficiary population was compliant on this measure across the three evaluation years. Compliance rates improved for the HMP beneficiary population from 2016 to 2017 before partially falling back in 2018. Compliance rates also rose for the comparison group from 2016 to 2017 before declining in (Exhibit 72).

The comparison group rate was higher than the HMP beneficiary rate in 2016; the HMP beneficiary rate was higher in 2017 and 2018. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	60.5%	76.0%	65.5%	-2.5%
Comparison Group	64.0%	66.9%	57.2%	0.4%
National Benchmark	N/A	N/A	N/A	N/A

Diabetes Measure – Percentage of Members who had Retinal Eye Exam Performed

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had retinal eye exam performed.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

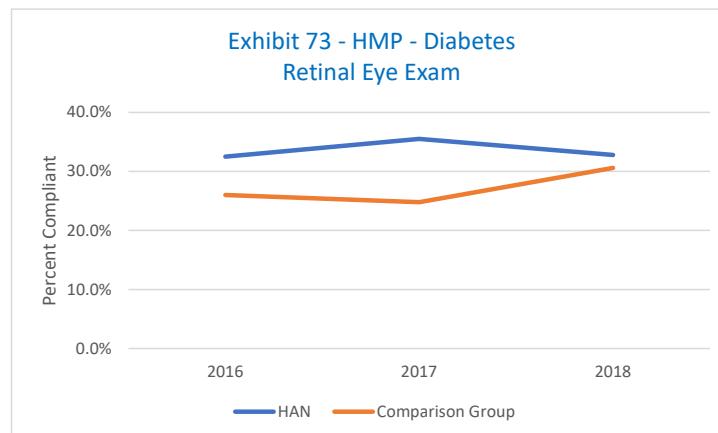
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Fewer than 40 percent of HMP and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rate for HMP beneficiaries improved from 2016 to 2017 before declining from 2017 to 2018; the comparison group rate moved inversely to the HMP beneficiary rate (Exhibit 73).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	32.5%	35.5%	32.8%	0.3%
Comparison Group	26.0%	24.8%	30.6%	4.0%
National Benchmark	N/A	N/A	N/A	N/A

Diabetes Measure – Percentage of Members who had Hemoglobin A1c (HbA1c) Testing

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who had Hemoglobin A1c (HbA1c) testing performed.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

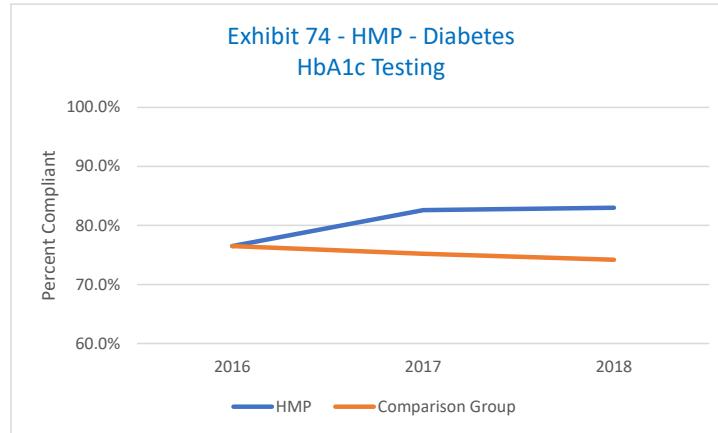
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 80 percent of the HMP beneficiary population and over 70 percent of the comparison group population was compliant on this measure across the three evaluation years. The compliance rate for HMP beneficiaries improved over the three years while the comparison group rate declined (Exhibit 74).

The HMP and comparison group rates were equal in 2016, while the HMP beneficiary rate was higher than the comparison group rate in 2017 and 2018. The difference was statistically significant in 2018.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	76.5%	82.6%	83.0%*	6.5%
Comparison Group	76.5%	75.2%	74.2%	2.3%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Diabetes Measure – Percentage of Members who Received Medical Attention for Nephropathy

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who received medical attention for nephropathy.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

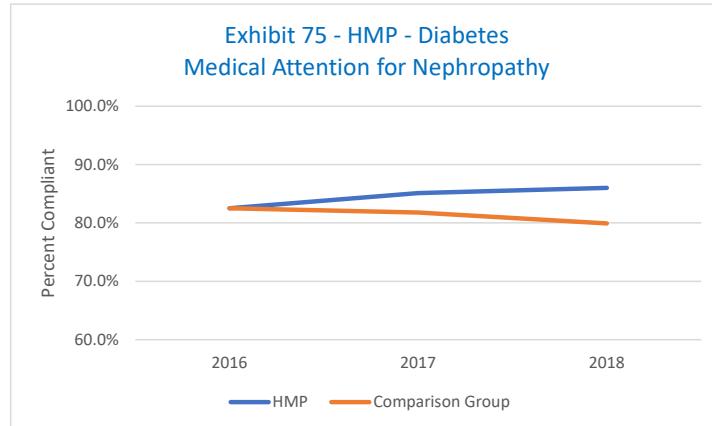
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 80 percent of the HMP beneficiary population and nearly 80 percent of the comparison group population was compliant on this measure across the three evaluation years. The compliance rate improved for HMP beneficiaries but declined for the comparison group (Exhibit 75).

The HMP and comparison group rates were equal in 2016, while the HMP beneficiary rate was higher than the comparison group rate in 2017 and 2018. The difference was not statistically significant in either year.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	82.5%	85.1%	86.0%	3.5%
Comparison Group	82.5%	81.8%	79.9%	-2.6%
National Benchmark	N/A	N/A	N/A	N/A

Diabetes Measure – Percentage of Members Prescribed ACE/ARB Therapy

Measure Description: Percentage of members 18 to 75 years of age with diabetes (type 1 and type 2) who were prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy).

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

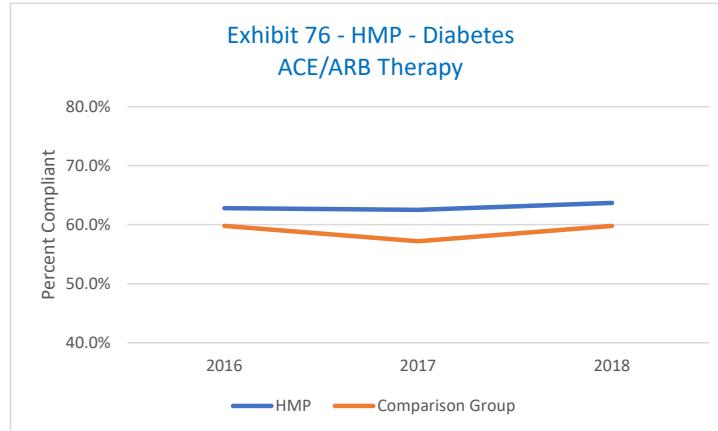
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 60 percent of HMP and comparison group beneficiaries were compliant on this measure across the three evaluation years. The compliance rate for both populations declined from 2016 to 2017 before rising again in 2018 (Exhibit 76).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2017 and 2018.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	62.8%	62.5%*	63.7%*	-1.6%
Comparison Group	59.8%	57.2%	59.8%	1.2%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Hypertension Measure – Percentage of Members who had LDL-C Test

Measure Description: Percentage of members 18 years of age and older with hypertension who had an LDL-C test performed.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

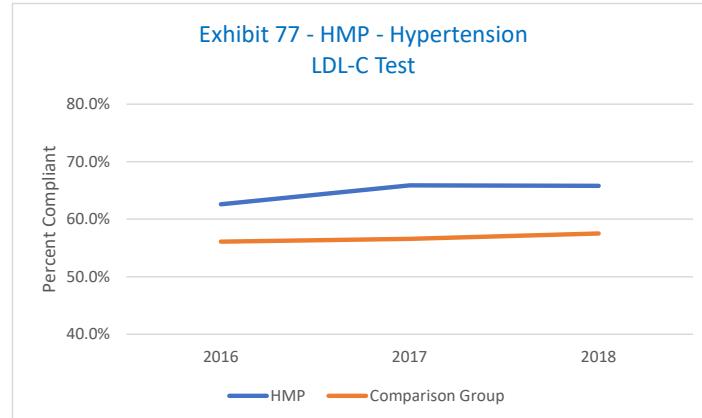
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 60 percent of the HMP beneficiary population and over 50 percent of the comparison group population was compliant on this measure across the three evaluation years. Compliance rates improved for both populations over the three years (Exhibit 77).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in all three years.

This measure did not have a national benchmark rate.



Note: Y-Axis does not start at zero.

Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	62.6%*	65.9%*	65.8%*	3.2%
Comparison Group	56.1%	56.6%	57.5%	1.4%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Hypertension Measure – Percentage of Members Prescribed ACE/ARB Therapy

Measure Description: Percentage of members 18 years of age and older with hypertension who were prescribed angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy).

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

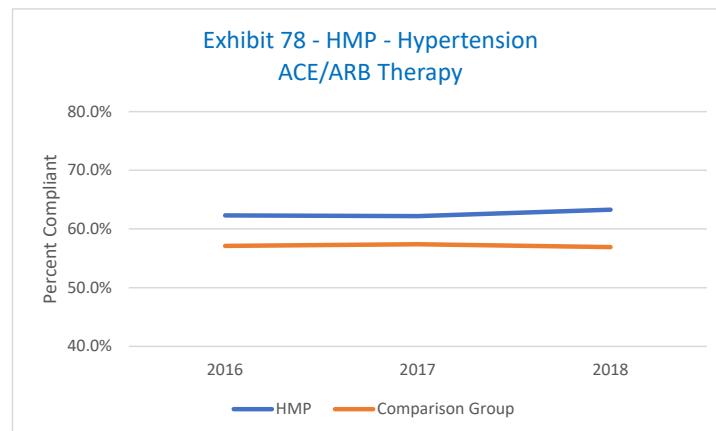
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 60 percent of the HMP beneficiary population and over 50 percent of the comparison group population was compliant on this measure across the three evaluation years. The HMP beneficiary compliance rate improved slightly from 2016 to 2018, while the comparison group rate declined slightly (Exhibit 78).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in all three years.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	62.3%*	62.2%*	63.3%*	1.0%
Comparison Group	57.1%	57.4%	56.9%	-0.2%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Hypertension Measure – Percentage of Members Prescribed Diuretics

Measure Description: Percentage of members 18 years of age and older with hypertension who were prescribed diuretics.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

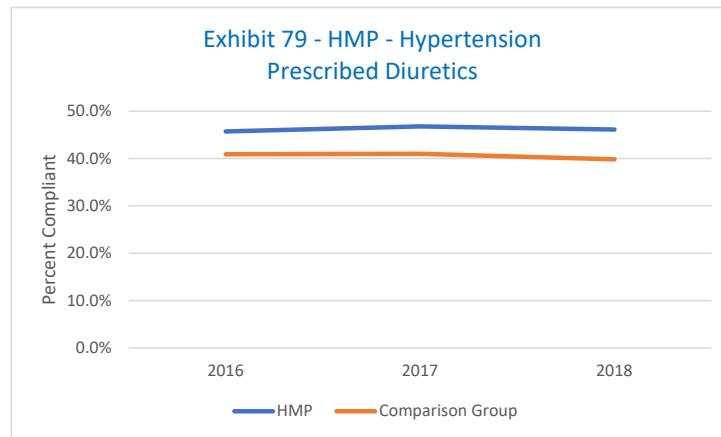
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Approximately 46 percent of HMP beneficiaries and 40 percent of comparison group beneficiaries were compliant on this measure across the three evaluation years. The HMP beneficiary compliance rate improved slightly from 2016 to 2018, while the comparison group rate declined slightly (Exhibit 79).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in all three years.

This measure did not have a national benchmark rate.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	45.7%*	46.8%*	46.1%*	0.4%
Comparison Group	40.9%	41.0%	39.8%	-1.1%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Hypertension Measure – Percentage of Members Prescribed ACE/ARB Therapy or Diuretics with Annual Medication Monitoring

Measure Description: Percentage of members 18 years of age and older with hypertension who received at least 180 treatment days of angiotensin converting enzyme inhibitors or angiotensin receptor blockers (ACE/ARB therapy) or diuretics and at least one therapeutic monitoring event for the therapeutic agent during the measurement year.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

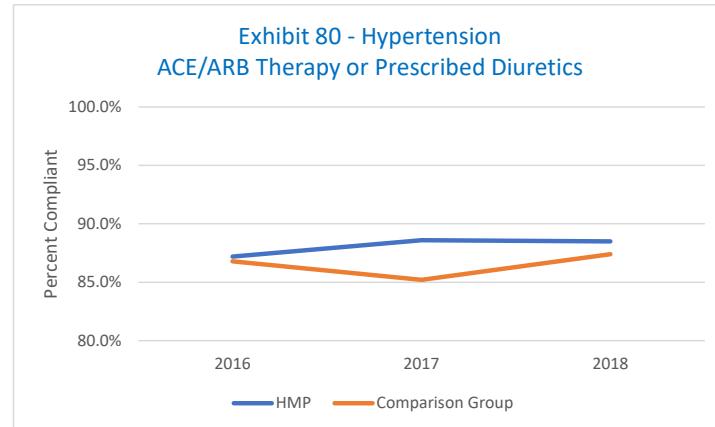
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Nearly 90 percent of the HMP beneficiary population and over 80 percent of the comparison group population was compliant on this measure across the three evaluation years. The compliance rate for HMP beneficiaries improved from 2016 to 2017 before plateauing in 2018. The comparison group rate declined from 2016 to 2017 before rebounding in 2018 (Exhibit 80).

The HMP beneficiary rate was higher than the comparison group rate in all three years. The difference was statistically significant in 2017.

This measure did not have a national benchmark rate.



Note: Y-Axis does not start at zero.

Population/Rate	2016	2017	2018	% Point Change 2016-2018
HMP	87.2%	88.6%*	88.5%	1.3%
Comparison Group	86.8%	85.2%	87.4%	0.4%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Mental Health Measure – Follow-up After Hospitalization for Mental Illness – 7 Days – Members 6 to 20

Measure Description: Percentage of members 6 to 20 years of age who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 7 days after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

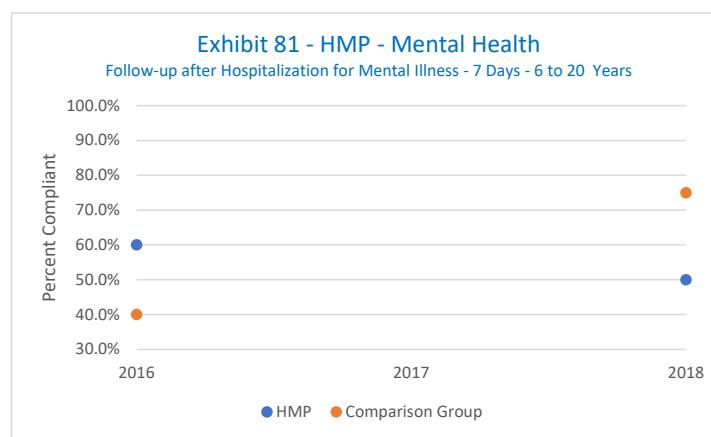
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: This measure did not have a sufficient number of cases to report findings for 2017. (Fewer than 10 percent of HMP beneficiaries are under the age of 21.) The compliance rate for HMP beneficiaries declined from 2016 to 2018 while the comparison group rate improved. However, results should be treated with caution, given the small population size (Exhibit 81).

The HMP beneficiary rate was higher than the comparison group rate in 2016 and lower in 2018. The difference was not statistically significant in either year.

The HMP beneficiary and comparison group rates both were higher than the national benchmark rate in 2016 and 2018.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	60.0%	N/A	50.0%	-10.0
Comparison Group	40.0%	N/A	75.0%	35.0%
Child Core Set (50 th percentile)	44.7%	47.8%	44.7%	--

Mental Health Measure – Follow-up After Hospitalization for Mental Illness – 7 Days – Members 21 and Older

Measure Description: Percentage of members 21 years of age or older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 7 days after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

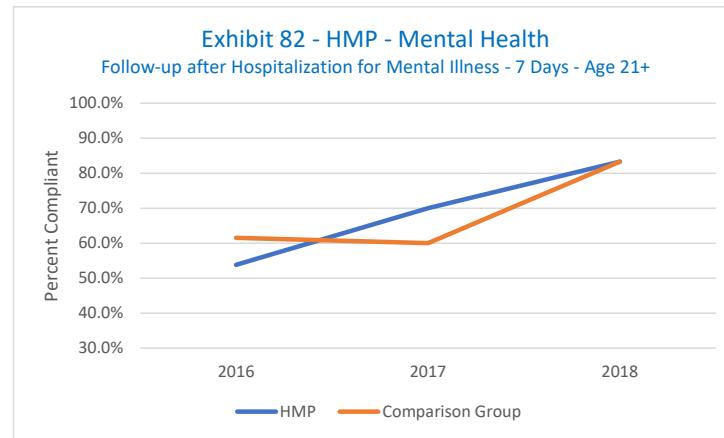
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 50 percent of the HMP beneficiary population and 60 percent or more of the comparison group population was compliant on this measure across the three evaluation years. Compliance rates for both populations improved substantially across the three years and exceeded 83 percent in 2018 (Exhibit 82).

The comparison group rate was higher in 2016 while the HMP beneficiary rate was higher in 2017; the rates were equal in 2018. The difference was not statistically significant in either year.

The HMP beneficiary and comparison group rates both were substantially higher than the national benchmark rate in all three years.



Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	53.8%	70.0%	83.3%	29.5%
Comparison Group	61.5%	60.0%	83.3%	21.8%
CMS Core Set (50 th percentile)	38.3%	41.9%	38.0%	-0.3%

Mental Health Measure – Follow-up After Hospitalization for Mental Illness – 30 Days – Members 6 to 20

Measure Description: Percentage of members 6 to 20 years of age who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 30 days after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

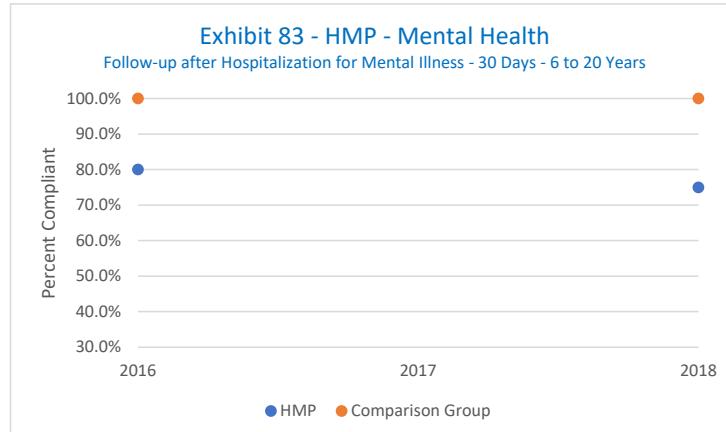
Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: This measure did not have a sufficient number of cases to report findings for 2017. (Fewer than 10 percent of HMP beneficiaries are under the age of 21.) The compliance rate for HMP beneficiaries declined from 2016 to 2018, while the comparison group rate remained constant at 100 percent compliant. Results should be treated with caution, given the small population size (Exhibit 83).

The comparison group rate was higher in both years. The difference was not statistically significant in either year.



Population/Rate	2016	2017	2018	% Point Change 2016-2018
HMP	80.0%	N/A	75.0%	-5.0%
Comparison Group	100.0%	N/A	100.0%	--
CMS Core Set (50 th percentile)	68.0%	69.2%	67.1%	-0.9%

The HMP beneficiary and comparison group rates both were higher than the national benchmark rate in 2016 and 2018.

Mental Health Measure – Follow-up After Hospitalization for Mental Illness – 30 Days – Members 21 and Older

Measure Description: Percentage of members 21 years of age or older who were hospitalized for treatment of selected mental illness or intentional self-harm diagnoses and who had a follow-up visit with a mental health practitioner within 30 days after discharge.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

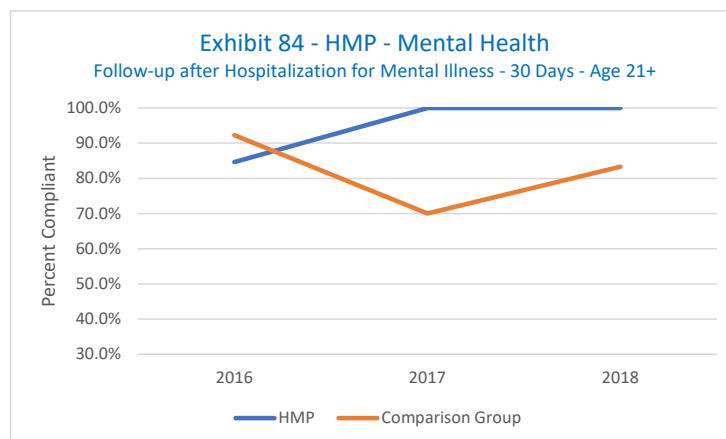
Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Over 80 percent of HMP beneficiaries in 2016 and 100 percent in 2017 and 2018 were compliant on this measure. Over 90 percent of comparison group beneficiaries were compliant in 2016; the comparison group rate declined in 2017 before partially rebounding in 2018 (Exhibit 84).

The comparison group rate was higher than the HMP beneficiary rate in 2016 while the HMP beneficiary rate was higher in 2017 and 2018. The difference was not statistically significant in any year.



Note: Y-Axis does not start at zero. Caution – small populations.

Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	84.6%	100.0%	100.0%	15.4%
Comparison Group	92.3%	70.0%	83.3%	-9.0%
CMS Core Set (50 th percentile)	59.7%	63.6%	58.6%	-1.1%

The HMP beneficiary and comparison group rates both were substantially higher than the national benchmark rate in all three years.

Opioid Measure – Use of Opioids at High Dosage

Measure Description: The proportion of members 18 years and older, receiving prescription opioids for ≥15 days during the measurement year at a high dosage (average milligram morphine dose [MME] >120 mg). **Note:** A lower rate indicates better performance.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

National Benchmark: Not applicable.

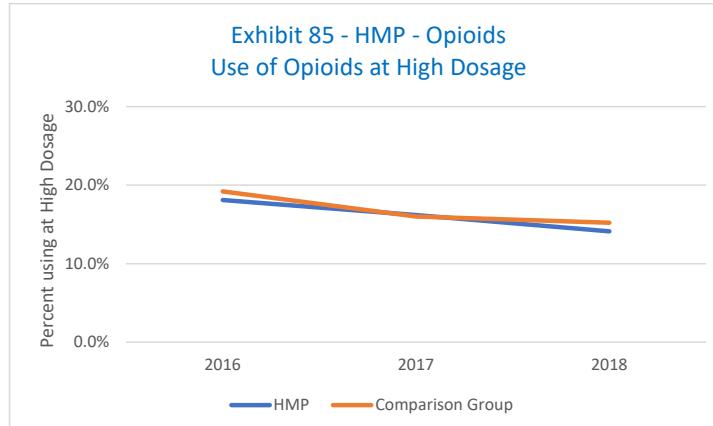
Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings⁴⁸: Approximately 18 percent of HMP and 19 percent of comparison group beneficiaries in 2016 used prescription opioids at a high dosage (Exhibit 85). The prevalence of multiple chronic conditions within the HMP beneficiary population likely contributed to this finding.

The use rate for both populations declined over the three years.

The HMP beneficiary use rate was lower than the comparison group use rate across the three years. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Note: Lower rate is better.

Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	18.1%	16.2%	14.1%	-4.0%
Comparison Group	19.2%	16.0%	15.2%	-4.0%
National Benchmark	N/A	N/A	N/A	N/A

⁴⁸ HEDIS specifications recommend displaying results multiplied by 1,000. PHPG is presenting as a straight percentage because the high use rate within this population makes the per 1,000 adjustment unnecessary.

Opioid Measure – Concurrent Use of Opioids and Benzodiazepines

Measure Description: Percentage of beneficiaries age 18 and older with concurrent use of prescription opioids and benzodiazepines. Beneficiaries with a cancer diagnosis, sickle cell disease diagnosis or in hospice are excluded. **Note:** A lower rate indicates better performance.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed in accordance with HEDIS Medicaid guidelines, using administrative data (OHCA MMIS paid claims). Results are for calendar years 2016 – 2018.

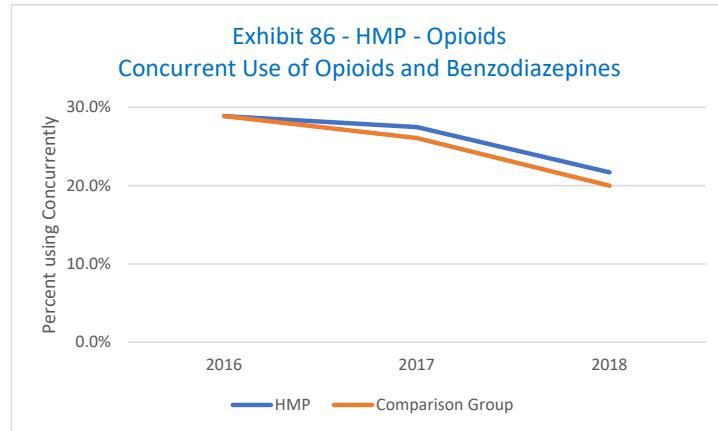
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: Slightly under 30 percent of HMP and comparison group beneficiaries using prescription opioids in 2016 concurrently were using prescription benzodiazepines. The rates for both populations declined from 2016 to 2018 (a lower rate is better) (Exhibit 86).

The HMP beneficiary rate was slightly higher than the comparison group rate in all three years. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Note: Lower rate is better.

Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	28.9%	27.5%	21.7%	-7.2%
Comparison Group	28.9%	26.1%	20.0%	-8.9%
National Benchmark	N/A	N/A	N/A	N/A

Social Determinants of Health – Awareness of Assistance and Use of Resource Specialist

Measure Description: Percentage of beneficiaries who reported being aware that the SoonerCare HMP has community resource specialists available to help with non-clinical issues (social determinants of health, or SDOH), such as obtaining food or housing assistance⁴⁹. Among those who were aware, the percentage who reported receiving assistance.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: Not applicable.

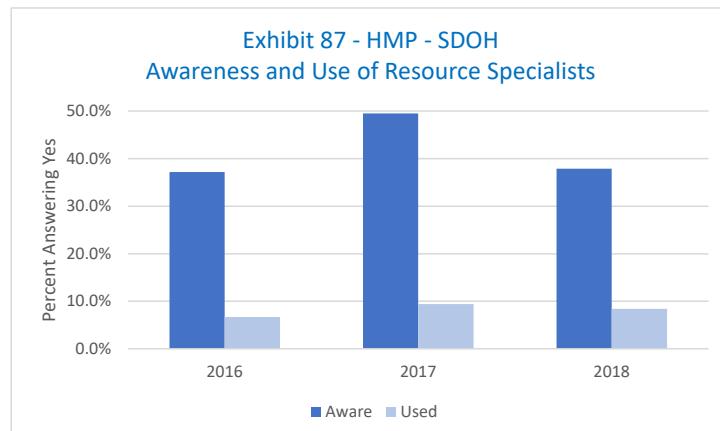
Data Source & Time Period: PHPG conducts telephone surveys of SoonerCare HMP beneficiaries shortly after enrollment (Baseline) and six months after the initial survey (Follow-up). Findings presented here are derived from the SFY 2016 – SFY 2018 SoonerCare HMP evaluation reports (Follow-up survey respondents).

National Benchmark: Not applicable.

Statistics: Descriptive statistics (percent answering yes).

Findings: Fewer than 50 percent of SoonerCare HMP beneficiaries reported being aware of the resource specialists across the three years of surveys. The awareness rate improved from 2016 to 2017 before dropping again in 2018 (Exhibit 87). (Each survey period consisted of a unique set of respondents.)

Among those who were aware of the resource specialists, fewer than 10 percent reported receiving assistance, either directly or through the health coach.



Yes Responses	2016	2017	2018	% Point Change 2016-2018
Aware	37.2%	49.5%	37.9%	0.2%
Used (if aware)	6.7%	9.4%	8.4%	1.7%

⁴⁹ Did you know that the SoonerCare Health Management Program has a Resource Center to help members deal with non-medical problems? For example, help with eligibility issues or community resources like food, help with lights, etc. (If answered yes) Have you or your health coach used the resource center to help you with a problem?

Social Determinants of Health – Satisfaction with Available Assistance

Measure Description: Satisfaction ratings among beneficiaries who reported receiving assistance with social determinants of health through the SoonerCare HMP⁵⁰.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: Not applicable.

Data Source & Time Period: PHPG conducts telephone surveys of SoonerCare HMP beneficiaries shortly after enrollment (Baseline) and six months after the initial survey (Follow-up). Findings presented here are derived from the SFY 2016 – SFY 2018 SoonerCare HMP evaluation reports (Follow-up survey respondents).

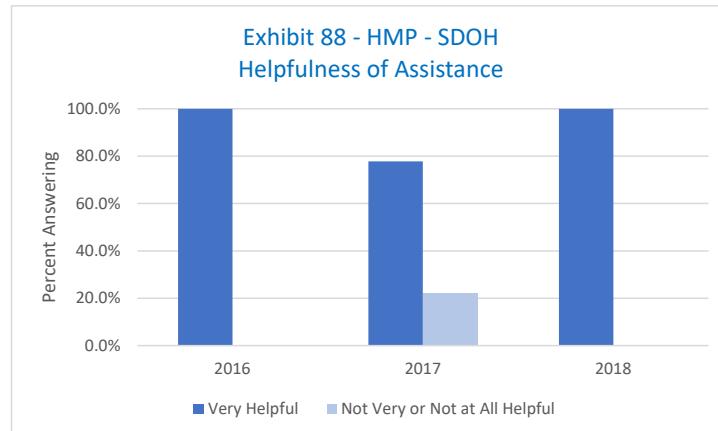
National Benchmark: Not applicable.

Statistics: Descriptive statistics (percent rating very helpful, somewhat helpful, not very helpful or not at all helpful).

Findings: Respondents reported receiving assistance with a variety of social service needs, including most frequently housing/rental assistance, food assistance and arranging child care and transportation to medical appointments.

Respondents also reported receiving assistance obtaining health-related items, such as eyeglasses, shower chairs and nebulizers.

One hundred percent of respondents in 2016 and 2018 reported that the resource center was very helpful (Exhibit 88).



Helpfulness	2016	2017	2018	% Point Change 2016-2018
Very Helpful	100.0%	77.8%	100.0%	--
Somewhat Helpful	0.0%	0.0%	0.0%	--
Not very Helpful	0.0%	11.1%	0.0%	--
Not at all Helpful	0.0%	11.1%	0.0%	--

⁵⁰ How helpful was the Resource Center in resolving the problem? Would you say it was very helpful, somewhat helpful, not very helpful or not at all helpful?

Satisfaction – Overall Satisfaction with Health Coach

Measure Description: Overall satisfaction ratings among beneficiaries with respect to their health coach⁵¹.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: Not applicable.

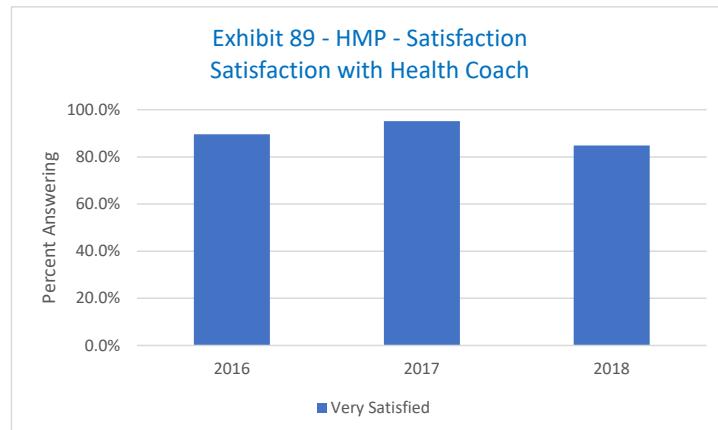
Data Source & Time Period: PHPG conducts telephone surveys of SoonerCare HMP beneficiaries shortly after enrollment (Baseline) and six months after the initial survey (Follow-up). Findings presented here are derived from the SFY 2016 – SFY 2018 SoonerCare HMP evaluation reports (Follow-up survey respondents).

National Benchmark: Not applicable.

Statistics: Descriptive statistics (percent rating very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied).

Findings: The health coach is the SoonerCare HMP beneficiary's primary point-of-contact with the program. The health coach is responsible for providing care management and assisting beneficiaries with making lifestyle changes to improve their health status.

Respondents reported high levels of satisfaction with their health coaches. Over 80 percent reported being very satisfied in each of the three years. Fewer than three percent in any year reported being dissatisfied (Exhibit 89).



Satisfaction	2016	2017	2018	% Point Change 2016-2018
Very Satisfied	89.6%	95.1%	84.8%	-4.8%
Somewhat Satisfied	7.8%	3.5%	13.2%	5.4%
Somewhat Dissatisfied	1.7%	0.5%	0.5%	-1.2%
Very Dissatisfied	0.9%	0.9%	1.5%	0.6%

⁵¹ Overall, how satisfied are you with your health coach?

Satisfaction – Overall Satisfaction with SoonerCare HMP

Measure Description: Overall satisfaction ratings among beneficiaries with respect to the SoonerCare HMP in its entirety⁵².

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: Not applicable.

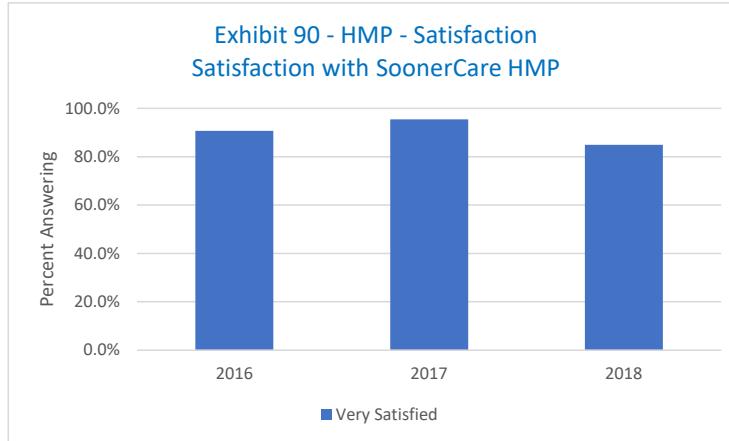
Data Source & Time Period: PHPG conducts telephone surveys of SoonerCare HMP beneficiaries shortly after enrollment (Baseline) and six months after the initial survey (Follow-up). Findings presented here are derived from the SFY 2016 – SFY 2018 SoonerCare HMP evaluation reports (Follow-up survey respondents).

National Benchmark: Not applicable.

Statistics: Descriptive statistics (percent rating very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied).

Findings: Respondents also reported high levels of satisfaction with their experience in the SoonerCare HMP. Over 80 percent reported being very satisfied in each of the three years. Fewer than two percent reported being dissatisfied (Exhibit 90).

As a further indication of satisfaction, over 95 percent of respondents in each year said they would recommend the SoonerCare HMP to a friend who had similar health care needs⁵³.



Satisfaction	2016	2017	2018	% Point Change 2016-2018
Very Satisfied	90.7%	95.4%	84.9%	-4.1%
Somewhat Satisfied	8.5%	3.2%	14.2%	5.7%
Somewhat Dissatisfied	0.8%	0.9%	0.0%	-0.8%
Very Dissatisfied	0.0%	0.5%	0.9%	0.9%

⁵² Overall, how satisfied are you with your health coach? Overall, how satisfied are you with your whole experience in the Health Management Program?

⁵³ Would you recommend the SoonerCare HMP to a friend who has health care needs like yours? Percent answering yes: 2016 – 96.7%, 2017 – 98.2%; 2018 – 95.9%.

Health Status – Self-Reported Change in Health Status

Measure Description: Beneficiary self-reported change in health status since enrolling in SoonerCare HMP and contribution of program to improved health status, if applicable⁵⁴.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: Not applicable.

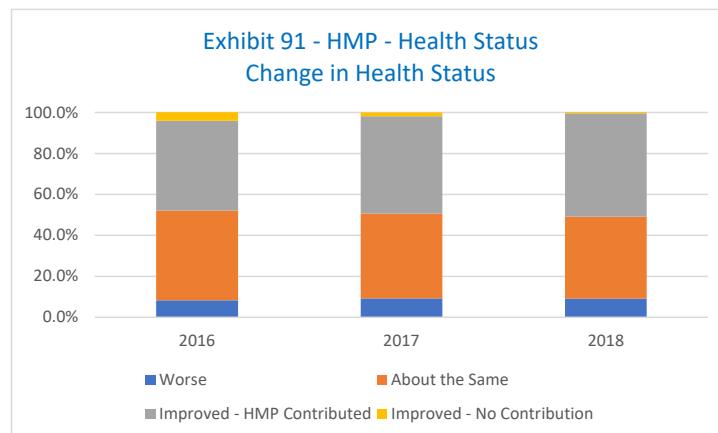
Data Source & Time Period: PHPG conducts telephone surveys of SoonerCare HMP beneficiaries shortly after enrollment (Baseline) and six months after the initial survey (Follow-up). Findings presented here are derived from the SFY 2016 – SFY 2018 SoonerCare HMP evaluation reports (Follow-up survey respondents).

National Benchmark: Not applicable.

Statistics: Descriptive statistics (percent rating very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied).

Findings: A majority of respondents across all years rated their health status as only fair⁵⁵. However, over 40 percent of follow-up survey respondents in 2016 and 2017, and 50 percent in 2018, reported both that their health status had improved and that the SoonerCare HMP had contributed to this improvement (Exhibit 91).

Fewer than 10 percent reported that their health had worsened since enrolling in the program.



Health Status	2016	2017	2018	% Point Change 2016-2018
Improved – No Contribution	4.1%	1.8%	0.5%	-3.6%
Improved – HMP Contributed	43.8%	47.5%	50.4%	6.6%
About the Same	43.8%	41.5%	40.0%	-3.8%
Worse	8.3%	9.2%	9.1%	0.8%

⁵⁴ Compared to before you participated in the SoonerCare Health Management Program, how has your health status changed? Would you say your health is better, worse or about the same? (If better) Do you think the SoonerCare Health Management Program has contributed to your improvement in health?

⁵⁵ Overall, how would you rate your health today? 2018 results: Excellent – 0.0%; Good – 22.7%; Fair – 66.4%; Poor – 10.9%.

HMP Quality of Care – Beneficiary Comments

PHPG invites survey respondents to share perceptions of the SoonerCare HMP in their own words, in addition to answering structured questions. Although qualitative in nature, respondent comments are overwhelmingly positive.

A representative selection of comments is presented below.

"I don't think I'd be here today if it wasn't for SoonerCare and my health coach. She helped me with my depression when my sister died. She would stay on the phone and listen to me. She also helped me to lower my cholesterol to normal and it was very high. My cardiologist was happy about that too!"

"My daughter has a very debilitating disease which she won't get better. Having the support of her nurse coach has helped so much. I used to have to try and get a hold of my doctor or his nurse and it could take days or weeks to hear back. (My health coach) always calls right back and has helped me know when to go to Urgent Care or not. I've called her about side effects from medication and she'll tell me when it is serious and when it isn't. She also put me in touch with a support group for other kids that have the same condition as my daughter. She has another patient she calls with the same thing and she put me in touch with her."

"Having the health coach available to call when I have a question about my husband's trauma is so helpful. I used to have to take him to the ER a lot or try and call his surgeon for basic questions but now I can call her. She also calls the day after she knows that he has a doctor appointment to see how it went. I think this is a great program."

"The Health Management Program really works. Knowing (my health coach) is going to call me and ask if I've been using my nicotine gum and eating better makes me do it. Otherwise, I know I wouldn't stick with it. I love the program and my nurse."

"My nurse is great. She has helped me stop smoking. She has been the only one that could help me. She doesn't talk down to me or judge me. This program is my favorite part of SoonerCare."

"My new nurse has been a godsend. The first one didn't help me much but this new one has helped me get a nebulizer and blood pressure cuff. It is nice to know that she is always there when I need her."

"The health coach got my daughter an appointment with the neurologist after I tried for two months. I told her I was having trouble and she said to let her handle it and she did."

"I want to say that (my health coach) is the best medical personnel I have ever worked with. I love her and don't want to do without her. She has helped me so much. She sent me exercises that I can do that don't end up hurting me the next day because of my arthritis. Any problem I have, she says, 'let's see what we can do about that' and then sends me paperwork on it."

"I wish I knew the name of my coach because she has done so much for me. Before, I didn't believe diet was so important with my high blood pressure. I changed the way I make food and started eating things I am supposed to for my high blood pressure and now I feel so much better and am off my high blood pressure medicine. I can now ride my bike with my youngest girl and I am able to be much more active. I can't thank her enough."

"I always feel so much better about myself after I talk to (my health coach). She always seems to know when to call, when I need her. My physical health hasn't changed that much but my mental health sure has. Although, (she) did suggest that I stop drinking Mountain Dew and I lost 30 pounds in a couple months so that is great."

"(My health coach) is fantastic! She has helped me in so many ways manage my M.S. I was having trouble getting all of my prescriptions filled since (Medicaid) only gives me six punches a month. (She) did some research and found medications that combined a few of the pills I was taking into one, then found discount pharmacies and places that donate drugs from people who don't use them anymore for the others. Between all of that I am now able to take all of my pills every month."

"(My health coach) is truly an inspiration. She has helped me eat better. She reminds me every month on what to eat, to stretch and exercise. She has helped me get through my depression as well."

"(She) was sent to us by God. Our teenage son had bladder control issues for years. The doctors thought it was due to an emotional problem. (She) asked if he had ever had a spinal injury, which he had years ago. She asked his doctor to check and sure enough he had a pinched nerve which was causing the problem. A few adjustments and he was all fixed! I love her for that."

"My health coach has been wonderful...I am bi-polar and I was in a bad downward spiral. My health coach helped me through this period and helped me find a new doctor and get back on my meds. She never rushes or pushes me and I appreciate that. If the program only helps one person, like me, then it is worth it."

HMP Quality of Care – Summary

The SoonerCare HMP beneficiary population outperformed the comparison group by a statistically significant amount in one or more years on nine of the 23 HEDIS quality-of-care measures. The comparison group did not outperform the HMP beneficiary population on any measure (Exhibit 92).

The HMP beneficiary population outperformed the national benchmark on all HEDIS measures for which a national benchmark exists.

HMP beneficiaries also reported high levels of satisfaction with their health coaches and the SoonerCare HMP overall. Between 40 and 50 percent of beneficiaries in each year reported improved health, with nearly all crediting the SoonerCare HMP as a factor in their improvement.

Exhibit 92 – HMP Quality of Care Measures - Summary

Measure	Source	HMP versus Comparison Group			HMP versus National Benchmark		
		2016	2017	2018	2016	2017	2018
Number of Chronic Conditions	OHCA	N/A	N/A	N/A	N/A	N/A	N/A
Percentage with Physical/ Behavioral Health Co-Morbidities	OHCA	N/A	N/A	N/A	N/A	N/A	N/A
Asthma – Medication Ratio – 5 – 18 Years	HEDIS	---	---	---	N/A	N/A	✓
Asthma – Medication Ratio – 19 – 64 Years	HEDIS	---	---	---	N/A	N/A	✓
Asthma – Medication Management – 75 Percent	HEDIS	---	---	---	N/A	N/A	N/A
CAD – Persistence of Beta-Blocker Treatment after a Heart Attack	HEDIS	---	---	---	N/A	N/A	N/A
CAD – Cholesterol Management – LDL-C Test	HEDIS	---	✓	---	N/A	N/A	N/A
COPD – Use of Spirometry Testing	HEDIS	✓	---	---	N/A	N/A	N/A
COPD – Pharmacotherapy Management – 14 Days	HEDIS	---	---	---	N/A	N/A	N/A
COPD – Pharmacotherapy Management – 30 Days	HEDIS	---	✓	---	N/A	N/A	N/A
Diabetes – LDL-C Test	HEDIS	---	---	---	N/A	N/A	N/A
Diabetes – Retinal Eye Exam	HEDIS	---	---	---	N/A	N/A	N/A
Diabetes – HbA1c Testing	HEDIS	---	---	✓	N/A	N/A	N/A
Diabetes – Medical Attention for Nephropathy	HEDIS	---	---	---	N/A	N/A	N/A
Diabetes – ACE/ARB Therapy	HEDIS	---	✓	✓	N/A	N/A	N/A
Hypertension – LDL-C Test	HEDIS	✓	✓	✓	N/A	N/A	N/A

Measure	Source	HMP versus Comparison Group			HMP versus National Benchmark		
		2016	2017	2018	2016	2017	2018
Hypertension – ACE/ARB Therapy	HEDIS	✓	✓	✓	N/A	N/A	N/A
Hypertension – Diuretics	HEDIS	✓	✓	✓	N/A	N/A	N/A
Hypertension – ACE/ARB Therapy or Diuretics with Monitoring	HEDIS	---	✓	---	N/A	N/A	N/A
Mental Health – Follow-up after Hospitalization – 7 Days – 6 to 20	HEDIS	---	---	---	✓	---	✓
Mental Health – Follow-up after Hospitalization – 7 Days – 21+	HEDIS	---	---	---	✓	✓	✓
Mental Health – Follow-up after Hospitalization – 30 Days – 6 to 20	HEDIS	---	---	---	✓	---	✓
Mental Health – Follow-up after Hospitalization – 30 Days – 21+	HEDIS	---	---	---	✓	✓	✓
Opioid – Use of Opioids at High Dosage	HEDIS	---	---	---	---	---	---
Opioid – Concurrent Use of Opioids and Benzodiazepines	HEDIS	---	---	---	---	---	---
SDOH – Member Awareness of Available Assistance	PHPG	N/A	N/A	N/A	N/A	N/A	N/A
SDOH – Member Satisfaction with Available Assistance	PHPG	N/A	N/A	N/A	N/A	N/A	N/A
Satisfaction – Health Coach	PHPG	N/A	N/A	N/A	N/A	N/A	N/A
Satisfaction – SoonerCare HMP	PHPG	N/A	N/A	N/A	N/A	N/A	N/A
Satisfaction – Change in Health Status	PHPG	N/A	N/A	N/A	N/A	N/A	N/A

✓ – HMP exceeds comparison group by statistically significant amount / HMP exceeds national benchmark

✗ – Comparison group exceeds HMP by statistically significant amount / National benchmark exceeds HMP

--- No statistically significant difference between HMP and comparison group / No difference between HMP and national benchmark

6. HMP Cost Effectiveness

Overview

SoonerCare HMP activities related to improving access and quality, if effective, should have an observable impact on beneficiary service utilization and expenditures. Improvement in quality of care should yield better outcomes in the form of fewer emergency room visits and hospitalizations, and lower acute care costs.

HMP Cost Effectiveness Measures

SoonerCare HMP performance in reducing costs associated with provision of health care services was evaluated through a combination of utilization and expenditure measures. Specifically:

- Emergency room utilization (visit) rate
- Inpatient hospital utilization (admission) rate
- Inpatient hospital readmission rate
- Health care expenditures (per member per month)
- Net expenditures (inclusive of HMP administrative expenses)

Emergency Room Utilization

Measure Description: Emergency room visits (for any reason) per 1,000 member months (i.e., the average number of visits per month for every 1,000 beneficiaries).

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed using OHCA MMIS paid claims. Results are for calendar years 2016 – 2018.

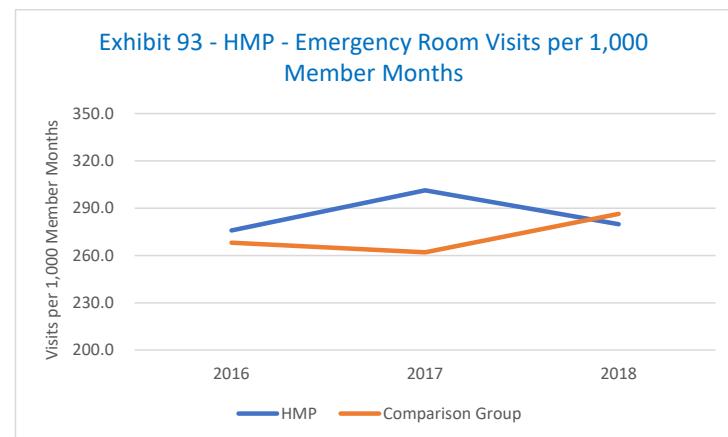
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: The HMP beneficiary and comparison group populations both averaged between approximately 260 and 300 emergency room visits per 1,000 member months. The high visit rate was a reflection of the populations' poor health status (Exhibit 93).

The HMP beneficiary visit rate was higher than the comparison group rate in 2016 and 2017 and lower in 2018. The difference was statistically significant 2017.

This measure did not have a national benchmark rate.



Note: Y-Axis does not start at zero. Lower rate is better.

Population/ Rate	2016	2017	2018	% Change 2016-2018
HMP	275.9	301.3*	279.7	1.4%
Comparison Group	268.1	261.9	286.4	6.8%
National Benchmark	N/A	N/A	N/A	N/A

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

Inpatient Hospital Utilization - Admissions

Measure Description: Hospital admissions (for any reason) per 100,000 member months (i.e., the average number of admissions per month for every 100,000 beneficiaries).

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed using OHCA MMIS paid claims. Results are for calendar years 2016 – 2018.

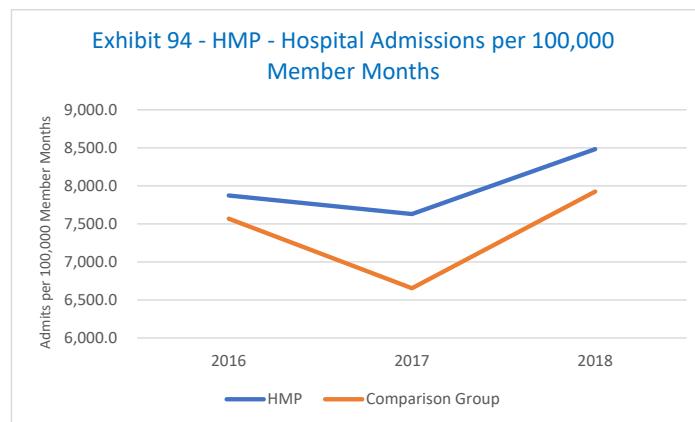
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: The HMP beneficiary and comparison group inpatient admission rate ranged from approximately 6,600 to 8,500 admissions per 100,000 member months (Exhibit 94). The high admission rate was a reflection of the populations' poor health status

The HMP beneficiary rate was higher than the comparison group rate in all three years. However, the difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Note: Y-Axis does not start at zero. Lower rate is better.

Population/ Rate	2016	2017	2018	% Change 2016-2018
HMP	7,872.4	7,629.8	8,481.4	7.7%
Comparison Group	7,568.8	6,656.0	7,294.3	4.7%
National Benchmark	N/A	N/A	N/A	N/A

Inpatient Hospital Utilization - Readmissions

Measure Description: Thirty-day hospital readmission rate.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The analysis was performed using OHCA MMIS paid claims. Results are for calendar years 2016 – 2018.

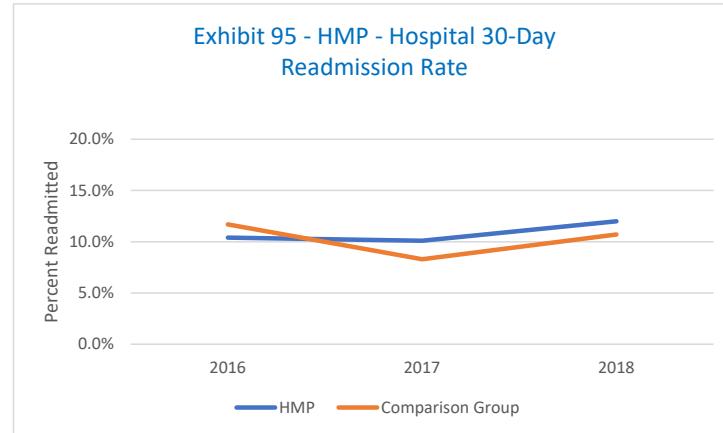
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: The HMP beneficiary hospital readmission rate increased from 10.4 percent in 2016 to 12 percent in 2018, while the comparison group declined from 11.7 percent in 2016 to 8.3 percent in 2017, before partially rebounding to 10.7 percent in 2018 (Exhibit 95).

The HMP beneficiary rate was lower than the comparison group rate in 2016, while the comparison group rate was lower in 2017 and 2018. The difference was not statistically significant in any year.

This measure did not have a national benchmark rate.



Note: Y-Axis does not start at zero. Lower rate is better.

Population/ Rate	2016	2017	2018	% Point Change 2016-2018
HMP	10.4%	10.1%	12.0%	1.6%
Comparison Group	11.7%	8.3%	10.7%	-1.0%
National Benchmark	N/A	N/A	N/A	N/A

Per Member Per Month Expenditures

Measure Description: Average monthly expenditures per member for Medicaid-covered health care services. Net PMPM expenditures, inclusive of HMP administrative expenses.

Waiver Population: SoonerCare beneficiaries enrolled in the HMP during the measurement year.

Comparison Group: PHPG used propensity score matching to identify an appropriate non-HAN/non-HMP comparison group for the analysis.

Data Source & Time Period: The health expenditure analysis was performed using OHCA MMIS paid claims. Results are for calendar years 2016 – 2018.

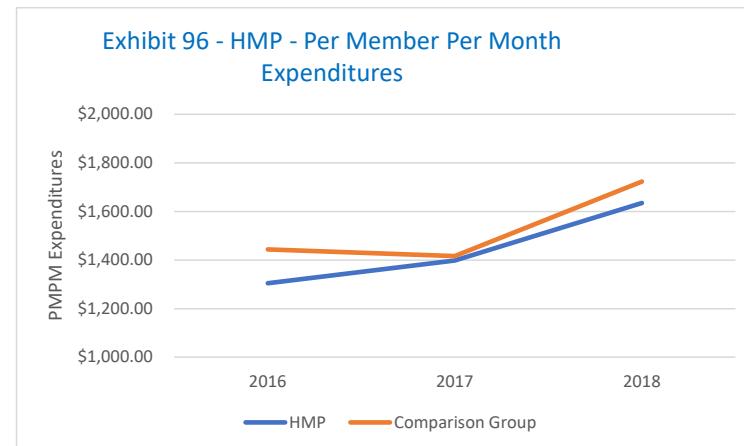
National Benchmark: Not applicable.

Statistics: Appendix 2 contains detailed supporting data for the measure, including testing for statistical significance.

Findings: The HMP beneficiary population's average PMPM health expenditures increased from \$1,304 in 2016 to \$1,635 in 2018, while the comparison group's increased from \$1,444 in 2016 to \$1,722 in 2018.

The HMP population's expenditures were lower than the comparison group's in all three years. The difference was statistically significant in 2016 (Exhibit 96).

This measure did not have a national benchmark.



Population/ PMPM	2016	2017	2018	% Change 2016-2018
HMP	\$1,304.14*	\$1,398.51	\$1,634.74	25.4%
Comparison Group	\$1,443.77	\$1,416.51	\$1,722.41	19.3%
National Benchmark	N/A	N/A	N/A	

* HMP rate differs from comparison group rate by a statistically significant amount (95% confidence level)

HMP Cost Effectiveness – Summary

The SoonerCare HMP and comparison group populations showed mixed results with respect to service utilization. However, on the key cost effectiveness test, the HMP beneficiary population registered lower PMPM health expenditures in all three years of the evaluation. The difference was statistically significant in 2016 (Exhibit 97).

Exhibit 97 – Cost effectiveness Measures - Summary

Measure	Source	HAN versus Comparison Group			HAN versus National Benchmark		
		2016	2017	2018	2016	2017	2018
Emergency Room Utilization	OHCA	---	X	---	N/A	N/A	N/A
Inpatient Hospital Admissions	OHCA	---	---	---	N/A	N/A	N/A
Inpatient Hospital Readmissions	OHCA	---	---	---	N/A	N/A	N/A
PMPM Expenditures (Health Services Component)	OHCA	✓	---	---	N/A	N/A	N/A

✓ – HMP exceeds comparison group by statistically significant amount / HMP exceeds national benchmark

X – Comparison group exceeds HMP by statistically significant amount / National benchmark exceeds HMP

--- No statistically significant difference between HMP and comparison group / No difference between HMP and national benchmark

7. Retroactive Eligibility Waiver – Access to Care

Overview

The SoonerCare Demonstration during the evaluation period included a waiver of retroactive eligibility for the majority of the enrolled population. The waiver extended to pregnant women, infants and children, parents/caretakers and Insure Oklahoma beneficiaries. (Exhibits 2 and 3 present detailed information on populations covered under the waiver and populations exempted from it.)

The OHCA has worked to ensure that applicants subject to the waiver are able to complete the application process expeditiously and receive real-time determination of eligibility. In 2007, the OHCA began development of an online enrollment function for potential SoonerCare Medicaid/CHIP beneficiaries, known as “No Wrong Door”. The OHCA completed development activities and began processing online enrollments in September 2010; paper enrollments were phased-out in subsequent months. During the evaluation period, all new applications and renewals for populations subject to the waiver were processed online.

The online eligibility system accepts applications via three sources:

- Home Internet – Individuals can apply or renew directly through the “Home View” version of the online eligibility system.
- Agency Internet – Individuals can apply at agency partner locations, where partners assist by entering demographic data on the individual’s behalf using the “Agency View” version of the online eligibility system. The OHCA’s agency partners include state and county health departments and the Oklahoma Department of Human Services. Other partners include Indian Health Services, tribal partners (e.g., Cherokee Nation, Chickasaw Nation and Choctaw Nation), Variety Care Family Health (FQHC) and Tulsa Community Action Project (advocacy organization), among others.
- Federal Exchange – Individuals found to be potentially eligible for Medicaid by the Federally-facilitated Marketplace (Federal Exchange) have their application transmitted to the OHCA via the Hub.

Beneficiaries are determined eligible based on their attested eligibility information, after which the OHCA verifies key eligibility information through matching to electronic data sources. Upon application entry, the OHCA’s system:

- Performs real-time SSN and citizenship verification;
- Performs Alien status verification via SAVE (Systematic Alien Verification Entitlement Program system record); and
- Performs address validation.

Applicant data is submitted to a business rules engine which contains the business policies and procedures for determining eligibility. For applications entered using Home or Agency View,

eligibility is determined real-time and communicated to the applicant on the “results” screen and through case status letters.

Applications received from the Federally Facilitated Marketplace are submitted to the business rules engine and a case status letter is sent to the applicant detailing the same information as is provided during an online submission. Applicants can choose to be notified via postal mail or email.

After initial eligibility determination, additional data on income and other criteria is received from internal and external sources, such as the Oklahoma Employment Security Commission (wage and unemployment data) and State Online Query-Internet (immigration status), among others. As information is received, the application is reprocessed through the business rules engine and eligibility is redetermined passively (i.e., without action by the beneficiary).

Retroactive Eligibility Access to Care Measures

The OHCA’s performance with respect to ensuring timely access to SoonerCare coverage was evaluated through five⁵⁶ process measures, for which data was derived from the agency MMIS/eligibility system:

1. The number of eligibility determinations made, broken down by type
2. The number of individuals determined ineligible (new applicants and renewals), broken down by reason⁵⁷
3. The average processing times, broken down by type
4. The rate of timely eligibility determinations, broken down by completed within five days, 10 days and 30 days
5. The internal churn rate (i.e., the number of disenrolled beneficiaries re-enrolling within six months)

⁵⁶ The Special Terms and Conditions included a sixth measure, “The accurate transfer rate, i.e., the number of individuals transferred to Medicaid, CHIP or the Exchange, as applicable, who are determined eligible by the agency.” The OHCA tracked the number of transfers from the Exchange during the evaluation period, as reported under Measure #1. However, the disposition of transfers to the agency was not tracked separately, nor did the agency have access to the disposition of transfers made to the Exchange. This measure therefore was not included in the evaluation.

⁵⁷ The Special Terms and Conditions contained separate measures for individuals “determined ineligible” and “disenrolled”. The two items are addressed together under measure #2, which stratifies results into “new applicant” and “renewals”, the latter of which represents disenrollments.

Number of Eligibility Determinations Made, Broken Down by Type

Measure Description: Eligibility determination counts by beneficiary status, including new applications and redeterminations. Also, eligibility determinations by source, including agency internet (i.e., data entered by a state worker or partner on behalf of an applicant), home internet, passive re-enrollment⁵⁸ or via transfer from the Federal Exchange.

Populations: SoonerCare cases processed through the agency's online enrollment application (includes all SoonerCare cases/beneficiaries subject to the waiver).

Data Source & Time Period: Oklahoma MMIS/eligibility system. Data is for calendar years 2016 – 2018.

Statistics: Analysis limited to descriptive statistics presented below in findings.

Findings: The volume of new applications declined modestly over the three year evaluation period, dropping from 291,000 in 2016 to 279,000 in 2017, before partially rebounding to 286,000 in 2018.

Redeterminations fell from 180,000 in 2016 to 155,000 in 2017 and again to 147,000 in 2018. This occurred during a time of economic growth in the State (Exhibit 98).

The volume of applications and redeterminations processed via the internet was relatively stable over the evaluation period. Passive renewal volume declined by nearly 50 percent from 2016 – 2018 (Exhibit 99). Federal Exchange transfers declined by 24 percent.

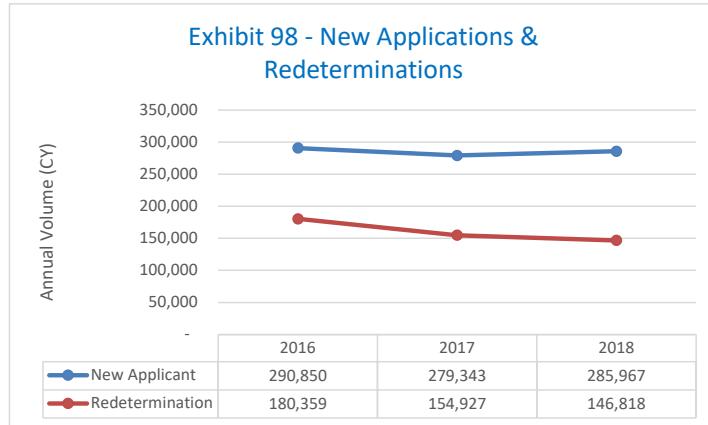


Exhibit 99 - Application/Redetermination Source

Source	2016	2017	2018	% Change 2016-2018
Agency Internet	107,456	108,666	110,632	3.0%
Home Internet	253,206	248,943	259,527	2.5%
Passive Renewal ⁵⁹	86,177	55,318	44,298	-48.6%
Federal Exchange	24,370	21,323	18,528	-24.0%
TOTAL	471,209	434,250	432,985	-8.1%

⁵⁸ Under passive re-enrollment, the OHCA renews eligibility if it determines through automated checks that the case continues to meet income and other criteria.

⁵⁹ The OHCA initiated passive renewals in July 2016. The agency temporarily suspended passive renewals during the period March – June 2017.

Number of Persons Determined Ineligible, By Reason

Measure Description: Counts of persons determined ineligible, broken down by application type (new applicant or renewal) and basis for decision. Basis can be “ineligibility established” (i.e., the agency was able to verify the individual did not meet eligibility criteria) or “eligibility cannot be established” (i.e., the agency was unable to verify that the individual met or continued to meet eligibility criteria).

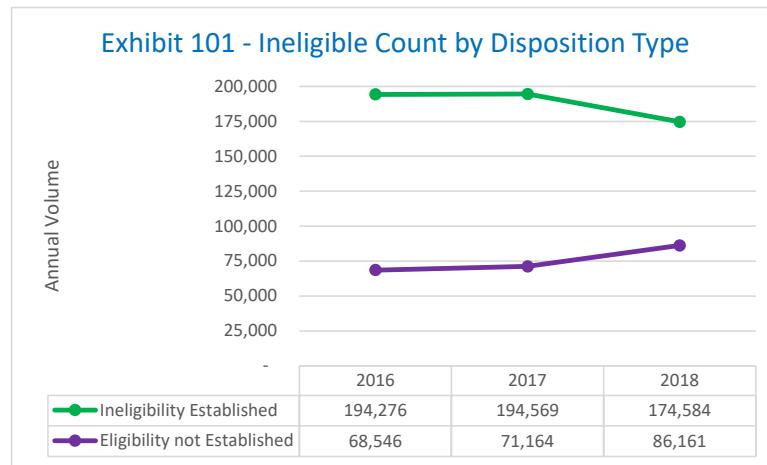
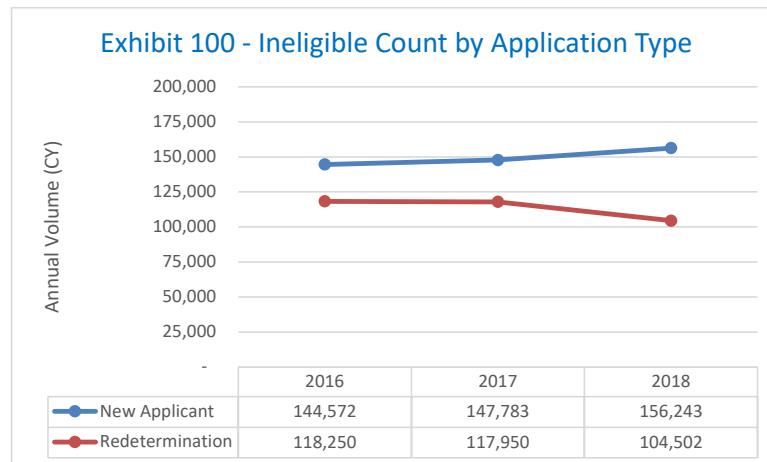
Populations: SoonerCare applicants or renewals processed through the agency’s online enrollment application (includes all SoonerCare beneficiaries subject to the waiver).

Data Source & Time Period: Oklahoma MMIS/eligibility system. Data is for calendar years 2016 – 2018.

Statistics: Analysis limited to descriptive statistics presented below in findings.

Findings: The volume of ineligible new applicants rose modestly over the evaluation period. The volume of persons found ineligible at redetermination (annual renewal) was stable from 2016 to 2017 but declined from 2017 to 2018 (Exhibit 100).

The majority of cases consisted of persons whose ineligibility was established through the application or redetermination process, as opposed to persons whose eligibility status could not be verified. However, the gap closed over the evaluation period.



In 2016, 74 percent of cases fell into the first category; in 2018 the portion had dropped to 60 percent (Exhibit 101).

Average Processing Times, Broken Down by Type

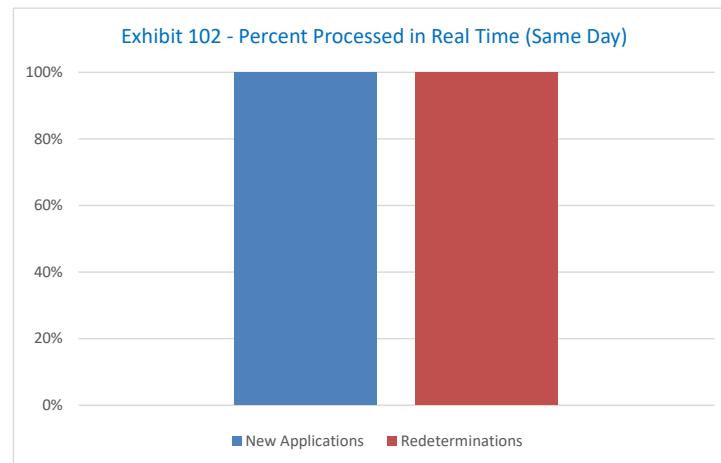
Measure Description: The number of days, on average, required to process new applications and redeterminations.

Populations: SoonerCare applicants or renewal cases processed through the agency's online eligibility system (includes all SoonerCare beneficiaries subject to the waiver).

Data Source & Time Period: Oklahoma MMIS/eligibility system. Data is for calendar years 2016 – 2018.

Statistics: Analysis limited to descriptive statistics presented below in findings.

Findings: As described in the Overview section, applications and redeterminations are processed in real time through the agency's online eligibility system. This includes passive redeterminations processed automatically by the OHCA (Exhibit 102).



Rate of Timely Eligibility Determinations

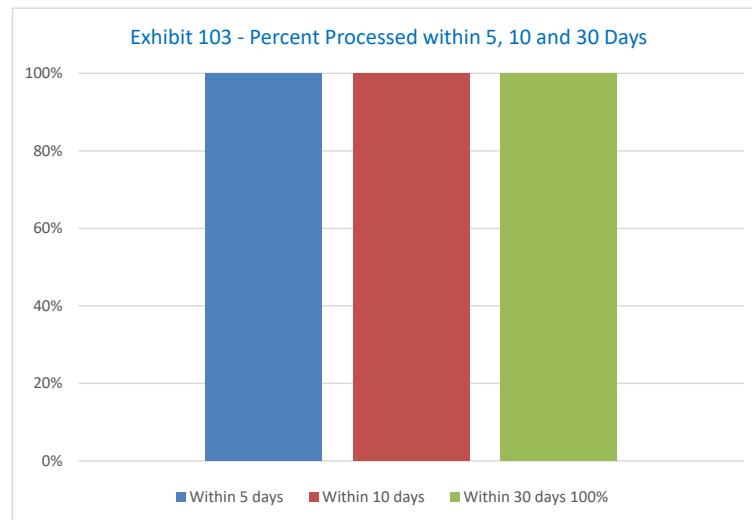
Measure Description: The percentage of determinations completed within five days, 10 days and 30 days.

Populations: SoonerCare applicants or renewal cases processed through the agency's online eligibility system (includes all SoonerCare beneficiaries subject to the waiver).

Data Source & Time Period: Oklahoma MMIS/eligibility system. Data is for calendar years 2016 – 2018.

Statistics: Analysis limited to descriptive statistics presented below in findings.

Findings: As described in the Overview section, applications and redeterminations are processed in real time through the agency's online eligibility system. Thus, 100 percent of determinations occur within five days (and 10 and 30 days) (Exhibit 103).



Internal Churn Rate

Measure Description: The number of disenrolled beneficiaries re-enrolling within six months.

Population: SoonerCare beneficiaries who lost eligibility. The status of each beneficiary was examined for the subsequent six-month period to document whether s/he regained eligibility at some point during this period. The data includes any beneficiary with at least a one-day gap in coverage (i.e., beneficiaries who disenrolled and re-enrolled in the same month are included).

Data Source & Time Period: Oklahoma MMIS/eligibility system. Data is for calendar years 2016 – 2018, as well as the first six months of 2019 (to identify churn rate among beneficiaries losing eligibility in July 2018 or later).

Statistics: Analysis limited to descriptive statistics presented below in findings.

Findings: The churn count increased over the evaluation period, both in absolute numbers and as a percent of total disenrollments (persons who lost eligibility at time of annual renewal) (Exhibits 104 and 105).

The increase suggests that a greater number of Demonstration beneficiaries were at risk of exposure to medical claims as the waiver period progressed.

However, the STCs for the 2019 – 2023 waiver period restrict the retroactive eligibility waiver to the parent/caretaker group; all other populations shown in Exhibit 2 now receive retroactive coverage. This likely will reduce the churn rate going forward.

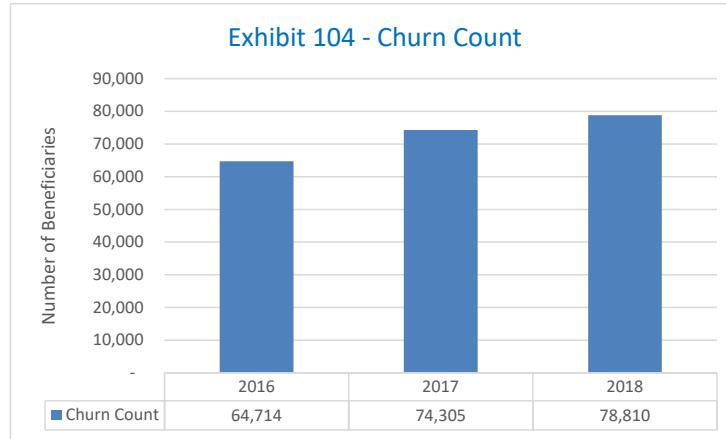


Exhibit 105 - Churn Percent of Total Disenrolled

Population	2016	2017	2018	% Change 2016-2018
Churn Beneficiaries	64,714	74,305	78,810	21.8%
Total Disenrolled ⁶⁰	118,250	117,950	104,502	-11.6%
Churn % of Total	54.7%	63.0%	75.4%	37.8%

⁶⁰ Beneficiaries disenrolled at annual renewal. This data, which also is presented in Exhibit 98, was taken from a standard monthly report generated by the MMIS. Churn counts were produced through ad hoc reporting for the evaluation. The two datasets therefore may not be identical, although any difference should not be material.

Retroactive Eligibility Waiver - Summary

The OHCA's use of a real-time, online eligibility system for Demonstration beneficiaries subject to the retroactive eligibility waiver ensures ready access to coverage when individuals apply. The passive renewal feature similarly promotes access and continuity-of-care for beneficiaries due for redetermination.

The OHCA experienced an increase in Medicaid churn during the evaluation period, which could pose a heightened risk of incurred medical claims for affected beneficiaries, depending on the basis for the temporary loss of eligibility. (Loss due to moving out-of-state or obtaining private coverage directly or through a spousal plan would not pose a risk, while loss of eligibility due to failure to timely recertify could leave the individual exposed to avoidable expenses.)

This finding suggests that the OHCA and CMS acted appropriately in restricting the scope of the retroactive eligibility waiver in the 2019 – 2023 waiver period. The number of beneficiaries experiencing Medicaid churn – and the associated churn rate – are likely to decline substantially as a result.

G. Conclusions

The OHCA's overarching goals for the SoonerCare Choice program are to meet the health care needs of Oklahomans through provision of high quality, accessible and cost effective care. The Demonstration was evaluated by testing hypotheses directly related to these three goals.

SoonerCare Health Access Networks - Access to Care

Hypothesis - Impact on Access: The implementation and expansion of the HANs will improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs.

Conclusion: Evaluation findings **supported** the hypothesis.

Observations: SoonerCare HAN beneficiary access to care was evaluated by analyzing HEDIS preventive/ambulatory care measures and CAHPS survey data. Results were tabulated for the HAN beneficiary population and a comparison group identified using propensity score matching.

The SoonerCare HAN and comparison group beneficiary populations both registered HEDIS preventive/ambulatory care compliance rates between 87 and 96 percent across the three years of the evaluation. SoonerCare HAN beneficiary rates also consistently exceeded a national benchmark rate set at the 50th percentile of all Medicaid-reporting states.

SoonerCare HAN and comparison group beneficiaries both reported high levels of satisfaction with access to care, as measured through the CAHPS survey. Over 80 percent reported always or usually being able to get the care/treatment needed. SoonerCare HAN beneficiary rates again exceeded the national benchmark.

The SoonerCare HAN and comparison group rates did not differ by a statistically significant amount on the majority of measures, and this typically would argue against a conclusion that the evaluation supported the hypothesis. However, the compliance and satisfaction rates were very high in absolute terms, and also relative to the national benchmark.

All SoonerCare Choice beneficiaries are enrolled in a patient centered medical home, which has primary responsibility for ensuring access to preventive/ambulatory services. A portion of the SoonerCare statewide PCMH network is aligned with one of the HANs but the State's interest is in ensuring access to care, regardless of PCMH affiliation. The State's goal was achieved during the evaluation period, both for HAN and non-HAN beneficiaries.

SoonerCare Health Access Networks – Quality of Care

Hypothesis: The implementation and expansion of the HANs will improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, with specific focus on the populations at greatest risk, including those with one or more chronic illnesses.

Conclusion: Evaluation findings **partially supported** the hypothesis.

Observations: The SoonerCare HANs seek to improve quality by providing care management to high risk beneficiaries, including frequent users of the emergency room and persons with complex/chronic health care needs. The HANs also support PCMH providers seeking to raise their accreditation status to the highest level recognized by the OHCA.

SoonerCare HAN beneficiary quality care was evaluated primarily through analysis of HEDIS chronic care measures, CAHPS survey data and PHPG targeted survey data related to social determinants of health. HEDIS and CAHPS results were tabulated for the HAN beneficiary population and a comparison group identified using propensity score matching.

SoonerCare HAN beneficiaries outperformed the comparison group by a statistically significant amount on several chronic care measures, including for diabetes and hypertension, two of the most prevalent chronic conditions within the SoonerCare population. SoonerCare HAN adults also had higher rates of follow-up after hospitalization for a mental illness. Comparison group beneficiaries outperformed their SoonerCare HAN counterparts on several asthma/COPD measures.

Although the SoonerCare HAN beneficiary population did not stand out from the comparison group on the majority of HEDIS measures, it did consistently outperform the national benchmark. SoonerCare HAN beneficiaries also reported high levels of satisfaction with respect to their health care, health plan (SoonerCare), personal doctor and support addressing social determinants of health.

SoonerCare HAN enrollment grew rapidly during the three evaluation years and the number of beneficiaries receiving care management also increased substantially, from 2,825 in 2016 to 4,639 in 2018 (64.2 percent change). During the same period, the portion of beneficiaries enrolled with a HAN PCMH holding the highest accreditation level reached 52 percent, well above the non-HAN portion of 40 percent.

The impact of the HANs on quality of care is open to further evaluation, as network growth stabilizes and the HANs have the opportunity to perform care management on an established enrollment base. The hypothesis will be re-examined as part of the 2019 – 2023 evaluation cycle.

SoonerCare Health Access Networks – Cost Effectiveness

Hypothesis: The implementation and expansion of the HANs will reduce costs associated with the provision of health care services to SoonerCare beneficiaries served by the HANs.

Conclusion: Evaluation findings **partially supported** the hypothesis.

Observations: SoonerCare HAN cost effectiveness was evaluated through analysis of emergency room utilization, hospital utilization (admission rates) and PMPM expenditures. Results were tabulated for the HAN beneficiary population and a comparison group identified using propensity score matching.

Much of the SoonerCare HANs' focus is on supporting PCMH providers and their ability to offer enhanced access, which is a prerequisite for obtaining the OHCA's highest accreditation rating. For example, providers at the highest tier must offer extended office hours, including a minimum number of weekend or evening hours to their patients. The HANs also target frequent users of the emergency room through their care management functions.

HAN beneficiaries used the emergency room at a lower rate than the comparison group across all three evaluation years, suggesting that the HANs have been effective in supporting beneficiary access to care and changing behaviors among frequent ER users.

Hospital admission rates showed mixed results, with HAN utilization lower in one year and comparison group utilization lower in another.

HAN beneficiaries were slightly more costly than the comparison group on a PMPM basis. As noted earlier, the HANs include a disproportionate number of university-affiliated PCMH providers. HAN PCMH providers and care managers are able to refer beneficiaries to specialists within the university systems, which could contribute to higher PMPM expenditures, while ultimately benefiting the affected patients. The PSM matching exercise controlled for urban versus rural place-of-residence but not for university affiliation.

The HANs also were growing rapidly during the three years covered under the evaluation. This growth meant that the HANs were regularly absorbing and initiating care for significant numbers of new beneficiaries while continuing to manage care for existing enrollees. As the growth rate slows in future evaluation years, it will be possible to evaluate the HANs as a more mature delivery system.

Finally, and similar to a capitated health plan, each HAN provides care management only to a small percentage of its total enrollment. The evaluation design required examining the HANs across all beneficiaries, which had the potential to dilute any impact the networks may have had on the care managed population. In the next waiver evaluation period, PHPG proposes to expand the HAN evaluation by obtaining rosters of care managed beneficiaries from the networks and evaluating these persons in isolation (while also conducting the population-wide evaluation).

SoonerCare Health Management Program - Access to Care⁶¹

Hypothesis: Incorporating health coaches into primary care practices will result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline, when care management occurred via telephonic or face-to-face contact with a nurse care manager.

Conclusion: Evaluation findings supported the hypothesis.

Observations: The original SoonerCare HMP model in place prior to the 2016 – 2018 waiver evaluation period employed telephonic and in-home face-to-face care management. Under the revised model, health coaches embedded at participating PCMH practices assumed responsibility for most care management. The OHCA anticipated this would strengthen beneficiary relationships both with health coaches and the PCMH provider, resulting in more frequent contacts and improved access to care.

SoonerCare HMP beneficiary access to care was evaluated by analyzing the number of beneficiaries actively engaged in health coaching along with HEDIS preventive/ambulatory care measures for these beneficiaries. HEDIS results were tabulated for the HMP beneficiary population and a comparison group identified using propensity score matching.

The number of SoonerCare HMP beneficiaries engaged in health coaching was approximately 6,000 per year, in conformance with contract requirements. Beneficiaries were treated for a range of chronic health conditions, the most common of which were hypertension, diabetes, asthma and COPD.

SoonerCare HMP beneficiaries registered nearly universal access to care, with HEDIS compliance rates for both children and adults exceeding 98 percent in each of the evaluation years. Adult SoonerCare HMP beneficiaries, who comprised more than 90 percent of enrollment, outperformed the comparison group by a statistically significant amount in all three years. SoonerCare HMP beneficiary compliance rates also were consistently higher than national benchmark rates.

⁶¹ PHPG conducted targeted evaluations of the SoonerCare HMP in State Fiscal Years 2016, 2017 and 2018. The scope included beneficiary satisfaction (results of which are included in this report), quality of care (HEDIS compliance rates) and cost effectiveness. The precise findings with respect to quality of care and cost effectiveness differ from this evaluation, due to application of a different comparison group methodology and differences in time periods. However, the overall findings were consistent with the conclusions presented herein. The SoonerCare HMP evaluations are archived on the OHCA website at: <http://www.okhca.org/research.aspx?id=87>

SoonerCare Health Management Program – Quality of Care

Hypothesis 1 – Impact on Identifying Appropriate Target Population: The implementation of the HMP, including health coaches and practice facilitation, will result in a change in the characteristics of the beneficiary population enrolled in the HMP (as measured through claims data to identify characteristics such as disease burden and co-morbidity) compared to baseline.

Conclusion: Evaluation findings **supported** the hypothesis.

Observations: The SoonerCare HMP was developed to serve beneficiaries with complex/chronic health needs who are at risk for adverse health outcomes. Between 75 and 80 percent of the beneficiary population during the three year period had at least two of the prevalent chronic conditions targeted under the program⁶²; nearly 20 percent had four or more of the conditions.

Approximately 75 percent of SoonerCare HMP beneficiaries had one or more of the prevalent chronic health conditions treated under the program in combination with a behavioral health co-morbidity. Common co-morbidities included psychosis and major depression.

Hypothesis 2 – Impact on Health Outcomes: Use of disease registry functions by the health coach will improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children’s Healthcare Quality Measures.

Conclusion: Evaluation findings **supported** the hypothesis.

Observations: The practice-embedded health coaches employed a variety of methods, including motivational interviewing and patient tracking to improve beneficiary disease self-management skills and encourage healthier lifestyles.

SoonerCare HMP quality-of-care outcomes were evaluated through analysis of HEDIS chronic care measures. HEDIS and CAHPS results were tabulated for the HMP beneficiary population and a comparison group identified using propensity score matching.

The SoonerCare HMP beneficiary population outperformed the comparison group by a statistically significant amount in one or more years on nine of the 23 HEDIS quality-of-care measures. The comparison group did not outperform the HMP beneficiary population on any measure.

The HMP beneficiary population also outperformed the national benchmark on all HEDIS measures for which a national benchmark exists.

Additional room for improvement remains but the strong results relative to the comparison group support the hypothesis that the SoonerCare HMP health coaching model has had a positive impact on quality-of-care. The HMP vendor should evaluate opportunities for strengthening health

⁶² Asthma, coronary artery disease, COPD, diabetes, heart failure and hypertension.

coaching outreach and interventions among those conditions where the program did not outperform the comparison group by a statistically significant amount.

Hypothesis 3 – Impact on Satisfaction/Experience of Care: Beneficiaries using HMP services will have high satisfaction and will attribute improvement in health status (if applicable) to the HMP.

Conclusion: Evaluation findings **supported** the hypothesis.

Observations: PHPG conducts telephonic surveys of SoonerCare HMP beneficiaries at time of enrollment (baseline) and six-months after the initial survey. Beneficiaries are queried about satisfaction with their health coach and the overall program. Beneficiaries also are asked to report whether their health status has improved, worsened or stayed the same and, if improved, whether the SoonerCare HMP contributed to the improvement.

Respondents reported high levels of satisfaction with their health coaches. Over 80 percent reported being very satisfied in each of the three years. Fewer than three percent in any year reported being dissatisfied.

Respondents also reported high levels of satisfaction with their experience in the SoonerCare HMP. Over 80 percent reported being very satisfied in each of the three years. Fewer than two percent reported being dissatisfied.

A majority of respondents across all years rated their health status as only fair. However, over 40 percent of follow-up survey respondents in 2016 and 2017, and 50 percent in 2018, reported both that their health status had improved and that the SoonerCare HMP had contributed to this improvement.

SoonerCare Health Management Program – Cost Effectiveness

Hypothesis 1 - Utilization: Beneficiaries using HMP services will have fewer ER visits, hospital admissions and readmissions, as compared to beneficiaries not receiving HMP services (as measured through claims data).

Conclusion: Evaluation findings were **inconclusive**.

Observations: SoonerCare HMP impact on utilization was evaluated through analysis of paid claims data for emergency room visits and hospital admissions/readmissions. Results were tabulated for the HMP beneficiary population and a comparison group identified using propensity score matching.

Results were mixed, with SoonerCare HMP beneficiaries registering lower rates of utilization in some instances and comparison group beneficiaries registering lower rates in others. However, with the exception of a higher emergency room visit rate for HMP beneficiaries in 2017, none of the differences were statistically significant.

Hypothesis 2 – Effectiveness of Care: Per member per month health expenditures for members enrolled in HMP will be lower than would have occurred absent their participation in nurse care management (health coaching).

Conclusion: Evaluation findings **supported** the hypothesis.

Observations: SoonerCare HMP cost effectiveness was evaluated through analysis of paid claims data that captured per member per month expenditures for members enrolled in the SoonerCare HMP. Results were tabulated for the HMP beneficiary population and a comparison group identified using propensity score matching.

SoonerCare HMP beneficiary expenditures were lower than the comparison group across all three evaluation years. The difference was statistically significant in 2016.

Although evaluation findings supported the hypothesis, the analysis methodology may have understated the impact of the SoonerCare HMP on beneficiary costs over time by evaluating each year in isolation (in accordance with design guidelines). SoonerCare HMP health coaches work with beneficiaries over months, and often years, to improve chronic care self-management skills and promote healthier lifestyles.

PHPG has conducted longitudinal evaluations of SoonerCare HMP beneficiaries and found the savings attributable to participation in the HMP increases over time. (The program's impact on emergency room and hospital utilization also becomes more pronounced.)

The next evaluation cycle (2019 – 2023) coincides with start of a new HMP contract with expanded practice facilitation and health coaching modalities. PHPG will explore adding a longitudinal component to the evaluation design, to better quantify the program's impact on beneficiaries with multi-year program tenures.

Retroactive Eligibility Waiver - Access to Care

Hypothesis: The evaluation will support the hypothesis that the waiver of retroactive eligibility is an appropriate feature of the program, given that the State's (OHCA's) enrollment systems ensure readiness, eligibility and timely enrollment.

Conclusion: Evaluation findings **supported** the hypothesis.

Observations: During the period covered by the evaluation, the OHCA operated an online eligibility system for applications and beneficiaries subject to the waiver. All new applications and renewals for populations subject to the waiver were processed online. All new applications and redeterminations were processed in real-time.

H. Interpretations & Policy Limitations/Interactions with other State Initiatives

The majority of state Medicaid programs have transitioned to managed care by enrolling at least a portion of their populations into capitated health plans. Health plan contracts typically encompass most or all covered medical services, and in many instances also include behavioral health. The contracts also require health plans to assess their members' medical, behavioral health (if applicable) and social service needs, develop care plans and provide care management in accordance with care plan goals and interventions.

Oklahoma is one of a minority of states that has elected to implement managed care through a non traditional model. After terminating its capitated program in 2004, the OHCA began a years-long transition to the SoonerCare Choice program in place during the waiver evaluation period (and still operating today).

SoonerCare Choice seeks to achieve the same access, quality and cost effectiveness objectives common to capitated programs but to do so in a more targeted fashion. The OHCA contracts with the SoonerCare HANs and SoonerCare HMP vendor to offer practice enhancement to affiliated PCMH providers and provide care management to high risk beneficiaries.

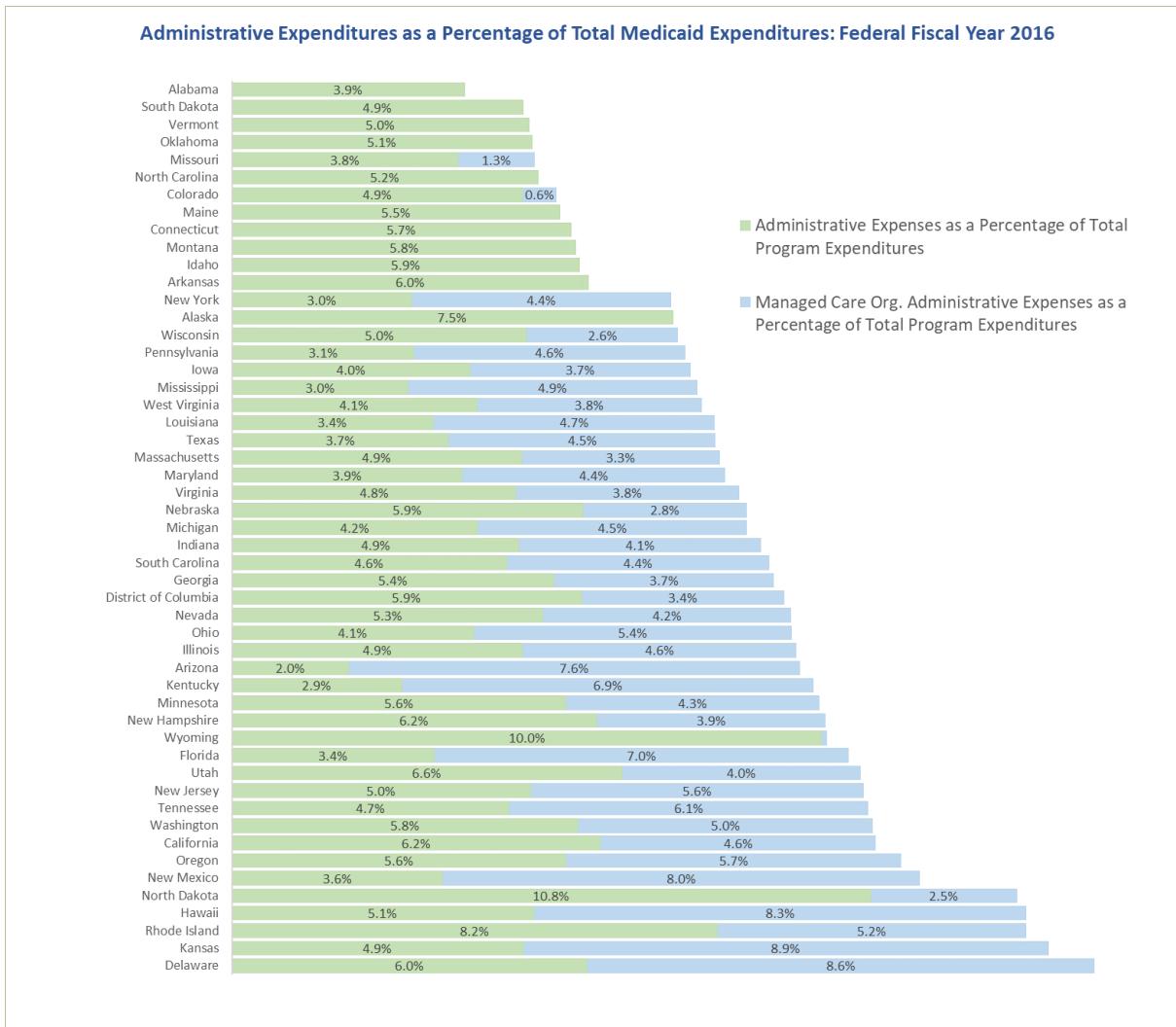
Medicaid benefits continue to be paid on a fee-for-service basis and the majority of SoonerCare Demonstration beneficiaries, who are healthy children and pregnant women, receive any needed care coordination through their PCMH provider and/or prenatal care provider.

The OHCA model has the advantage of requiring fewer state dollars for program administration. PHPG conducted an analysis of state Medicaid program administrative costs in 2019, using CMS-64 report data for Federal Fiscal Year 2016⁶³ (most recent year available) and findings from a 2018 Milliman study of Medicaid health plan administrative expenses⁶⁴, and found Oklahoma to have the fourth lowest administrative cost in the nation. In general, states with non-capitated models had lower administrative costs due to the absence of administrative payments to health plans (Exhibit 105 on the following page).

⁶³ <https://www.medicaid.gov/medicaid/financial-management/state-expenditure-reporting-for-medicaid-chip/expenditure-reports-mbescbes/index.html>

⁶⁴ Medicaid Managed Care Financial Results for 2017, Milliman Research Report, May 2018.
<http://www.qa.milliman.com/uploadedFiles/insight/2018/Medicaid-managed-care-financial-results-2017.pdf>
Milliman calculated average health plan administrative expenses to be close to 12 percent. PPHP lowered this amount to 10 percent when arraying states to err on the conservative side.

Exhibit 105 – Administrative Cost Comparison



The OHCA's administrative cost advantage is meaningful only if the program achieves its stated objectives with respect to access, quality and cost effectiveness. The evaluation found the SoonerCare program did largely meet these objectives during the 2016 – 2018 evaluation period.

The evaluation isolated the impact of the SoonerCare HAN and HMP initiatives from the remainder of the Medicaid program by analyzing the HAN and HMP populations in relation to a comparison group of non-HAN/non-HMP beneficiaries. (HAN and HMP enrollments are mutually exclusive; beneficiaries are not co-enrolled in the two programs.)

All SoonerCare Demonstration beneficiaries are enrolled with a PCMH provider. The HAN and HMP initiatives include activities designed to enhance PCMH practices. PHPG did not seek to isolate the impact of the PCMH program on beneficiary outcomes, as the core program serves as a baseline for all beneficiaries. PHPG's evaluation of the HAN and HMP initiatives instead was designed to identify the impact of HAN and HMP interactions with PCMH providers, along with the other HAN/HMP beneficiary-facing interventions.

SoonerCare HAN beneficiaries enjoyed ready access to preventive/ambulatory services and registered high levels of satisfaction with the availability of care. Beneficiaries did not demonstrate statistically significant differences from the comparison group on most HEDIS measures, or demonstrate lower PMPM costs, but the evaluation period coincided with rapid enrollment growth within the HANs. The next waiver evaluation period should provide more conclusive evidence of the HANs' impact on quality and cost.

SoonerCare HMP beneficiaries also enjoyed ready access to preventive/ambulatory services and registered high levels of satisfaction with their experience in the Health Management Program. Beneficiary HEDIS compliance rates were higher than the comparison group on all measures for which a statistically significant difference was found (nine out of 23 total). SoonerCare HMP beneficiaries also registered lower PMPM expenditures than the comparison group across the three evaluation years (statistically significant difference in one of the three years).

The OHCA has routinely evaluated HAN and HMP performance to identify opportunities for improvement. The OHCA negotiated new contracts with the HANs in 2019 that expand care management responsibilities and require creation of "health neighborhoods". These health neighborhoods are to be situated in both urban and rural communities. They are to operate in accordance with the Patient-Centered Primary Care Collaborative definition of clinical-community partnerships that include the medical, behavioral health and social supports necessary to enhance health, with the PCMH serving as the patient's primary "hub" and coordinator of integrated, whole person health care delivery.

The OHCA entered into a new contract with the HMP vendor in 2019 that expands the program's geographic reach and health coaching modes. The contract also incorporates value-based purchasing concepts, with the vendor entitled to earn back withhold payments by meeting HEDIS quality targets.

Contracting with capitated health plans is a proven strategy for implementing managed care. However, the success of the SoonerCare Demonstration offers another viable option to states considering implementation or expansion of managed care, particularly in rural/frontier areas where a capitated program may be difficult to establish.

I. Lessons Learned & Recommendations

As discussed in the previous section, a primary lesson learned through evaluation is that states have a viable alternative to capitated health plan contracts in circumstances where capitation may be difficult to implement (e.g., rural portions of a state).

The HAN and HMP models are distinct from each other and offer different “non-traditional” approaches to implementing or expanding managed care. Their relevance to another state would depend on that state’s delivery system(s) and the interest of the provider community.

The two university-based HANs present examples of how that state can contract for selected activities with organizations that have the capacity to cover a significant geographic area and to add affiliated practices on a large scale. The third HAN, based in a rural county, demonstrates that the same model can be replicated on a smaller scale through a true grassroots initiative.

The SoonerCare HMP offers a model for targeting high risk beneficiaries through an intensive health coaching initiative in coordination with the beneficiary’s medical home. The program allows the state to concentrate resources where they are most needed and to rely on the PCMH system to coordinate care for the majority of the Medicaid population consisting of healthy children and pregnant women. (The OHCA does operate directly a high-risk OB care management program for pregnant women who meet high risk criteria.)

The HMP’s success is predicated on recruitment and training of interested providers (to host health coaches) and identification and recruitment of appropriate beneficiaries based on risk. It also requires a holistic approach to care management that addresses a beneficiary’s medical, behavioral health and social service needs in their entirety, and that measures progress toward achievement of chronic condition self-management goals and encourages a healthier lifestyle.

APPENDICES

Appendix 1 – Evaluation Measure Specifications

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
Evaluation of Health Access Networks – Access to Care							
1	Will the implementation and expansion of the HANs improve access to and the availability of health care services to SoonerCare beneficiaries served by the HANs?	Children and adolescents' access to PCPs – 12 months to 19 years	Members within age cohort enrolled with a HAN-affiliated PCMH ^{65,66}	In accordance with HEDIS specifications (administrative data only)	SoonerCare Choice members within age cohort not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
2		Adults' access to preventive/ ambulatory health services	Members within age cohort enrolled with a HAN-affiliated PCMH	In accordance with HEDIS specifications (administrative data only)	SoonerCare Choice members within age cohort not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

⁶⁵ HEDIS measures, which comprise a large portion of the evaluation, include specifications for continuous enrollment during a measurement year. PHPG also required at least 11 months of enrollment for other measures calculated with paid claims, including emergency room/hospital utilization and per member expenditures.

⁶⁶ HAN beneficiaries do not actively enroll in a network but instead are considered to be aligned with one based on the status of their PCMH. The HANs significantly expanded their PCMH rosters during the 2016 – 2018 waiver period, resulting in the enrollment of large numbers of beneficiaries with established PCMH relationships. PHPG therefore classified beneficiaries as HAN members at the time their PCMH joined a network (or the beneficiary selected a PCMH already affiliated with a HAN) and did not impose any minimum enrollment tenure.

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
3		Getting needed care – children and adults	Adult members enrolled with a HAN-affiliated PCMH Child members enrolled with a HAN-affiliated PCMH	In accordance with CAHPS specifications	SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH	Source - CAHPS survey data file Steward – CAHPS	Welch two sample t-test
Evaluation of Health Access Networks – Quality of Care							
4	Will the implementation and expansion of the HANs improve the quality and coordination of health care services to SoonerCare beneficiaries served by the HANs, including those with one or more chronic illnesses?	Number of HAN beneficiaries engaged in care management	Total unduplicated members engaged in care management at any point during year Unduplicated members with multiple chronic illnesses engaged in care management at any point during the year	Numerators – members engaged in care management Denominators – all members	N/A	Source - HAN care management databases Steward - HANs	Time series
5		Asthma – Asthma medication ratio	HAN members with asthma	In accordance with HEDIS specifications	SoonerCare Choice members with asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
6		Asthma – Medication management for people with asthma – 75 percent	HAN members with asthma	In accordance with HEDIS specifications	SoonerCare Choice members with asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
7		CAD – Persistent beta-blocker treatment after a heart attack	HAN members with CAD and heart failure	In accordance with HEDIS specifications	SoonerCare Choice members with CAD/heart failure not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
8		CAD – Cholesterol management for patients with cardiovascular conditions – LDL-C test	HAN members with CAD and heart failure	In accordance with HEDIS specifications	SoonerCare Choice members with CAD/heart failure not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
9		COPD – Use of spirometry testing in the assessment and diagnosis of COPD	HAN members with COPD	In accordance with HEDIS specifications	SoonerCare Choice members with COPD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
10		COPD – pharmacotherapy management of COPD exacerbation – 14 days	HAN members with COPD	In accordance with HEDIS specifications	SoonerCare Choice members with COPD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
11		COPD – pharmacotherapy management of COPD exacerbation – 30 days	HAN members with COPD	In accordance with HEDIS specifications	SoonerCare Choice members with COPD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
12		Diabetes – Percentage of members who had LDL-C test	HAN members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
13		Diabetes – percentage of members who had retinal eye exam performed	HAN members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
14		Diabetes – percentage of members who had HbA1c testing	HAN members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
15		Diabetes - Percentage of members who received medical attention for nephropathy	HAN members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
16		Diabetes - Percentage of members prescribed ACE/ARB therapy	HAN members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
17		Hypertension – Percentage of members who had LDL-C test	HAN members with hypertension	In accordance with HEDIS specifications	SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
18		Hypertension – Percentage of members prescribed ACE/ARB therapy	HAN members with hypertension	In accordance with HEDIS specifications	SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
19		Hypertension – Percentage of members prescribed diuretics	HAN members with hypertension	In accordance with HEDIS specifications	SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
20		Hypertension – Percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring	HAN members with hypertension	In accordance with HEDIS specifications	SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
21		Mental Health – Follow-up after hospitalization for mental illness – 7 days	HAN members hospitalized for mental illness	In accordance with HEDIS specifications	SoonerCare Choice members hospitalized for mental illness not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
22		Mental Health – Follow-up after hospitalization for mental illness – 30 days	HAN members hospitalized for mental illness	In accordance with HEDIS specifications	SoonerCare Choice members hospitalized for mental illness not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
23	Will the implementation and expansion of the HANs enhance the State's PCMH program by making HAN care management and support available to more providers, as documented through an evaluation of PCP profiles that incorporates a review of utilization, disease guideline compliance and cost?	Number and percentage of HAN-affiliated beneficiaries aligned with a PCMH who has attained the highest level of OHCA accreditation	HAN-affiliated beneficiaries	Numerator – Beneficiaries aligned with PCMH providers holding Tier 3 accreditation (or highest level under any future redesign of PCMH tiers) Denominator – All HAN-aligned beneficiaries	Beneficiaries not aligned with a HAN PCMH	Source – MMIS Steward – OHCA	Time series

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
24	Will beneficiaries enrolled with a HAN PCMH provider have higher satisfaction, compared to beneficiaries enrolled with a non-HAN PCMH?	Rating of health care – children and adults	Adult members enrolled with a HAN-affiliated PCMH	In accordance with CAHPS specifications	SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH	Source - CAHPS survey data file Steward – CAHPS	Welch two sample t-test
25			Child members enrolled with a HAN-affiliated PCMH		SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH		
26		Rating of personal doctor – children and adults	Adult members enrolled with a HAN-affiliated PCMH	In accordance with CAHPS specifications	SoonerCare Choice adult members not enrolled with a HAN-affiliated PCMH	Source - CAHPS survey data file Steward – CAHPS	
			Child members enrolled with a HAN-affiliated PCMH		SoonerCare Choice child members not enrolled with a HAN-affiliated PCMH		

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
27		Rating of assistance with SDOH	Central Communities HAN members receiving SDOH through care management	Numerators – Members reporting satisfaction with HMP Denominator – All respondents	N/A	Source – SoonerCare Independent Evaluator survey data file Steward - SoonerCare Independent Evaluator for survey data	Descriptive statistics
Evaluation of Health Access Networks – Cost Effectiveness							
28	Will the implementation and expansion of the HANS reduce cost associated with provision of health care services to SoonerCare beneficiaries served by the HANs?	Emergency room utilization	SoonerCare Choice HAN members	Numerator – ED visits Denominator – total member months	SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source – MMIS Steward – OHCA	Welch two sample t-test Regression with propensity score matching
29		Hospital admissions	SoonerCare Choice HAN members	Numerator – IP admissions Denominator – total member months	SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP PCMH and not enrolled in the HMP	Source – MMIS Steward – OHCA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
30		Evaluation of Health Access Networks – PMPM Expenditures	SoonerCare Choice HAN members	Numerator – total expenditures (paid claims and PCMH case management fees) Denominator – total member months	SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source – MMIS Steward – OHCA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
Evaluation of Health Management Program – Access to Care							
31	Will implementation of the HMP, including health coaches and practice facilitation, result in an increase in enrollment, as compared to baseline?	Number of beneficiaries engaged in health coaching ⁶⁷	SoonerCare HMP members engaged in health coaching (minimum of three months)	N/A	N/A	Source – HMP contractor database Steward – HMP contractor	Time series
32	Will incorporating health coaches into primary care practices result in increased contact with HMP beneficiaries by the PCP (measured through claims encounter data), as compared to baseline?	Children and adolescents' access to PCPs – 12 months to 19 years	SoonerCare HMP members engaged in health coaching (minimum of three months)	In accordance with HEDIS specifications (administrative data only)	SoonerCare Choice members within age cohort not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

⁶⁷ HMP beneficiaries undergo an initial assessment and care planning stage upon enrollment in the program, after which most are care managed on a schedule related to their follow-up physician office visits. PHPG accounted for these initial activities by applying the three-month minimum enrollment tenure when identifying beneficiaries for inclusion in the HMP category.

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
33		Adults' access to preventive/ ambulatory health services	Members within age cohort enrolled with a HAN-affiliated PCMH	In accordance with HEDIS specifications (administrative data only)	SoonerCare Choice members within age cohort not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
Evaluation of Health Management Program – Quality of Care							
34	Will implementation of the HMP result in a change in characteristics of the beneficiary population enrolled in the HMP (as measured through population characteristics, including disease burden and co-morbidity obtained through claims and algorithms) as compared to baseline?	Number of chronic conditions	SoonerCare members enrolled in the HMP, by coaching method	Numerator – Number of chronic conditions Denominator – Number of members	N/A	Source – MMIS; HMP contractor database Steward – OHCA for claims; HMP contractor for member assignments	Time series
35		Percentage of members with physical/ behavioral health comorbidities	SoonerCare members enrolled in the HMP, by coaching method	Numerator – Number of members with at least one chronic physical and one behavioral health condition Denominator – Number of members	N/A	Source – MMIS; HMP contractor database Steward – OHCA for claims; HMP contractor for member assignments	Time series

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
36	Will the use of disease registry functions by the health coach (along with other coaching activities) improve the quality of care delivered to beneficiaries, as measured by changes in performance on the initial set of Health Care Quality Measures for Medicaid-Eligible Adults or CHIPRA Core Set of Children's Healthcare Quality Measures?	Asthma – use of appropriate medications for people with asthma	HMP members with asthma	In accordance with HEDIS specifications	SoonerCare Choice members with asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
37		Asthma – Medication management for people with asthma – 75 percent	HMP members with asthma	In accordance with HEDIS specifications	SoonerCare Choice members with asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
38		CAD – Persistent beta-blocker treatment after a heart attack	HMP members with CAD and heart failure	In accordance with HEDIS specifications	SoonerCare Choice members with CAD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
39		CAD – Cholesterol management for patients with cardiovascular conditions – LDL-C test	HMP members with CAD and heart failure	In accordance with HEDIS specifications	SoonerCare Choice members with CAD not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
40		COPD – Use of spirometry testing in the assessment and diagnosis of COPD	HMP members with COPD	In accordance with HEDIS specifications	SoonerCare Choice members with COPD or asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
41		COPD – pharmacotherapy management of COPD exacerbation – 14 days	HMP members with COPD	In accordance with HEDIS specifications	SoonerCare Choice members with COPD or asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
42		COPD – pharmacotherapy management of COPD exacerbation – 30 days	HMP members with COPD	In accordance with HEDIS specifications	SoonerCare Choice members with COPD or asthma not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
43		Diabetes – Percentage of members who had LDL-C test	HMP members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
44		Diabetes – percentage of members who had retinal eye exam performed	HMP members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
45		Diabetes – percentage of members who had HbA1c testing	HMP members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
46		Diabetes - Percentage of members who received medical attention for nephropathy	HMP members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
47		Diabetes - Percentage of members prescribed ACE/ARB therapy	HMP members with diabetes	In accordance with HEDIS specifications	SoonerCare Choice members with diabetes not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
48		Hypertension – Percentage of members who had LDL-C test	HMP members with hypertension	In accordance with HEDIS specifications	SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
49		Hypertension – Percentage of members prescribed ACE/ARB therapy	HMP members with hypertension	In accordance with HEDIS specifications	SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
50		Hypertension – Percentage of members prescribed diuretics	HMP members with hypertension	In accordance with HEDIS specifications	SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
51		Hypertension – Percentage of members prescribed ACE/ARB therapy or diuretics with annual medication monitoring	HMP members with hypertension	In accordance with HEDIS specifications	SoonerCare Choice members with hypertension not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
52		Mental Health – Follow-up after hospitalization for mental illness – 7 days	HMP members hospitalized for mental illness	In accordance with HEDIS specifications	SoonerCare Choice members hospitalized for mental illness not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching
53		Mental Health – Follow-up after hospitalization for mental illness – 30 days	HMP members hospitalized for mental illness	In accordance with HEDIS specifications	SoonerCare Choice members hospitalized for mental illness not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - NCQA	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
54		Opioid – Use of opioids at high dosage in persons without cancer	HMP members prescribed opioids (through Medicaid)	In accordance with PQA specifications	SoonerCare Choice members prescribed opioids not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - PQA	Welch two sample t-test Regression with propensity score matching
55		Opioid – Concurrent use of opioids and benzodiazepines	HMP members prescribed opioids (through Medicaid)	In accordance with PQA specifications	SoonerCare Choice members prescribed opioids and benzodiazepines not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source - MMIS Steward - PQA	Welch two sample t-test Regression with propensity score matching
56		SDOH – Member awareness of SDOH available assistance	Randomly selected sample of HMP members enrolled in HMP	Numerators – Members reporting awareness and use of SDOH assistance	N/A	Source – SoonerCare Independent Evaluator survey data file	Descriptive statistics

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
57		SDOH – Member satisfaction with SDOH available assistance	Randomly selected sample of HMP members enrolled in HMP	available through HMP Denominator – All respondents	N/A	Steward - SoonerCare Independent Evaluator for survey data Source – SoonerCare Independent Evaluator survey data file Steward - SoonerCare Independent Evaluator for survey data	Descriptive statistics
58	Will beneficiaries using HMP services have high satisfaction and attribute improvement in health status (if applicable) to the HMP?	Overall satisfaction with health coach	Randomly selected sample of HMP members enrolled in HMP	Numerators – Members reporting satisfaction with health coach Denominator – All respondents	N/A	Source – SoonerCare Independent Evaluator survey data file Steward - SoonerCare Independent Evaluator for survey data	Descriptive statistics
61		Overall satisfaction with HMP	Randomly selected sample of HMP members enrolled in HMP	Numerators – Members reporting satisfaction with HMP	N/A	Source – SoonerCare Independent Evaluator	Descriptive statistics

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
				Denominator – All respondents		survey data file Steward - SoonerCare Independent Evaluator for survey data	
59	Change in health status	Randomly selected sample of HMP members enrolled in HMP		Numerators – Members reporting improved health status Denominator – All respondents	N/A	Source – SoonerCare Independent Evaluator survey data file Steward - SoonerCare Independent Evaluator for survey data	Descriptive statistics
60	Contribution of HMP to improved health status (if applicable)	Randomly selected sample of HMP members enrolled in HMP		Numerators – Members attributing improved health status to HMP Denominator – Members reporting improved health status	N/A	Source – SoonerCare Independent Evaluator survey data file Steward - SoonerCare Independent Evaluator for survey data	Descriptive statistics

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
Evaluation of Health Management Program – Cost Effectiveness							
61	Will beneficiaries using HMP services have fewer ER visits as compared to beneficiaries not receiving HMP services (as measured through claims data)?	ER utilization – HMP members versus comparison group	SoonerCare HMP members (minimum of three months)	Numerator – ED visits Denominator – total participants	SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source – MMIS Steward – Independent Evaluator	Welch two sample t-test Regression with propensity score matching
62	Will beneficiaries using HMP services have fewer (admissions and) readmissions as compared to beneficiaries not receiving HMP services (as measured through claims data)?	Hospital admissions – HMP members versus comparison group Hospital readmissions (30 days) – HMP members versus comparison group	SoonerCare HMP members (minimum of three months) SoonerCare HMP members with at least one hospitalization	Numerator – Admissions Denominator – total participants Numerator – Unique members with readmissions within 30 days following an admission Denominator – total members with admissions in 30-day period	SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source – MMIS Steward – SoonerCare Independent Evaluator	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
63	Will per member per month expenditures for members enrolled in HMP be lower than would have occurred absent their participation?	PMPM costs – HMP members versus comparison group <i>(Also, calculation of net costs, taking HMP administrative expenses into account)</i>	SoonerCare HMP members (minimum of three months)	Numerator – total expenditures (paid claims) and program administrative costs (vendor payments and agency direct/overhead expenses) Denominator – member months	SoonerCare Choice members not enrolled with a HAN-affiliated PCMH and not enrolled in the HMP	Source – MMIS Steward – SoonerCare Independent Evaluator	Welch two sample t-test Regression with propensity score matching

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
Evaluation of Retroactive Eligibility – Access to Care							
64	Do the state's enrollment systems ensure readiness, eligibility and timely enrollment?	The number of eligibility determinations made, broken down by type	SoonerCare Demonstration beneficiaries	N/A	N/A	Source – OHCA eligibility system Steward - OHCA	Descriptive statistics
65		The number of individuals determined ineligible, broken down by procedural versus eligibility reasons	SoonerCare Demonstration beneficiaries	N/A	N/A	Source – OHCA eligibility system Steward - OHCA	Descriptive statistics
66		The average processing times, broken down by type	SoonerCare Demonstration beneficiaries	N/A	N/A	Source – OHCA eligibility system Steward - OHCA	Descriptive statistics

Ref	Research Question	Measure	Population	Numerator/ Denominator	Comparison Group	Data Source & Measure Steward	Analytic Methods
67		The rate of timely eligibility determinations, broken down by completed within five days, 10 days and 30 days	SoonerCare Demonstration beneficiaries	N/A	N/A	Source – OHCA eligibility system Steward - OHCA	Descriptive statistics
68		The internal churn rate (i.e., the number of disenrolled beneficiaries re-enrolling within six months)	SoonerCare Demonstration beneficiaries	N/A	N/A	Source – OHCA eligibility system Steward - OHCA	Descriptive statistics

Appendix 2 – HEDIS/Utilization/Expenditure Measures – *HAN versus Comparison Group*

HEALTH ACCESS NETWORKS		Percent Compliant			P-Value/Statistical Significance (p < .05)		
HEDIS Measure		2016	2017	2018	2016	2017	2018
Child and Adolescents' Access to PCP - 12 to 24 months							
HAN		96.2%	95.8%	96.5%	0.03227	0.3615	0.05493
Comparison Group		95.6%	95.5%	96.1%	Yes	No	No
Child and Adolescents' Access to PCP - 25 months to 6 years							
HAN		88.7%	88.1%	89.9%	0.3849	0.0330	0.0384
Comparison Group		89.0%	88.7%	90.4%	No	Yes	Yes
Child and Adolescents' Access to PCP - 7 to 11 years							
HAN		93.1%	93.1%	93.5%	0.1676	0.0365	0.0605
Comparison Group		93.4%	93.6%	93.8%	No	Yes	No
Child and Adolescents' Access to PCP - 12 to 19 years							
HAN		92.5%	92.3%	92.6%	0.0002	0.1093	0.1887
Comparison Group		93.3%	92.6%	92.8%	Yes	No	No
Adults' Access to Preventive/Ambulatory Health Services							
HAN		96.0%	96.1%	87.7%	0.0748	0.7947	0.5757
Comparison Group		96.5%	96.0%	87.4%	No	No	No
Asthma - Medication Ratio - 5 to 18 years							
HAN		76.0%	76.4%	77.6%	0.0044	0.0397	0.0005
Comparison Group		79.4%	78.8%	81.1%	Yes	Yes	Yes
Asthma - Medication Ratio - 19 to 64 years							
HAN		58.4%	62.6%	71.4%	0.6236	1.0000	0.3941
Comparison Group		61.3%	62.6%	67.6%	No	No	No
Asthma - Medication Management - 75 percent							
HAN		21.4%	24.2%	26.3%	<.0001	0.0013	0.1327
Comparison Group		26.0%	28.0%	27.9%	Yes	Yes	No
CAD - Persistent Beta-Blocker Treatment after a Heart Attack							
HAN		24.9%	24.9%	29.1%	0.5461	0.1472	0.6269
Comparison Group		26.9%	29.9%	27.5%	No	No	No

HEALTH ACCESS NETWORKS HEDIS Measure	Percent Compliant			P-Value/Statistical Significance (p < .05)		
	2016	2017	2018	2016	2017	2018
CAD - Cholesterol Management - LDL-C Test						
HAN	64.5%	64.9%	66.6%	0.2623	0.8106	0.4341
Comparison Group	68.5%	65.8%	69.3%	No	No	No
COPD - Use of Spirometry Testing						
HAN	22.8%	26.3%	27.6%	0.0275	0.0482	1.0000
Comparison Group	32.0%	35.6%	27.6%	Yes	Yes	No
COPD - Pharmacotherapy Management of Exacerbation - 14 days						
HAN	33.3%	34.8%	33.9%	0.7133	0.2225	0.6315
Comparison Group	32.3%	31.6%	35.1%	No	No	No
COPD - Pharmacotherapy Management of Exacerbation - 30 days						
HAN	52.2%	53.7%	55.8%	0.8179	0.7012	0.1151
Comparison Group	52.8%	52.6%	51.8%	No	No	No
Diabetes - Members who had LDL-C Test						
HAN	63.9%	62.9%	61.4%	0.1982	0.6330	0.5764
Comparison Group	59.2%	64.4%	59.6%	No	No	No
Diabetes - Retinal Eye Exam						
HAN	30.4%	27.6%	29.7%	0.8097	0.7120	0.4598
Comparison Group	29.6%	26.6%	32.0%	No	No	No
Diabetes - HbA1c Testing						
HAN	77.2%	74.7%	76.6%	0.7938	0.4910	0.8098
Comparison Group	76.4%	76.8%	75.9%	No	No	No
Diabetes - Medical Attention for Nephropathy						
HAN	78.8%	77.8%	84.8%	0.3560	1.0000	0.1463
Comparison Group	81.5%	77.8%	81.1%	No	No	No
Diabetes - ACE/ARB Therapy						
HAN	59.1%	56.3%	57.5%	0.0011	0.0845	0.0037
Comparison Group	54.5%	53.9%	53.3%	Yes	No	Yes

HEALTH ACCESS NETWORKS HEDIS Measure	Percent Compliant			P-Value/Statistical Significance (p < .05)		
	2016	2017	2018	2016	2017	2018
Hypertension - LDL-C Test						
HAN	52.5%	54.6%	55.7%	0.3969	0.0685	0.0282
Comparison Group	53.4%	52.9%	53.8%	No	No	Yes
Hypertension - ACE/ARB Therapy						
HAN	53.9%	53.9%	54.4%	0.2639	0.0746	0.0042
Comparison Group	52.8%	52.6%	51.9%	No	No	Yes
Hypertension - Diuretics						
HAN	41.1%	40.5%	39.1%	0.1316	0.0994	0.3248
Comparison Group	39.7%	39.0%	38.3%	No	No	No
Hypertension - ACE/ARB Therapy or Diuretics with Monitoring						
HAN	87.9%	87.4%	88.2%	0.0100	0.0203	0.0487
Comparison Group	85.0%	85.0%	86.3%	Yes	Yes	Yes
Mental Health - Follow-up after Hospitalization - 7 days - 6 to 20						
HAN	55.4%	58.0%	54.7%	0.0199	0.3898	0.1473
Comparison Group	45.4%	54.9%	59.6%	Yes	No	No
Mental Health - Follow-up after Hospitalization - 7 days - 21 and older						
HAN	69.4%	60.7%	63.3%	0.0088	0.3454	0.5407
Comparison Group	38.9%	51.8%	57.1%	Yes	No	No
Mental Health - Follow-up after Hospitalization - 30 days - 6 to 20						
HAN	89.2%	85.1%	82.2%	0.3554	0.9209	0.0011
Comparison Group	86.6%	84.8%	90.0%	No	No	Yes
Mental Health - Follow-up after Hospitalization - 30 days - 21 and older						
HAN	88.9%	85.7%	85.7%	0.0433	0.6107	0.7818
Comparison Group	69.4%	82.1%	83.7%	Yes	No	No
Emergency Room Visits (per 1,000 member months)						
HAN	62.2	61.9	60.0	<.0001	0.0113	0.0436
Comparison Group	67.4	63.5	61.1	Yes	Yes	Yes

HEALTH ACCESS NETWORKS		Percent Compliant			P-Value/Statistical Significance (p < .05)		
HEDIS Measure		2016	2017	2018	2016	2017	2018
Hospital Admissions (per 100,000 member months)							
HAN		732.6	785.0	811.2	0.0341	0.0001	0.2670
Comparison Group		770.8	692.7	784.1	Yes	Yes	No
Per Member Per Month Expenditures							
HAN		\$ 217.33	\$ 220.97	\$ 226.69	0.4307	0.0001	<.0001
Comparison Group		\$ 215.40	\$ 202.69	\$ 214.98	No	Yes	Yes

Appendix 2 – HEDIS/Utilization/Expenditure Measures – HMP versus Comparison Group

HEALTH MANAGEMENT PROGRAM		Percent Compliant			P-Value/Statistical Significance (p < .05)		
HEDIS Measure		2016	2017	2018	2016	2017	2018
Child and Adolescents' Access to PCP - 12 months to 19 years							
	HMP	99.8%	98.9%	98.4%	<.0001	0.0307	<.0001
	Comparison Group	95.4%	92.1%	91.3%	Yes	Yes	Yes
Adults' Access to Preventive/Ambulatory Health Services							
	HMP	99.9%	99.5%	97.8%	<.0001	<.0001	<.0001
	Comparison Group	96.0%	95.9%	89.2%	Yes	Yes	Yes
Asthma - Medication Ratio - 5 to 18 years							
	HMP	73.1%	76.5%	82.9%	0.5510	1.0000	0.1377
	Comparison Group	77.6%	76.5%	94.3%	No	No	No
Asthma - Medication Ratio - 19 to 64 years							
	HMP	70.4%	76.1%	72.3%	0.2305	0.1778	0.8306
	Comparison Group	59.3%	63.0%	74.5%	No	No	No
Asthma - Medication Management - 75 percent							
	HMP	32.2%	33.3%	45.6%	0.0839	0.4415	0.0672
	Comparison Group	22.3%	27.0%	32.2%	No	No	No
CAD - Persistent Beta-Blocker Treatment after a Heart Attack							
	HMP	28.5%	28.0%	28.4%	0.6076	0.5045	0.4460
	Comparison Group	26.8%	30.3%	30.8%	No	No	No
CAD - Cholesterol Management - LDL-C Test							
	HMP	68.8%	73.5%	70.1%	0.3696	0.0068	0.0639
	Comparison Group	65.6%	64.0%	64.1%	No	Yes	No
COPD - Use of Spirometry Testing							
	HMP	31.0%	28.7%	25.6%	0.0465	0.8049	0.7816
	Comparison Group	21.9%	29.9%	27.1%	Yes	No	No
COPD - Pharmacotherapy Management of Exacerbation - 14 days							
	HMP	35.6%	36.9%	38.3%	0.1245	0.1880	0.7979
	Comparison Group	30.6%	32.9%	37.5%	No	No	No

HEALTH MANAGEMENT PROGRAM HEDIS Measure	Percent Compliant			P-Value/Statistical Significance (p < .05)		
	2016	2017	2018	2016	2017	2018
COPD - Pharmacotherapy Management of Exacerbation - 30 days						
HMP	52.5%	59.0%	54.2%	0.4911	0.0138	0.3506
Comparison Group	50.1%	51.3%	51.3%	No	Yes	No
Diabetes - Members who had LDL-C Test						
HMP	60.5%	76.0%	65.5%	0.4715	0.1183	0.0685
Comparison Group	64.0%	66.9%	57.2%	No	No	No
Diabetes - Retinal Eye Exam						
HMP	32.5%	35.5%	32.8%	0.1538	0.0691	0.6164
Comparison Group	26.0%	24.8%	30.6%	No	No	No
Diabetes - HbA1c Testing						
HMP	76.5%	82.6%	83.0%	1.0000	0.1573	0.0227
Comparison Group	76.5%	75.2%	74.2%	No	No	Yes
Diabetes - Medical Attention for Nephropathy						
HMP	82.5%	85.1%	86.0%	1.0000	0.4908	0.0822
Comparison Group	82.5%	81.8%	79.9%	No	No	No
Diabetes - ACE/ARB Therapy						
HMP	62.8%	62.5%	63.7%	0.0785	0.0021	0.0382
Comparison Group	59.8%	57.2%	59.8%	No	Yes	Yes
Hypertension - LDL-C Test						
HMP	62.6%	65.9%	65.8%	<.0001	<.0001	<.0001
Comparison Group	56.1%	56.6%	57.5%	Yes	Yes	Yes
Hypertension - ACE/ARB Therapy						
HMP	62.3%	62.2%	63.3%	<.0001	<.0001	<.0001
Comparison Group	57.1%	57.4%	56.9%	Yes	Yes	Yes
Hypertension - Diuretics						
HMP	45.7%	46.8%	46.1%	0.0002	<.0001	<.0001
Comparison Group	40.9%	41.0%	39.8%	Yes	Yes	Yes

HEALTH MANAGEMENT PROGRAM HEDIS Measure	Percent Compliant			P-Value/Statistical Significance (p < .05)		
	2016	2017	2018	2016	2017	2018
Hypertension - ACE/ARB Therapy or Diuretics with Monitoring						
HMP	87.2%	88.6%	88.5%	0.7749	0.0074	0.3620
Comparison Group	86.8%	85.2%	87.4%	No	Yes	No
Mental Health - Follow-up after Hospitalization - 7 days - 6 to 20						
HMP	60.0%	N/A	50.0%	0.5796	N/A	0.5374
Comparison Group	40.0%	N/A	75.0%	No	N/A	No
Mental Health - Follow-up after Hospitalization - 7 days - 21 and older						
HMP	53.8%	70.0%	83.3%	0.7054	0.6601	1.0000
Comparison Group	61.5%	60.0%	83.3%	No	No	No
Mental Health - Follow-up after Hospitalization - 30 days - 6 to 20						
HMP	80.0%	N/A	75.0%	0.3739	N/A	0.3910
Comparison Group	100.0%	N/A	100.0%	No	N/A	No
Mental Health - Follow-up after Hospitalization - 30 days - 21 and older						
HMP	84.6%	100.0%	100.0%	0.5585	0.0811	0.1661
Comparison Group	92.3%	70.0%	83.3%	No	No	No
Opioid - Use of Opioids at High Dosage						
HMP	18.1%	16.2%	14.1%	0.3363	0.8987	0.3705
Comparison Group	19.2%	16.0%	15.2%	No	No	No
Opioid - Concurrent Use of Opioids and Benzodiazepines						
HMP	28.9%	27.5%	21.7%	0.9736	0.3071	0.2184
Comparison Group	28.9%	26.1%	20.0%	No	No	No
Emergency Room Visits (per 1,000 member months)						
HMP	275.9	301.3	279.7	0.6410	0.0280	0.7098
Comparison Group	268.1	261.9	286.4	No	Yes	No
Hospital Admissions (per 100,000 member months)						
HMP	7872.4	7629.8	8481.4	0.5868	0.0661	0.4846
Comparison Group	7568.8	6656.0	7924.3	No	No	No

HEALTH MANAGEMENT PROGRAM HEDIS Measure	Percent Compliant			P-Value/Statistical Significance (p < .05)		
	2016	2017	2018	2016	2017	2018
Hospital Readmission Rate						
HMP	10.4%	10.1%	12.0%	0.2294	0.0781	0.2839
Comparison Group	11.7%	8.3%	10.7%	No	No	No
Per Member Per Month Expenditures						
HMP	\$ 1,304.14	\$ 1,398.51	\$ 1,634.74	0.0117	0.7785	0.3138
Comparison Group	\$ 1,443.77	\$ 1,416.51	\$ 1,722.41	Yes	No	No

Appendix 3 – CAHPS Measures

CAHPS Measure	Adults					Children				
	HAN (N = 43)	Non-HAN (N = 431)	Difference (HAN- Non-HAN)	P-Value	Statistically Significant (95%)	HAN (N = 124)	Non-HAN (N = 295)	Difference (HAN- Non-HAN)	P-Value	Statistically Significant (95%)
Getting Needed Care (Composite)										
1 Always	52%	53%	-1%	0.9004	No	57%	54%	3%	0.5737	No
2 Usually	31%	31%	0%	1.0000	No	32%	34%	-1%	0.6923	No
3 Sometimes	12%	12%	1%	1.0000	No	9%	10%	-1%	0.7526	No
4 Never	4%	4%	0%	1.0000	No	2%	2%	0%	1.0000	No
Total	100%	100%				100%	100%			
<i>Positive (1 + 2)</i>	83%	84%	-1%	0.8650	No	89%	87%	1%	0.5713	No
Rating of Health Care										
8 - 10	67%	74%	-6%	0.3226	No	95%	84%	11%	0.0021	Yes
5 - 7	30%	20%	11%	0.1245	No	5%	15%	-10%	0.0041	No
0 - 4	3%	7%	-4%	0.3155	No	0%	1%	-1%	0.2644	No
Total	100%	100%				100%	100%			
Mean	8.15	8.24	(0.09)	0.5739	No	8.89	8.75	0.14	0.1903	No
Rating of Health Plan										
8 - 10	63%	70%	-8%	0.3429	No	90%	83%	7%	0.0668	No
5 - 7	35%	24%	11%	0.1126	No	10%	16%	-6%	0.1089	No
0 - 4	3%	6%	-3%	0.4200	No	0%	1%	-1%	0.2644	No
Total	100%	100%				100%	100%			
Mean	8.13	8.21	(0.08)	0.6171	No	9.05	8.74	0.31	0.0039	Yes
Rating of Personal Doctor										
8 - 10	78%	82%	-4%	0.5187	No	86%	86%	0%	1.0000	No
5 - 7	20%	13%	7%	0.2026	No	9%	12%	-3%	0.3730	No
0 - 4	3%	5%	-2%	0.5597	No	4%	2%	2%	0.2401	No
Total	100%	100%				100%	100%			
Mean	8.52	8.73	(0.21)	0.1898	No	8.95	9.02	(0.07)	0.5122	No