

OKLAHOMA EMERGENCY DEPARTMENT UTILIZATION

ISSUE BRIEF
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Government Human Services Consulting

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Introduction and Background

The Oklahoma Health Care Authority (OHCA) contracted with Mercer Government Human Services Consulting (Mercer), a part of Mercer Health & Benefits LLC, to analyze one of the key drivers of health care cost, emergency department (ED) utilization. EDs have become the front door to health care for many Americans, and often, ED visits are for non-urgent — and even routine — health care problems. The costs of these low-acuity ED visits can be more than triple the cost of treatment in a primary or urgent care setting. Nationally the estimates of waste in the health care system related to unnecessary ED visits totaled approximately \$14 billion in 2010, not including replacement costs had services been delivered in a more appropriate setting. However, to put spending for ED visits in perspective, the Medicaid and Children’s Health Insurance Program (CHIP) Payment and Access Commission (MACPAC) estimated that spending on ED visits represented only about 4% of the overall Medicaid spend in 2011.¹ In Oklahoma’s SoonerCare program ED services accounted for approximately \$198 million from July 2012 through December 2013, less than 2% of the State’s total Medicaid spend. So, why the significant interest in ED utilization?

State legislatures, Medicaid program directors, hospitals and other stakeholders are keenly interested in avoidable ED visits because they are often representative of other challenges in the health care delivery system. As noted in the landmark 2001 report by the Institute of Medicine, *Crossing the Quality Chasm*², health care should be safe, timely, efficient, equitable, effective and patient centered. In many ways “inappropriate” ED utilization has become the “face” for what is wrong with the health care system: mainly that it represents a fragmented delivery model that is problem focused and volume driven with little concern for quality and value. It has been and continues to be OHCA’s mission “...to responsibly purchase state and federally funded health care in the most efficient and comprehensive manner possible; and to analyze and recommend strategies for optimizing the accessibility and quality of health care; and to cultivate relationships to improve the health outcomes of Oklahomans”. To that end the OHCA is seeking to fully understand a critical component of their SoonerCare program expense. They are committed to engaging data analytic models to quantify the issues, identify drivers, implement refinements to existing initiatives, identify new strategies to more appropriately manage inappropriate ED utilization, and to develop member-centric, coordinated, efficient and effective systems of care for the most vulnerable Oklahomans.

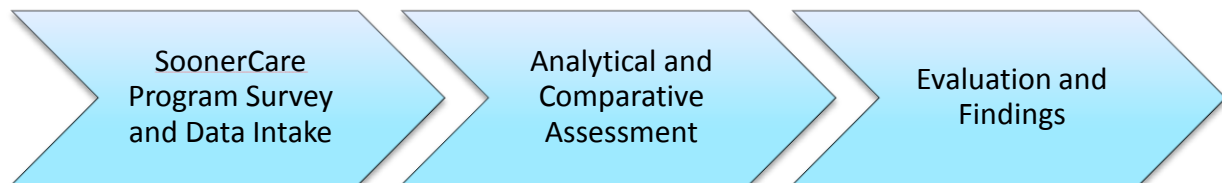
¹ MACFacts, “Revisiting Emergency Department Use in Medicaid”, July 2014, https://www.macpac.gov/wp-content/uploads/2015/01/MACFacts-EDuse_2014-07.pdf last accessed 07-29-15.

² Institute of Medicine, “Crossing the Quality Chasm,” March 1, 2001, available at <https://iom.nationalacademies.org/Reports/2001/Crossing-the-Quality-Chasm-A-New-Health-System-for-the-21st-Century.aspx> accessed 29 July 2015.

Approach

Mercer used the following systematic approach to conduct the analysis and provide a comprehensive picture of ED utilization, and to identify successful approaches used by other states to manage “inappropriate” ED utilization. The timeframe for this study, as indicated below in Exhibit 1, encompassed the eighteen-month period starting July 1, 2012 and ending December 31, 2013.

Exhibit 1: Timeframe for ED Utilization Study, July 1, 2012–December 31, 2013



Study Limitations

There were data issues that prevented certain proposed data analyses. In part, some of the data issues were related to the historical nature of the review period such as information pertaining to the tracking of a member’s enrollment in a particular population health management program or engagement in multiple programs over the course of the study period. Thus, Mercer was not able to draw conclusions about the effectiveness of one type of ED intervention over another or the efficacy on one population health management program over another. There was also difficulty in mapping and assigning members to patient-centered medical home (PCMH) providers versus health access network (HAN) providers and the impact of members switching between different providers during the study period. This prevented analysis of the effectiveness of PCMH versus HAN providers in decreasing “inappropriate” ED utilization. It was also difficult to perform analyses on the times of day in which ED visits occurred as the claims did not routinely contain time of admission. For the topics that Mercer was not able to analyze both the OHCA and Mercer have agreed to continue to work towards data enhancement processes in an effort to more fully evaluate these particular areas of the evaluation during subsequent data analysis periods.

Oklahoma Medicaid Program

Since its inception under legislative mandate in 1993, the OHCA has sought to improve access to and decrease costs of the State’s Medicaid program, known as SoonerCare. In the past twenty-two years, the SoonerCare program has expanded and matured to provide statewide coverage through a wide variety of health care benefits and innovative programs to a diverse population of adults and children, often considered to be the most vulnerable citizens in the State. To accomplish its goal, the OHCA utilizes two different health care delivery models and a variety of smaller programs and several initiatives through which it administers the various benefit packages.

Delivery Models

SoonerCare Traditional

In this “traditional” fee-for-service (FFS) payment model SoonerCare Traditional enrollees receive a comprehensive medical benefit plan and can access services from contracted SoonerCare providers; enrollees are not required to select a primary care provider (PCP). In turn, the OHCA pays the provider on a FFS basis according to a predetermined fee schedule. SoonerCare Traditional provides coverage for members who are institutionalized, in state or tribal custody,

covered under a commercial health maintenance organization (HMO), enrolled under one of the Home and Community-Based Services (HCBS) waivers or that are dually eligible for Medicaid and Medicare services.

SoonerCare Choice

Unlike the “traditional” FFS model, SoonerCare Choice provides a type of managed care option typically referred to as “enhanced” Primary Care Case Management (PCCM), more commonly known as the patient-centered medical home (PCMH) model. The PCMH model is centered on enrollees selecting a PCP who is responsible for providing a medical home for the member. Medical home providers are expected to engage members in care through proactive outreach, delivery of care coordination services and/or linking them to community programs and services in an effort to assist the member in navigating the health care system. The OHCA contracts directly with PCPs throughout the state to provide medical home/care coordination services and in turn the PCPs receive a monthly care coordination payment. Monthly payments vary depending on the level of medical home/care coordination services provided and the mix of adults and children the PCP’s practice accepts. Additionally, PCPs may be eligible to receive performance incentive payments after certain quality improvement goals, as defined under the Sooner Excel program, are met. Similar to the traditional FFS model all other services are reimbursed on a fee-for-service basis.

Other SoonerCare Programs

OHCA operates a number of other programs that offer either limited benefits or premium assistance to qualifying individuals including those who are currently receiving home and community based services. The majority of individuals who demonstrated eligibility in one of the programs below were attributed to the SoonerCare Traditional bucket for the purposes of this analysis.

- *Sooner Plan (family planning services and contraceptive products).*
- *Soon-to-be-Sooners (pregnancy-related medical services).*
- *SoonerCare Supplemental (dual eligibles).*
- *Insure Oklahoma Employer-Sponsored Insurance (ESI) (premium assistance for small businesses).*
- *Insure Oklahoma Individual Plan (basic health services for uninsured adults).*

SoonerCare Initiatives

While the SoonerCare Choice program has undergone significant evolution since its early years, the program’s overarching goals have remained constant: to provide accessible, high quality and cost effective care to the SoonerCare population. To this end, over the past seven years, the OHCA has consistently looked for opportunities to implement innovative initiatives to continue movement toward goal attainment. The OHCA’s activities can be classified into two categories: population care management and PCP practice transformation. The work accomplished under each of these initiatives serve many purposes including engagement of SoonerCare enrollees to be more active in making decisions about where to receive their health care, as well as developing self-management skills to support each individual’s ongoing effort to manage their chronic conditions — all of which can serve to manage ED utilization.

Population Care Management

Case Management

The case management unit focuses on the episodic health care needs of several groups including the following:

- Obstetric case management for at-risk or high-risk maternity events including targeting interventions at specific counties with high infant mortality rates.
- Pediatric case management for high-risk newborns and at-risk children who may be medically complex and require ongoing private duty nursing.
- Other programs such as coordination of out-of-state services, support services for individuals undergoing breast or cervical cancer treatment, clinical reviews of individuals enrolled in a long-term care waiver, medically complex adults and individuals who have a history of consistent ED usage.

The Health Management Program and the Chronic Care Unit

These two programs are similar in nature but provide differing levels of engagement to targeted members. The Chronic Care Unit provides telephonic based support to identified members and the Health Management Program (HMP) supports the primary care practice transformation efforts through synergistic activities such as embedding health coaches and practice facilitators in larger volume primary care practices.

As part of the ED analysis, the OHCA requested evaluation of ED utilization outcomes between these two programs. Unfortunately existing member eligibility and program specific enrollment data did not support the necessary linking of members to each program during the study period.

Delivery System Initiatives

Much of health services research focuses on ED utilization and hypothesizes that individuals use the ED for low-acuity non-emergent conditions because access to their primary care provider and/or availability of timely appointments is severely limited. In part this is due to the fact that primary care has moved away from a health and wellness model to a more volume driven, reactive, acute episodic based care delivery system. Due to a number of factors, over the past several years, efforts to re-invigorate or “transform” primary care have surfaced. More importantly, these efforts have shown early positive returns in their attempts to align payment with quality outcomes and to place the member back at the center of care. In fact, recent research indicates that medical home models can curb “inappropriate” ED utilization between 5-8%.³

Patient Centered Medical Home

The OHCA introduced their PCMH model in 2009. In this model, members are aligned with a primary care provider who is responsible for meeting strict access and quality of care standards. PCMH providers are arrayed into three levels, or tiers, depending on the number of standards they are required to meet. The OHCA pays monthly care management fees (in addition to regular fee-for-service payments) based on the tier achieved (higher reimbursement rates for higher tiers).

Health Access Network

In 2010, the OHCA expanded upon their PCMH model by contracting with three health access network (HAN) provider systems. The HANs are community-based, integrated networks intended to advance program access, quality and cost-effectiveness goals by offering greater care coordination support to affiliated PCMH providers.

³ Health Services Research. 2015 Apr;50(2):418-39. doi: 10.1111/1475-6773.12218. Epub 2014 Aug 12. Do patient-centered medical homes reduce emergency department visits?, David G1, Gunnarsson C, Saynisch PA, Chawla R, Nigam S. last accessed August 7, 2015.

Understanding the Issue

According to federal law, EDs are required to evaluate and treat all patients with emergency conditions regardless of their ability to pay. Additionally, EDs must be staffed, equipped and ready to treat all types of patients with all types of conditions 24 hours a day, 7 days of the week, and 365 days of the year. According to the National Hospital Association, ED visits increased an unprecedented 44% from 88.5 million in 1991 to 127.2 million in 2010. However, during the same period, EDs closed at a rate of almost eleven percent. These figures underscore the strain that many EDs face and highlight the importance of ensuring that precious ED resources are used in the most efficient and effective manner.

EDs were originally designed to treat the most critically ill and injured patients, as well as to act as a safety net during public health emergencies such as catastrophic events, epidemic outbreaks, and even terrorist attacks. “Inappropriate” ED utilization can negatively impact hospital resources, including long term financial viability, it can contribute to fragmented care, and it can cost insurance health programs significantly more than if the same type of care were delivered in an alternative setting. A 2010 RAND Corporation study indicated that between 14% and 27% of all ED visits for non-urgent reasons could take place in an alternate location, resulting in potential cost savings of \$4.4 billion annually.⁴

There is no lack of health services research on the topic of ED usage and many of the papers and journal articles provide conflicting and inconsistent messages. Over the years, many myths have developed regarding ED utilization in general and Medicaid enrollee ED utilization in particular. In fact, these myths have become so pervasive the Medicaid and Children’s Health Insurance Program (CHIP) Payment and Access Commission (MACPAC) issued a MACfacts document in June of 2014 specifically to debunk myths regarding Medicaid ED utilization.^{1 above} However, even in this briefing document, it is clear that in part incorrect beliefs about ED utilization are fueled by a shortage of consistent terminology, and methodological approaches in which to study “inappropriate” and/or avoidable/preventable ED usage.

To address this issue, the OHCA requested that Mercer assist in the development of a standardized definition in which the OHCA could consistently identify and quantify the component of ED utilization typically referred to in terms such as “avoidable”, “preventable” and “inappropriate”. It is important to understand that not all ED utilization is preventable or “inappropriate”. In fact, most of it is legitimate and necessary. However, it is important to parse ED utilization in order to identify the potential drivers that cause unnecessary utilization and to develop programs and interventions to curtail this type of utilization.

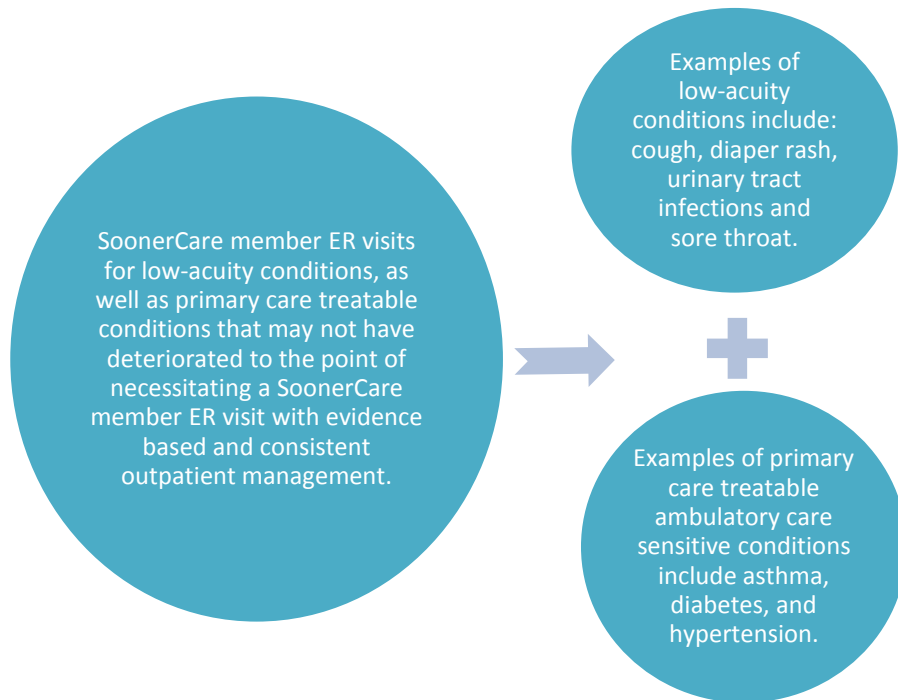
OHCA Definition Development

Mercer was asked to help the OHCA document a definition of “inappropriate” ED utilization and identify how the definition may differ from the provider’s perspective. Mercer’s approach to this task included conducting telephonic interviews with various stakeholders including OHCA staff members, community primary care physicians, hospital representatives, and ED physicians. Mercer also drew on our experience working with other state Medicaid programs to help inform the development of terminology that could be used to define a subset of ED visits that are typically referenced by terms such as “inappropriate”, “unnecessary”, “avoidable” and/or “preventable”.

⁴ Rand Health Corporation. *The Evolving Role of Emergency Departments in the United States* (2013).

Throughout the remainder of this issue brief, ED utilization that is often referred to as “inappropriate”, “unnecessary”, “avoidable” or “preventable” will be referred to as primary care treatable and/or low-acuity non-emergent (PCT/LANE). Primary care treatable and low-acuity non-emergent (PCT/LANE) can be defined as those ED visits by SoonerCare members for low-acuity conditions, as well as primary care treatable conditions that, with evidence based and consistent outpatient management may not have deteriorated to the point of necessitating a SoonerCare member ER visit. The definition that was developed, along with examples of low-acuity and primary care treatable conditions are presented in Exhibit 2.

Exhibit 2: Primary Care Treatable/Low-Acuity — Non-Emergent (PCT/LANE) Definition and Examples of Conditions



Methodology and Analysis

The OHCA shared member eligibility and provider and member claims data files with Mercer. For the statistical analysis, the eligibility file was augmented by member information from the various populations in SoonerCare, including SoonerCare Choice, OHCA's health management program (HMP) and their various health access networks (HANs). Also added to the eligibility file were distance measures generated by the geospatial analysis: distance from the member's address in the eligibility file to the closest primary care provider (PCP) and hospital, and, as well as to the member's chosen PCP (if available for non-SoonerCare Choice members).

The OHCA eligibility system allows member assignment in multiple aid categories in one month. To streamline the analysis, a hierarchy was provided by the OHCA to assign one aid category for each month of eligibility. For each month of eligibility with a patient-centered medical home (PCMH) selection, a member was categorized as SoonerCare Choice; otherwise the member was categorized as SoonerCare Traditional. A member was also assigned to the HMP for the entire study period (July 1, 2012 to December 31, 2013) if the member had at least two consecutive months of enrollment in the HMP program.

From the member claims files, emergency (ED) visits were counted per member, and paid claims were summed to calculate total visit cost and ED per member per month (PMPM) dollars paid during the study period. The primary diagnosis code for each ED visit was captured from the member claims file. The distance to the visited hospital was also added by the geospatial analysis to the member claims file. Members with more than six ED visits in the eighteen month study period were categorized as "frequent ED users".

Given that a member could change membership in SoonerCare programs during the study period, each member was placed into a single combination of the eligibility fields based on the latest program in which they were enrolled during the last month of eligibility or the end of the study period. For example, if a member was in SoonerCare Traditional for eight months, but SoonerCare Choice for three months, including the last month of the study period, the member was categorized as a SoonerCare Choice member for purposes of statistical analysis. Changes in status follow:

- 29.5% of members moved between SoonerCare Choice and SoonerCare Traditional.
- 4.8% of members had a change in aid category (Temporary Assistance for Needy Families (TANF), Aged, Blind, or Disabled (ABD), Breast and Cervical Cancer (BCC), etc.).
- Out of 192,060 members who were enrolled in a HAN for any month during the study period, 108,425 (56.6%) had a change in status during the study period.

Movement between programs, changes in health management programs and health access networks during the study period affect how the statistics that follow can be interpreted.

Statistical Analyses

Mercer conducted descriptive, univariate and multivariate statistical analyses. As a first step in our analysis, Mercer conducted descriptive statistical analyses. Data were summarized for the entire SoonerCare population, SoonerCare Choice, SoonerCare Traditional and members with at least

one emergency department (ED) visit during the study period. ED utilization rates per 1,000 member months were calculated as the number of ED visits divided by the number of member months, multiplied by 1,000. Complete tables of our statistical analyses are presented in the comprehensive report.

It is important at this point to note limitations in our analysis. The first is that crossover claims (claims for members who are dually eligible for Medicare and Medicaid) were not available. Because Medicaid is the payer of last resort, there may be ED visits by a portion of the population for which claims data were not analyzed. Second, incomplete data for day and time of ED visit made analysis based on these variables unreliable. Finally, analysis of ED utilization, relative cost and return on investment by initiative is limited due to the movement between the OHCA population health management programs noted above.

SoonerCare Medicaid Population Demographics

Nearly 60% of the Oklahoma Medicaid in the study population was under the age of 21, the majority were female and Caucasian. Just over 50% of Medicaid members lived in urban areas. Almost 70% were part of the Temporary Assistance to Needy Families (TANF) aid category. Twelve percent of the study population was dually eligible (eligible for Medicaid and Medicare) and just over 5% were pregnant. More than 82% of the Medicaid members were living within ten miles of a hospital and 94% were living within ten miles of the closest PCP.

More than 65% of the overall Medicaid population had zero ED visits during the eighteen month study period and 82.6% of members had fewer than two ED visits during the study period. The balance, 17.4% of the population, had two or more ED visits, and 2.5% had six or more ED visits.

More than 61% of the Oklahoma Medicaid population was part of the SoonerCare Choice managed care program.

Nearly 39% of the Oklahoma Medicaid population was part of the SoonerCare Traditional program. For purposes of analysis, this group was made up of all Oklahoma SoonerCare members who were not part of SoonerCare Choice. Complete tables of statistical analyses are presented in the comprehensive report.⁵

ED utilization Descriptive Analyses

Various statistical analyses were conducted to study the relationship between member demographics and ED utilization. Overall, members with higher rates of ED utilization were female, infants or those over 21 years of age. As could be anticipated, those in the aged, blind or disabled (ABD) aid category had far higher ED utilization rates than any other aid category and those dually eligible for Medicare and Medicaid had higher utilization than those that are not dually eligible for Medicare and Medicaid. ED utilization for members with a chosen primary care provider (PCP) (a selection made by SoonerCare Choice members only) within five miles of their home was lower than for those with a chosen PCP greater than five miles away.

Two findings that warrant additional discussion are that SoonerCare Choice members had higher ED utilization rates (68.1 per 1,000 member months) than SoonerCare Traditional members (55.5

⁵ All tables of statistical analyses can be found in the Mercer report, Oklahoma Emergency Department Utilization, November 22, 2015, Appendix B.

per 1,000 member months) and health management program (HMP) members had higher ED utilization rates (169.3 per 1,000 member months) than non-HMP members (62.5). While initially these findings seem counter to the intent and effort of the programs, there are two key details to keep in mind. First, as noted in the data limitations, crossover claims for those members who are dually eligible for Medicare and Medicaid were not available; this limits overall comparative analysis. Second, there must be recognition of the overall health and probable multiple chronic conditions of the members who make up these populations; the analysis focused on primary diagnosis of the ED visit exclusively. This consideration of overall member health should be carried throughout the remainder of this issue brief.

After the initial descriptive analyses were completed, additional analyses were conducted with those members considered frequent ED utilizers (those with 6+ ED visits between July 1, 2012 and December 31, 2013). The majority of the results mirrored those in the descriptive analysis, meaning the population of frequent ED utilizers is similar to the overall population of ED utilizers.

Additional analyses were completed to explore the relationship between frequent ED utilization and eighteen months of continuous enrollment in Medicaid. Two factors that became statistically significant when controlling for continuous enrollment were being a SoonerCare Choice member and taking part in a health access network (HAN). As the analysis continued, and comparisons between combinations of programs and demographic factors were analyzed the following key findings were identified:

- While SoonerCare Choice members overall were more likely to be frequent ED utilizers, this was not the case if the member's chosen PCP was within five miles of their home and the member was not part of OHCA's HMP or a HAN.
- SoonerCare Choice members in a HAN only and without a chosen PCP within five miles of their home were more likely to be frequent ED utilizers.

Program comparisons were conducted on the basis of ED per member per month (PMPM) dollars spent. Within SoonerCare Traditional, non-Part A Medicare members have a \$20 higher PMPM cost. All SoonerCare Choice program combinations have a higher PMPM cost than Traditional members. However, members in a HAN and/or members with a chosen PCP closer than five miles show the smallest PMPM cost differences with Traditional non-Part A Medicare members.

Within SoonerCare Choice, members who are in neither a HAN or OHCA's HMP, or are in a HAN only but do not have a chosen PCP within five miles, have a slightly higher PMPM cost than those in neither a HAN nor OHCA's HMP, or in a HAN only who have a chosen PCP within five miles. In summary, there is evidence that having a chosen PCP within five miles may provide some cost savings for a subset of the population. Complete tables of statistical analyses are presented in the comprehensive report.⁶

LANE Analysis

Mercer developed an analytical process specifically to identify and quantify the impact of low-acuity, non-emergent (LANE) emergency department (ED) usage. The LANE analysis provides a systematic and evidenced-based approach for evaluating trends and patterns of ED utilization. The analysis is underpinned by extensive health services research with additional input from an expert

⁶ All tables of statistical analyses can be found in the Mercer report, Oklahoma Emergency Department Utilization, November 22, 2015, Appendix B.

panel including ED physicians, state Medicaid chief medical officers, and other clinical providers with Medicaid and managed care organization (MCO) experience.

LANE visits are determined by diagnosis (ICD-9) and evaluation and management (E&M) codes. Mercer has identified 701 ICD-9 codes related to conditions that can be considered low-acuity and non-emergent that have the potential to be considered LANE conditions. E&M codes that are used for visits to the ED include 99281, 99282, 99283, 99284, and 99285. For purposes of Mercer’s LANE analysis, ED visits coded 99281, 99282 or 99283 (lower level of clinical complexity) are considered “potentially preventable”. Visits with an evaluation and management procedure code of 99284 or 99285 (higher level of clinical complexity) are not included in the analysis of ED visits considered “potentially preventable”. Visits with an E&M procedure code of 99284 or 99285 (higher level of clinical complexity) are not included in the analysis of ED visits considered “potentially preventable”. These conditions are of high severity, may pose an immediate significant threat to life or physiologic function and require urgent evaluation by the physician or other health care professional. Conditions meeting these criteria are not considered potentially preventable. The following is a description of LANE results grouped by SoonerCare Choice and SoonerCare Traditional populations. All tables and graphs prepared for the LANE analysis are presented in the comprehensive report.

Identification and Stratification of ED Visits

Mercer’s LANE analysis began with the identification of all ED visits within the study period. For this project, Mercer reviewed records of SoonerCare members’ ED visits between July 1, 2012 and December 31, 2013. In order to quantify the comprehensive cost of an ED visit, Mercer aggregated all claims for the same member at the same facility with the same date of service.

The total ED claims and total ED dollars for this 18 month study period are as follows (Exhibit 3):

Exhibit 3 Total ED Claims and Total ED Dollars

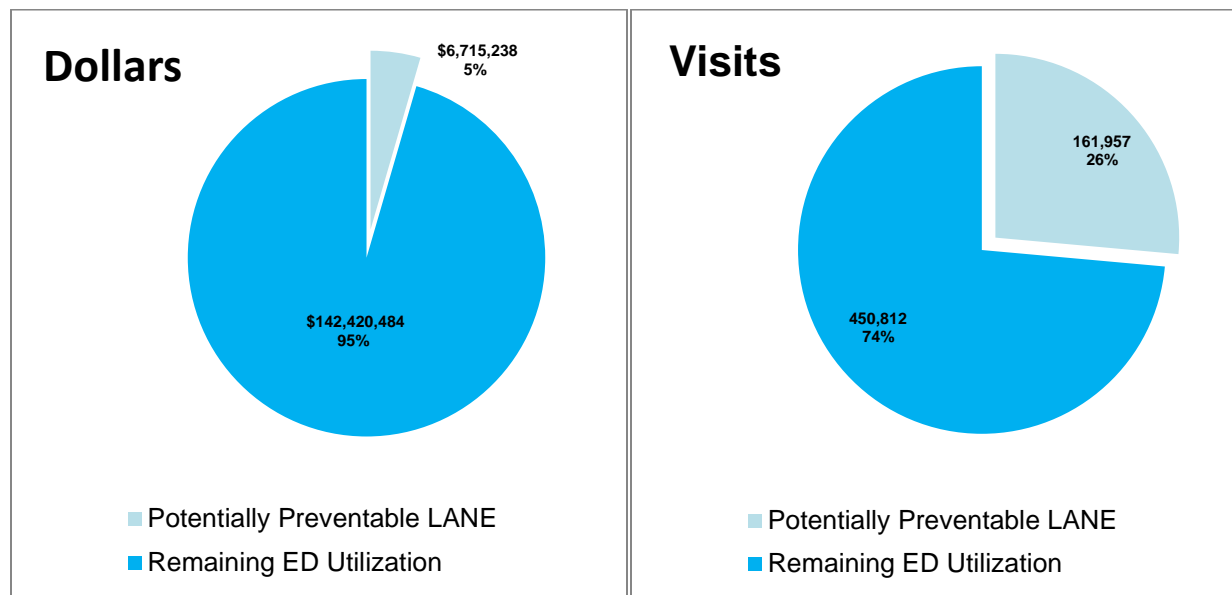
Program	Total ED Visits	Total ED Dollars
SoonerCare Choice	612,769	\$149,135,722
SoonerCare Traditional	319,490	\$ 49,306,934

After all ED visits were identified and claims for an individual visit were aggregated, the medical diagnoses available on the visit record were compared to Mercer’s list of LANE diagnoses. The LANE diagnoses were categorized as “low-acuity, non-emergent” based on the clinical severity of the condition that drove the member to the ED. Mercer reviewed all available diagnosis information for each ED claim and identified the subset of visits with a diagnosis on the list.

While many ED visits could have been avoided entirely, the final step of Mercer’s LANE analysis was to consider the costs of providing care in a more clinically appropriate and financially efficient setting. Mercer summarized the cost of physician office visits during the study period to quantify the cost of comparable visits to a primary care office, clinic, or specialist. The average cost per office visit for SoonerCare Traditional was \$54.41, and the average cost per office visit in SoonerCare Choice was \$93.09. The difference in average costs appeared to be based on underlying fees, rather than variation in the severity of cases. These unit costs were counted for each of the visits shown above as “potentially preventable”, which reduced the overall potential savings (Exhibit 4 and Exhibit 5).

Exhibit 4: SoonerCare Choice Low-Acuity Non-Emergent (LANE) Analysis Results

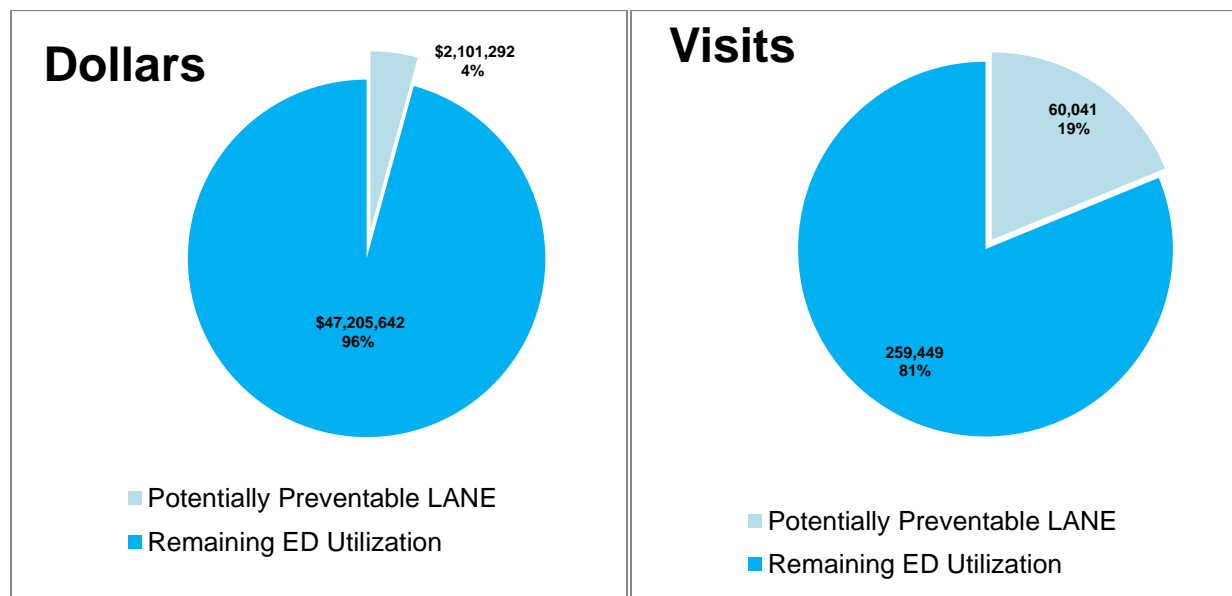
Source: Oklahoma Health Care Authority Medicaid Management Information System, July 2012–December 2013



1. All ED visits with a primary diagnosis on the list of 701 codes are identified as LANE. Mercer applies a specific percentage to each diagnosis code to adjust the LANE dollars and visits to the "Potentially Preventable LANE" subset of ED visits.

Exhibit 5: SoonerCare Traditional Low-Acuity Non-Emergent (LANE) Analysis Results

Source: Oklahoma Health Care Authority Medicaid Management Information System, July 2012–December 2013



1. All ED visits with a primary diagnosis on the list of 701 codes are identified as LANE. Mercer applies a specific percentage to each diagnosis code to adjust the LANE dollars and visits to the "Potentially Preventable LANE" subset of ED visits.

Mercer recognizes the significant challenges of influencing member behavior in a Medicaid population, as well as variation in clinical interpretations of the term “preventable”. As a result, each diagnosis in the LANE analysis is assigned a unique percentage which represents the portion of visits with that diagnosis code that could either be redirected to a more appropriate setting or

avoided entirely. These percentages are applied to the observed utilization by diagnosis code to quantify the “potentially preventable” ED utilization. Mercer also considers the input of the attending physician through the procedure code information attached to the claim. Cases that are indicated as having the highest level of medical complexity (99284 or 99285) are not considered “potentially preventable”. Based on the severity these conditions require urgent evaluation in an emergency department setting and are not considered low-acuity, non-emergent.

The SoonerCare ED utilization quantified by Mercer’s LANE algorithm as potentially preventable follows (Exhibit 6):

Exhibit 6: Potentially Preventable ED Visits and Potentially Preventable ED Dollars

	Total Potentially Preventable ED Visits	Total Potentially Preventable Visits as % of Total ED Visits	Total Potentially Preventable Dollars	Total Potentially Preventable Dollars as % of Total ED Dollars
SoonerCare Choice	161,957	26.4%	\$20,950,250	14.0%
SoonerCare Traditional	60,041	18.8%	\$ 5,173,759	10.5%

While many ED visits could have been avoided entirely, the final step of Mercer’s LANE analysis was to consider the costs of providing care in a more clinically appropriate and financially efficient setting. Mercer summarized the cost of provider office visits during the study period to quantify the cost of comparable visits to a primary care office, clinic, or specialist. The average cost per office visit for SoonerCare Traditional was \$54.41, and the average cost per office visit in SoonerCare Choice was \$93.09. The difference in average costs appeared to be based on underlying fees, rather than variation in the severity of cases. These unit costs were counted for each of the visits shown above as “potentially preventable”, which reduced the overall potential savings. For those individuals who incurred more than six LANE visits during the study period, Mercer only provided for six physician cost off-sets in the calculation.

The potentially preventable ED utilization after physician unit cost off-sets are as follows (Exhibit 7):

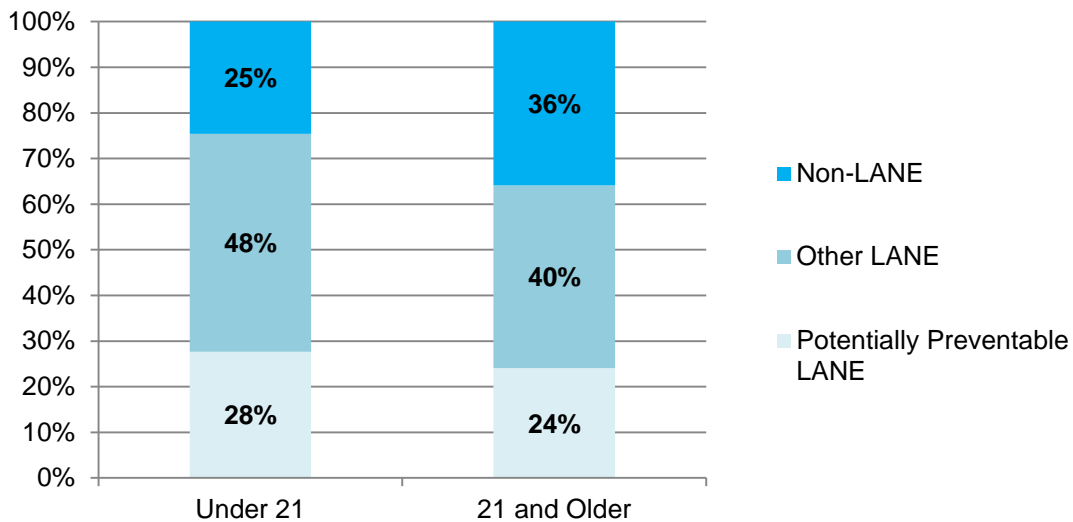
Exhibit 7: Net Potentially Preventable ED Utilization after Physician Cost Off-Sets

	Total Potentially Preventable Dollars	Net Potentially Preventable LANE Dollars	Total Equivalent Provider Office Costs	Net Potentially Preventable Percent of LANE Dollars
SoonerCare Choice	\$20,950,250	\$6,715,238	\$14,235,012	4.5%
SoonerCare Traditional	\$ 5,173,759	\$2,101,292	\$ 3,072,467	4.3%

Nearly 60% of the total Medicaid population in Oklahoma is under 21 years of age. In the SoonerCare Choice population under 21, the percentage is even higher at 79%. There are relatively few, 27%, under the age of 21 in the SoonerCare Traditional population. Although the percentage of the population under 21 in both SoonerCare plans varies significantly, about three-quarters of ED visits for members under 21 of both plans can be classified as low-acuity. This low-acuity non-emergent utilization is represented by the combination of the “Other LANE” and “Potentially Preventable LANE” in Exhibit 8 and Exhibit 9.

Exhibit 8: SoonerCare Choice Low-Acuity Non-Emergent (LANE) Visit Statistics by Age Group

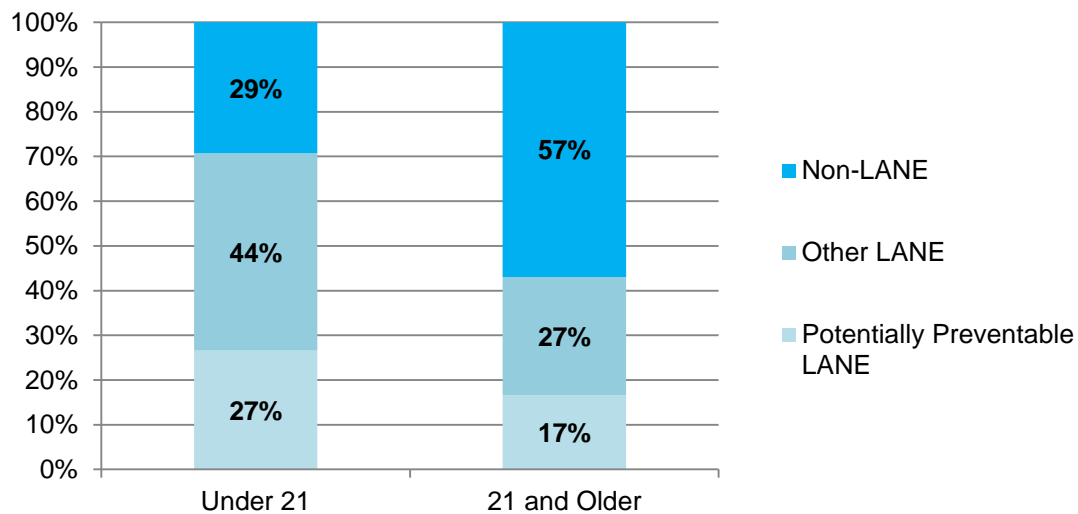
Source: Oklahoma Health Care Authority Medicaid Management Information System, July 2012–December 2013



1. All ED visits with a primary diagnosis on the list of 701 codes are identified as LANE. Mercer applies a specific percentage to each diagnosis code to adjust the LANE dollars and visits to the "Potentially Preventable LANE" subset of ED visits. The remaining visits, including all visits with CPT E&M codes 99284 and 99285, are considered "Other LANE".

Exhibit 9: SoonerCare Traditional Low-Acuity Non-Emergent (LANE) Visit Statistics by Age Group

Source: Oklahoma Health Care Authority Medicaid Management Information System, July 2012–December 2013



1. All ED visits with a primary diagnosis on the list of 701 codes are identified as LANE. Mercer applies a specific percentage to each diagnosis code to adjust the LANE dollars and visits to the "Potentially Preventable LANE" subset of ED visits. The remaining visits, including all visits with CPT E&M codes 99284 and 99285, are considered "Other LANE".

Nearly 60% of the total Medicaid population in Oklahoma is under 21 years of age. In the SoonerCare Choice population under 21, the percentage is even higher at 79%. There are relatively few, 27%, under the age of 21 in the SoonerCare Traditional population. Although the percentage of the under 21 population in both SoonerCare plans varies significantly, about three-quarters of ED visits for members under 21 of both plans can be classified as low-acuity. Furthermore, almost 30% of both Choice and Traditional SoonerCare ED visits for members under 21 could be also classified as potentially preventable.

Geospatial Analysis

Geocoding is a process that converts address information to geographic coordinates (based on longitude and latitude), places the coordinates on a map, and then analyzes the coordinates in relation to other spatial data. Two sets of data are needed for the geocoding process: one is the address of analysis, for this project, the member eligibility file address; the second is the address of reference, for this project, the provider address (primary care provider (PCP) or emergency department (ED) location).

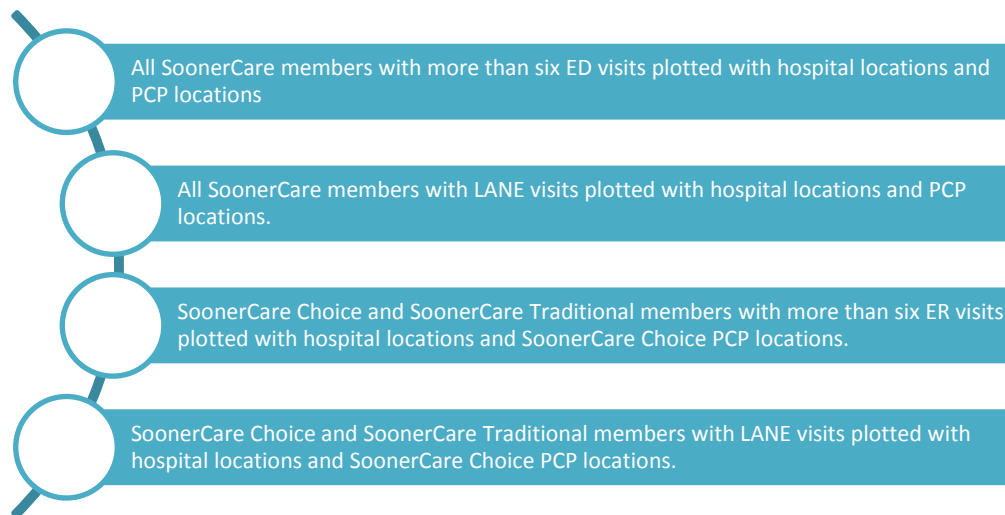
In order to conduct the geospatial analysis, the OHCA shared member eligibility, provider, and member claims data files with Mercer. Once validated, each file was limited to the fields required for geospatial analysis and the files were prepared for geocoding. Rural members were identified as those whose geocoded addresses were located in an Oklahoma county designated as rural. In broad terms, the areas of Oklahoma City and Tulsa were designated as urban areas and eliminated from the rural analyses described below. All maps were restricted to members whose geocoded addresses on the member eligibility file were located in Oklahoma. This may lead to slight variations in population sizes as compared to the statistical analyses.

Geospatial Analysis Results

Geospatial analyses were conducted for the state overall and specifically for the areas designated as rural. Maps were generated based on the groupings presented below (Exhibit 10).

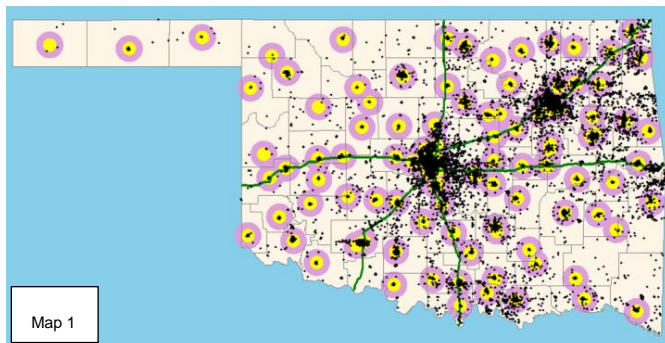
All maps generated are included in the comprehensive report. A selection of maps is included below:

Exhibit 10: Geospatial Analyses for State Overall and Areas Designated as Rural



One of the key considerations while reviewing the maps is the black icons (members) that fall outside a yellow or purple icon. These icons represent areas where access to providers, either hospitals or PCPs, may be an issue.

Exhibit 11: Map 1

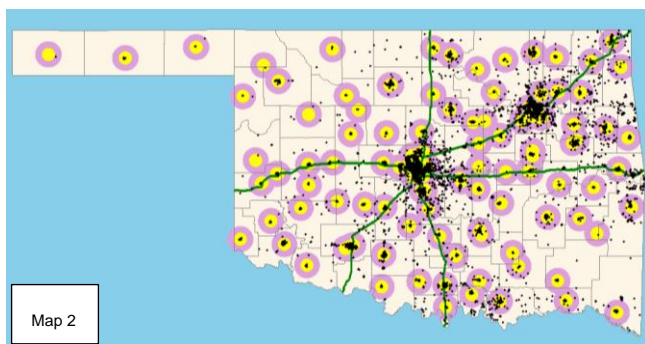


Map 1: All SoonerCare members with 6+ ED visits plotted with hospital locations

- A member address is represented by a black dot (n = 28,142).
- A yellow halo is a five mile radius from the address of a hospital (n=188).
- A purple halo is a ten mile radius from the address of a hospital.
- An interstate highway is represented by a green line.

As can be seen in Exhibit 11, and as described in the statistical analysis, the highest concentration of SoonerCare members is located in the urban areas of Oklahoma City and Tulsa, and as expected, the most significant concentration of members with six or more ED visits are also located in these urban areas. As noted in the statistical analysis, less than three percent of the members had six or more ED visits during the study period.⁷

Exhibit 12: Map 2



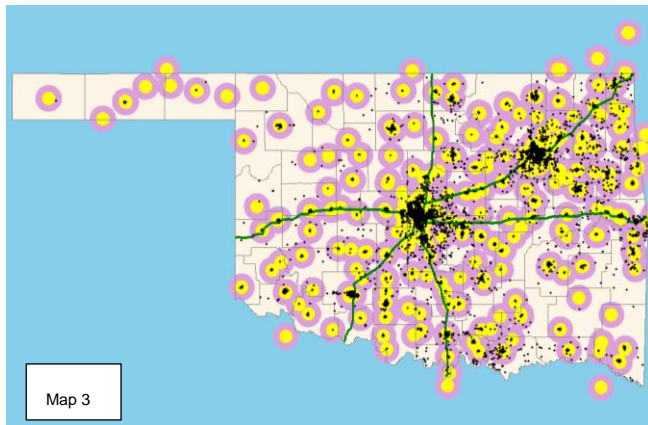
Map 2: SoonerCare Choice members with 6+ ED visits plotted with hospitals

- A member address is represented by a black dot (n = 9,100).
- A yellow halo is a five mile radius from the address of a hospital (n=188).
- A purple halo is a ten mile radius from the address of a hospital.
- An interstate highway is represented by a green line.

Again, as expected, Exhibit 12 shows the highest concentration of SoonerCare Choice members with six or more ED visits is located in the urban areas of Oklahoma City and Tulsa, as shown in Map 2. Interestingly, there are relatively few members who live more than ten miles from a hospital with six or more ED visits.

⁷ All tables of statistical analyses can be found in the Mercer report, Oklahoma Emergency Department Utilization, November 22, 2015, Appendix B.

Exhibit 13: Map 3

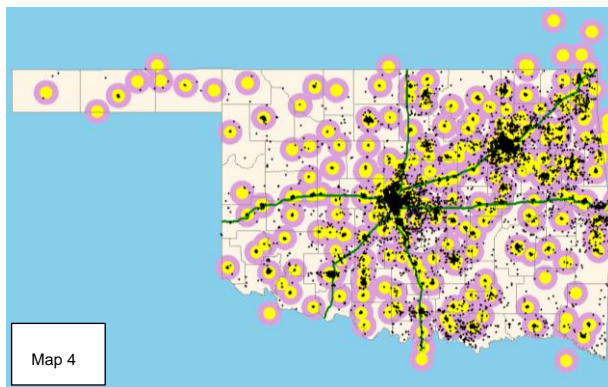


Map 3: SoonerCare Choice members with 6+ ED visits plotted with SoonerCare Choice contracted PCPs

- A member address is represented by a black dot (n = 9,100).
- A yellow halo is a five mile radius from the address of a SoonerCare Choice PCP (n=1,048).
- A purple halo is a ten mile radius from the address of a SoonerCare Choice PCP
- An interstate highway is represented by a green line.

Exhibit 13: Map 3 shows the distance from a SoonerCare Choice member's address to a SoonerCare Choice contracted PCP. As can be seen, the majority of these members have access to a SoonerCare Choice contracted PCP within five miles and even more within ten miles. As described in the statistical analysis, while SoonerCare Choice members overall were more likely to be frequent ED utilizers, this was not the case if the member's chosen PCP was located within five miles of their home and the member was not part of the OHCA's HMP or a HAN.⁸

Exhibit 14: Map 4



Map 4: SoonerCare Traditional members with 6+ ED visits plotted with PCPs

- A member address is represented by a black dot (n = 19,042).
- A yellow halo is a five mile radius from the address of a PCP (n=1,297).
- A purple halo is a ten mile radius from the address of a PCP.
- An interstate highway is represented by a green line.

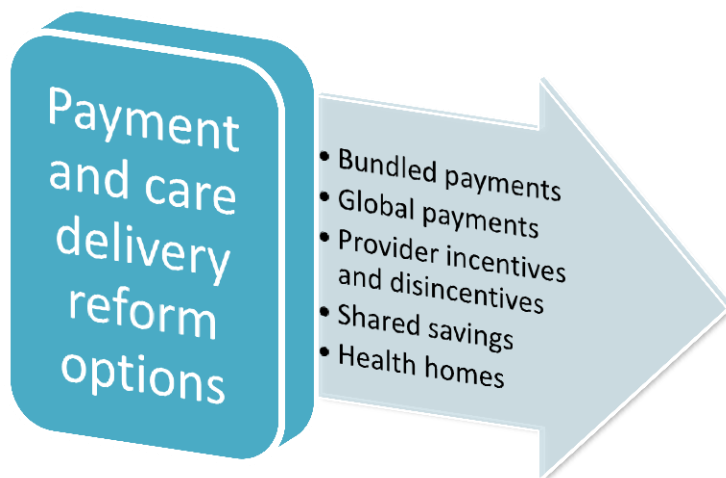
Exhibit 14: Map 4 shows the distance from a SoonerCare Traditional member's address to a PCP that participates in the SoonerCare program. There are more members who visited the ED 6+ times represented who do not have a PCP within ten miles in comparison to the SoonerCare Choice population.

⁸ All tables of statistical analyses can be found in the Mercer report, Oklahoma Emergency Department Utilization, November 22, 2015, Appendix B.

State Medicaid Approaches to Manage Emergency Department Utilization

Non-urgent use of the emergency department (ED) has been studied by both state Medicaid agencies and commercial insurers for decades. Despite the importance of appropriate ED use, uniform best practices have been slow to emerge due to the unique needs and challenges in states and local communities, as well as health care concerns of frequent ED users. There are, however, emerging ED diversion programs that demonstrate promise, especially in light of new payment reform options, such as those represented in Exhibit 15. Mercer has reviewed seven state programs that could inform strategies in Oklahoma to impact ED utilization among Medicaid beneficiaries. These states are Colorado, Maryland, Massachusetts, Missouri, Oregon, Washington, and Wisconsin.

Exhibit 15: Payment and Care Delivery Reform Options



The lessons learned in each state program included in this report provide options for Oklahoma to impact ED utilization. While each state program is unique, Oklahoma could tailor selected payment and/or care delivery reform options and implement through state plan amendments and/or waivers.

Payment reform models described below range from bundled payments for asthma-specific care management as in Massachusetts, to global payments as in the system implemented in Maryland. Payment reform models also incorporate a range of incentives and disincentives for providers to help shape more appropriate ED use. Some state programs, such as Washington, incorporate disincentives such as nonpayment for excessive non-urgent ED services for hospitals that do not adopt best care practices, or reimbursement withholds tied to ED reduction in Colorado. Many of the states reviewed indicated interest in adopting a shared savings model with the care or payment reform initiative. None have moved forward with shared savings in practice, but this option could provide a valuable opportunity for Oklahoma, its provider community, and for better measurement and outcomes. Another important incentive exists in the form of a 90% federal match rate for health home services, like Missouri's behavioral health home. These and other payment and care delivery reform models are reviewed in detail below.

Colorado

Colorado's Accountable Care Collaborative Program was launched in May 2011 and is comprised of seven Regional Care Collaborative Organizations (RCCOs). The RCCOs form a network of primary care medical providers (PCMPs) that support medical homes, and are ultimately responsible for reaching performance targets that focus on ED use reductions, hospital readmission prevention, and lower outpatient service utilization of magnetic resonance imaging (MRI), computed tomography (CT) scans, and x-rays.⁹ The PCMPs include group practices, federally qualified health centers (FQHCs), and rural health centers.

The role of the RCCO is to work with participating PCMPs in any stage of medical home processes and assist with improving medical home services. As noted in a number of reports on the program, "RCCOs have flexibility to customize reforms to meet regional needs"¹⁰ while remaining within the allowable funding as discussed below. Each RCCO operates differently and activities range from working with PCMPs to implement substance abuse screening to providing training on best care practices for managing chronic conditions to preventing overuse of ED services. One RCCO partnered with the fire department to get a frequent 911 caller, who made repeated ED visits, into intensive outpatient therapy and move into a sober living home.

RCCO services are reimbursed at a per member per month (PMPM) rate of \$20. One dollar is withheld from this total to fund an incentive pool to reward lower ED usage, as well as hospital admission reductions and outpatient service utilization of MRIs, CT scans, and x-rays.

The effect on ED visits has been, in some ways, mixed. For example, from state fiscal year (SFY) 2012 to SFY 2013, the number of ED visits increased for those enrolled in the program, but at a slower rate compared to the general Medicaid population. From SFY 2013 to SFY 2014, aggregate savings from the program totaled approximately \$31 million.¹¹ Colorado also reported fewer ED visits for certain program enrollees.¹² Adults enrolled in the program for more than six months utilized approximately 8% fewer ED services than adults not enrolled in the program. ED use by children with disabilities decreased by 7%, but doctor visits increased by 6%. It should be noted that fewer than six months of program enrollment resulted in higher than average ED use among the adult population. ED use by adults with disabilities enrolled in the program was higher than those not enrolled. ED use by non-disabled child enrollees was negligible.

⁹Colorado Center on Law & Policy. "The Colorado Medicaid Accountable Care Collaborative Program," available at http://www.healthpolicyproject.org/Publications_files/Medicaid/ColoradoAccountableCarePresentation.pdf, accessed 3 June 2015.

¹⁰Jahnke L., Siddiqui N., Andrulis D., Reddy S. "Snapshot of Medicaid 1115 Waiver and Other State-Based Delivery System Transformations," available at http://www.texashealthinstitute.org/uploads/1/3/5/3/13535548/snapshot_of_medicaid_1115_waiver_state_delivery_transformation.pdf, accessed 3 June 2015.

¹¹Colorado Department of Health Care Policy & Financing. "Creating a Culture of Change, Accountable Care Collaborative, 2014 Annual Report," available at <https://www.colorado.gov/pacific/sites/default/files/Accountable%20Care%20Collaborative%202014%20Annual%20Report.pdf>, accessed 2 June 2015.

¹²Colorado Department of Health Care Policy & Financing. "Colorado Medicaid Program Achieves Record Savings, Improved Outcomes," available at <https://www.colorado.gov/pacific/sites/default/files/Accountable%20Care%20Collaborative%20News%20Release%20and%20Fact%20Sheet%20-%20November%202013,%202014.pdf>, accessed 2 June 2015.

Applying Success in Oklahoma

Colorado's Accountable Care Collaborative Program operates as an RCCO through a fee-for-service (FFS) payment structure combined with a patient-centered care management (PCCM), PMPM payment of \$20 and incentive payments for meeting quality targets. Oklahoma operates an "enhanced" PCCM more commonly known as the patient-centered medical home (PCMH) model, but there are differences in reimbursement structures. In Colorado, there is a PMPM reimbursement withhold tied, in part, to ED utilization reductions. Colorado has also indicated interest in pursuing a complementary shared-savings model, which has not yet been implemented. Both the PMPM reimbursement withhold tied to ED reduction and shared savings could be implemented in Oklahoma through a state plan amendment (SPA). Another important consideration is the application of flexible RCCO activities locally tailored to meet specific regionally based health care needs.

Maryland

The Maryland Global Budget Revenue (GBR) model began in January 2014 and aims to transition to fixed hospital payments for both inpatient- and outpatient-based care. In addition to cost containment requirements, participants must also meet population management goals including targets for quality, safety, and patient experience across all payers for their facility to avoid reductions in the global budgets as the program advances. In order to ensure success of the GBR initiative, the University of Maryland Upper Chesapeake Health (UM UCH) embarked on a three-pronged approach to reduce the acute care costs and improve overall health outcomes. The three-pronged approach is as follows:

- Prevent acute health problems and the associated care from happening in the first place.
- Create and expand less costly, more convenient alternatives to ED care so people with acute problems use less expensive hospital-based care.
- Improve the function of the acute care system itself.¹³

To support this three-pronged approach, UM UCH developed four key programs to support the transformation and to provide a variety of interventions focused on empowering the ED physicians to control resources, including inpatient admissions, outpatient observation designations, discharge determinations and the use of advanced radiography and prescribing. Four key programs include:

1. **High-Risk Care Plan Program.** The High-Risk Care Plan Program targets individuals with over five ED visits, three hospital admissions, or one readmission in the past 12 months. The program focuses on the lack of appropriate comprehensive medical record information available to ED decision-makers, and creates a multi-disciplinary team including case managers, primary care physicians, ED physicians, pain management specialists, and psychiatrists. The teams work together to develop a "one-pager" that contains all of the critical patient information, including psychosocial information, to avoid electronic health record (EHR) searching fatigue. The program required an investment of \$20,000 up front for the easy-to-use EHR platform, and will eventually require case management staff increases. Of the 844 individuals in the program, over 50% have shown a decrease in opioid prescriptions, and a 40–50% reduction in admissions, observation stays, and ED visits.

¹³Pines J., McClellan M. "Case Studies in Emergency Medicine: Integrating Care for the Acutely Ill and Injured," available at <http://www.brookings.edu/research/papers/2015/05/04-emergency-medicine-case-studies-medtalk>, accessed 5 June 2015.

2. **Comprehensive Care Clinic.** The Comprehensive Care Clinic program targets individuals without a primary care provider (PCP), without insurance coverage, or those with high-risk follow-up care that puts them at risk for reengaging the ED. Comprehensive care coordination, not just referral services, is provided, as well as outreach specifically focused on population engagement. Outcomes data and return on investment are not yet available for this initiative as the clinic began operations in January 2015.
3. **Standardized Care Pathways.** The Standardized Care Pathways program stems from the variation in care management and admitting patterns by ED physicians. For example, a tool created by the program includes a low-risk chest pain protocol to provide appropriate care while safely reducing inpatient admissions. The protocol consists of activities such as arranging and scheduling a follow-up exercise treadmill test no later than 24 to 72 hours, which has produced promising results. Approximately 240 individuals have been safely diverted from inpatient admission or observation status since use of the protocol began in October 2014. However, the length of stay in the ED has increased due to testing requirements at the one and three hour mark required by the protocol.
4. **Patient Call Back Program.** The Patient Call Back Program is designed to incentivize intervention by ED physicians in the transitions and follow-up care identified after an ED visit. Because ED physicians are not directly reimbursed for cost efficiencies, they are paid to call up to two patients after a shift by the Maryland Emergency Medicine Network. The program began in January 2015 and provides \$20 per call, for up to 30 calls per month. To date, participation in the two EDs that are in the system is at 70%, with a 15% to 30% penetration rate for discharged patients.

Applying Success in Oklahoma

This multi-pronged approach to better coordination of care requires a great deal of buy-in by providers, which is not easy to accomplish. A key to the success of the programs is the employer/employee relationship, which fosters employee compliance with the care and operational changes. There are many state plan opportunities for implementing comprehensive care coordination and incentive programs in Oklahoma. These include a PMPM capitated payment or a shared savings or incentives-based arrangement implemented through a Medicaid integrated care management SPA. Consideration should be given to the feasibility of applying care coordination and incentive programs in a statewide initiative due to the operational and financing complexity that will exist outside of the employer/employee environment.

Massachusetts

Pediatric asthma remains a challenging condition in terms of population health and aggregate medical costs. Pediatric asthma diagnosis rates continue to grow, and the fact that more care is being provided in an ED setting underscores the need for better interventions to manage the chronic condition. Between 2001 and 2011, the prevalence of pediatric asthma nationally increased nearly 2% and in 2010, Oklahoma spent approximately \$5 million in Medicaid funds on pediatric asthma care in the ED.¹⁴ Asthma is also one of the top 20 most frequent reasons for an ED visit in Oklahoma. Massachusetts has adopted a Medicaid pediatric asthma pilot program, the MassHealth Pediatric Asthma Bundled Payment Pilot Program; intended to improve health outcomes of children with asthma, to reduce asthma-related ED utilization, and ultimately lower associated Medicaid

¹⁴Pearson W., Goates S., Harrykissoon S., Miller S. "State-Based Medicaid Costs for Pediatric Asthma Emergency Department Visits," available at http://www.cdc.gov/pcd/issues/2014/pdf/14_0139.pdf, accessed 8 June 2015.

costs.¹⁵ The Centers for Medicare & Medicaid Services (CMS) initially approved the pilot program in December 2011 through a Section 1115 Waiver.

The Massachusetts Pediatric Asthma Bundled Payment Pilot Program is based on a program created by the Children's Hospital of Boston, the Community Asthma Initiative, for high-risk pediatric asthma patients. That initiative focuses on home visits and environmental mitigation tools. The initiative was found to produce total savings of over \$500,000 within five years.¹⁶

Under the MassHealth Pediatric Asthma Bundled Payment Pilot Program, children are eligible for participation if they meet certain qualifications, which include being between the ages of two and eighteen and having "high-risk" asthma, which is defined by an asthma-related hospitalization or ED visit, an oral corticosteroid prescription for asthma in the last 12 months, or another indicator of poor asthma control. The children are also required to receive care at one of the pilot primary care sites enrolled in the program.

The pediatric asthma pilot includes two phases. The first phase provides greater flexibility of coverage for community prevention services not covered by MassHealth, including community health worker home visits or environmental trigger mitigation supplies reimbursed with a \$50 PMPM capitated payment.¹⁷ The second phase will incorporate the experiences of the first phase to develop a Medicaid bundled payment for children with high-risk asthma.

Applying Success in Oklahoma

ED savings analyses from the MassHealth Pediatric Asthma Pilot Program have not yet been reported. While cost savings have not been reported, savings have been found in the Community Asthma Initiative, on which the Pediatric Asthma Pilot Program is based.

Massachusetts applied for and received approval for the pilot program through a Section 1115 Medicaid Waiver. While Oklahoma could pursue the same path through a Section 1115 Medicaid Waiver, the Childhood Asthma Leadership Coalition has identified other opportunities to design and receive Medicaid funding for community-based pediatric asthma programs. These options include the following: asthma interventions in non-clinical settings through the early, periodic, screening diagnosis and treatment Medicaid component; asthma interventions furnished by non-traditional providers through preventive benefits under Medicaid; and community-based asthma interventions under Medicaid health homes.¹⁸

¹⁵Medicaid. "Attachment J Master DSTI Plan," available at <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ma/MassHealth/ma-masshealth-attach-j.pdf>, accessed 8 June 2015.

¹⁶Burton A., Chang D., Gratale D. "Medicaid funding of Community-Based Prevention, Myths, State Successes Overcoming Barriers and the Promise of Integrated Payment Models," available at http://www.nemours.org/content/dam/nemours/www2/filebox/about/Medicaid_Funding_of_Community-Based_Prevention_Final.pdf, accessed 8 June 2015.

¹⁷The Brookings Institution. "A Case Study in Payment Reform to Support Optimal Pediatric Asthma Care," available at <http://www.brookings.edu/~media/research/files/papers/2015/04/27-asthma-case-study/asthma-case-study.pdf>, accessed on 8 June 2015.

¹⁸Harty M., Horton K. "Using Medicaid to Advance Community-Based Childhood Asthma Interventions: A Review of Innovative Medicaid Programs in Massachusetts and Opportunities for Expansion under Medicaid Nationwide," available at http://www.nchh.org/Portals/0/Contents/HCF_Community-Based-Asthma-Interventions-and-Medicaid-CALC-White-Paper_2.28.13.pdf, accessed 5 June 2015.

Missouri

In 2010, the Agency for Healthcare Research and Quality (AHRQ) reported that one in eight ED visits involved an individual with a mental disorder, substance abuse problem, or both.¹⁹ The connection between mental health needs and ED care is confirmed in this and other reports, and anecdotally from emergency care providers in Oklahoma and across the country. Missouri has worked to better coordinate behavioral health care, which has produced savings by avoiding unnecessary ED visits.

Missouri's behavioral health home initiative was the first to receive CMS approval, granted in 2011, for a Medicaid health home under Section 2703 of the Affordable Care Act.²⁰ Since implementation, the behavioral health homes have kept Medicaid beneficiaries out of hospitals and EDs, and averted care costs have saved \$2.9 million as of 2013.²¹

The behavioral health home SPA focuses on Medicaid enrollees who have comorbidities involving a serious and persistent mental health condition or substance use disorder. An eligible individual must also incur more than \$10,000 in Medicaid care costs during a 12-month period.

Missouri identifies those who meet these conditions through their Medicaid claims-based EHR, CyberAccess. Those identified are then automatically assigned to a health home. The behavioral health homes are community mental health centers (CMHCs) with providers that have received additional training on chronic conditions, as well as data and analytic tools.²² Potentially eligible individuals who present in the ED are referred to a health home. Missouri reimburses health homes directly through a PMPM care coordination fee. The care coordination PMPM payment is in addition to the FFS and managed care plan service payments.

The community medical homes provide mental health services and are required to help navigate and coordinate physical health issues. Specifically, medical homes conduct annual screenings including hypertension, diabetes, obesity, and high cholesterol. The homes also provide smoking cessation counseling and obesity and weight management services for diabetics. Medical homes assist in behavioral health case management services that include all possible psychosocial issues such as housing, assistance with activities of daily living, and medication adherence. Case managers also schedule and help patients keep appointments.²³

Applying Success in Oklahoma

Oklahoma may consider reviewing comorbidities of ED patients to ensure that such a strategy appropriately reflects the realities of the SoonerCare population who are frequent ED utilizers.

¹⁹Healthcare Cost and Utilization Project. "Emergency Department Use for Mental and Substance Use Disorders," available at https://www.hcup-us.ahrq.gov/reports/ED_Multivar_Rpt_Revision_Final072010.pdf, accessed 5 June 2015.

²⁰Missouri Department of Mental Health. "Community Mental health Center Healthcare Homes," available at <http://dmh.mo.gov/mentalillness/mohealthhomes.html>, accessed on 4 June 2015.

²¹Department of Mental Health and MO Healthnet. "Progress Report, Missouri CMHC Healthcare Homes," available at <http://dmh.mo.gov/docs/mentalillness/prnov13.pdf>, accessed on 4 June 2015.

²²The Commonwealth Fund. "State in Action Archive," available at <http://www.commonwealthfund.org/publications/newsletters/states-in-action/2011/jan/december-2010-january-2011/snapshots/missouri>, accessed 2 June 2015.

²³Ibid.

Oklahoma could then consider creating and submitting a similar behavioral health home SPA under section 2703 of the Affordable Care Act. States receive a 90% federal match rate for health home services during the first eight fiscal quarters from the effective date of the SPA. Medicaid reimbursement under a health home arrangement is flexible and can include FFS, PMPM payments, and tiered shared savings, among other reimbursement options.

Oregon

The Central Oregon Health Council, established in 2009, is a public-private partnership to improve health outcomes in the region, including a particular focus on high health care utilizers. The council's ED diversion project reflects a promising initiative that has reduced non-emergent visits to the ED, and concurrent ED costs in central Oregon.

The ED diversion project targeted 144 frequent users, defined as having had ten or more ED visits in a twelve month period. A majority (83) of those targeted were enrolled in Medicaid. Of the 144 targeted frequent users, 79 were enrolled in the project, which included a four-tiered intervention process. The intervention process began with the development of a community wide treatment plan for each frequent user and then shifted to the services of health engagement teams, community health workers (CHWs), and behavioral health consultants.

A central component of the community wide treatment plan is the use of electronic health communication that allows a patient's records to be accessed by all regional hospitals and the patient's health home. The community wide treatment plan includes an individualized plan of care with information on patient demographics, patient-centered primary care home (PCPCH) location, primary reasons for ED visits, and other individualized information. The treatment plan is then reviewed by a health engagement team and sent to the patient's PCPCH.

A full health engagement team is composed of a physician, registered nurse (RN) case manager, psychologist or social worker, CHW, and representation from the PCPCH to participate in the collaborative care model. CHWs serve a standout role as a patient advocate or peer and help patients and their families navigate the local health care system, using an approach known as the "Pathways Model" of care. This model identifies a single problem and then provides guidance to the CHW to help the patient through a resolution process. The "Pathways Model" of care has a process in place for resolving more than 80 identified problems, which range from medical home connection to chronic disease management. Additionally, two full-time CHWs have been implanted in three EDs and are able to provide services at the point of contact.

To better address comorbid mental health needs of high utilizers, behavioral health consultants were integrated into the PCPCH of those in need of behavioral health services. Adding behavioral health consultants to the PCPCH has increased compliance with follow-up care from 15% to 90%.²⁴

In its first year of implementation, there was a 49% decrease in ED visits between the first six months of 2011 and the same period in 2010. This translates to a reduction of 541 ED visits, approximately 300 visits of which were attributed to Medicaid enrollees. ED savings attributed to Medicaid patients amounted to \$3.132 million for just that six month period. Enrollment of subsequent targeted high utilizers in the program in 2011 showed similar progress of reducing repeat ED visits.

²⁴Ibid.

Applying Success in Oklahoma

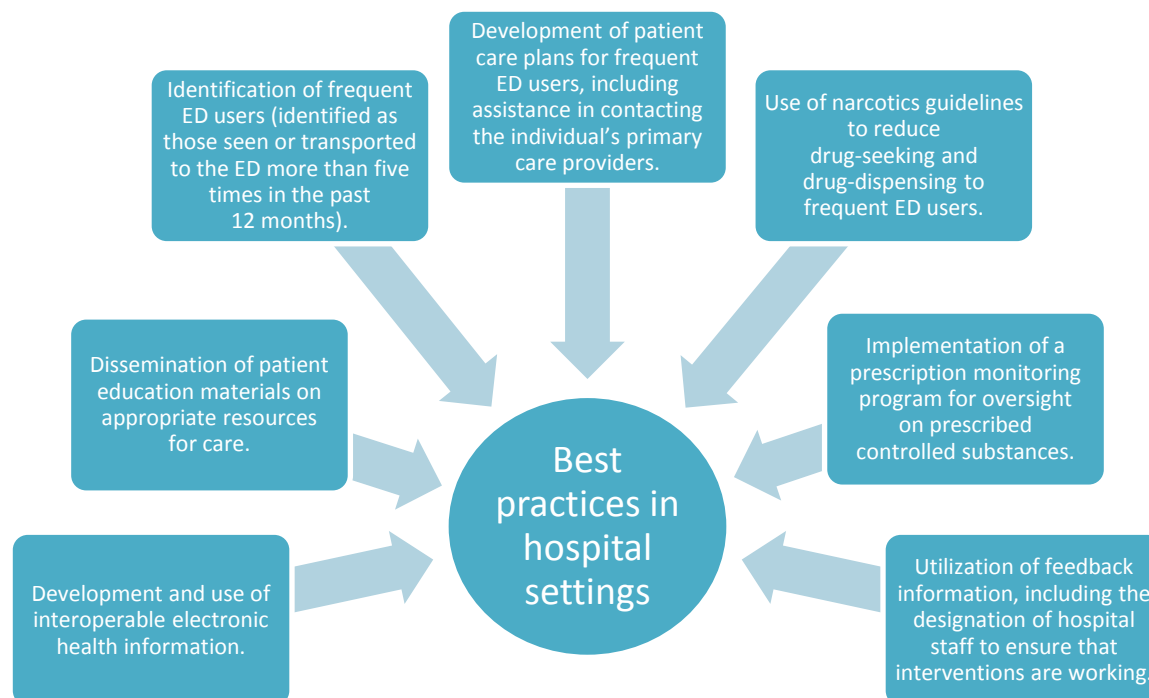
Provider funding for the project was contributed directly from program partners including hospitals and clinics, with a reimbursement plan from PacificSource Health Plans through a shared savings arrangement. Notably, however, the ED diversion project operates as a coordinated care organization with a shared savings model, where providers in Oregon have voluntarily come together to coordinate care and have accountability for the overall costs and quality of that care. Oklahoma could replicate the Oregon ED Diversion Project via an integrated care model (ICM) Medicaid SPA or potentially a health homes SPA. Under an ICM arrangement in Medicaid, reimbursement can be flexible and can include FFS or a capitated managed care organization (MCO) and can provide incentive, as well as service and care coordination.

Washington

Washington State's "ER is for Emergencies" program was formed by collaboration between the Washington State Chapter of the American College of Emergency Physicians, the Washington State Medical Association and the Washington State Hospital Association.

Launched in 2012, the "ER is for Emergencies" program focuses on the following seven best practices in hospital settings (Exhibit 16).²⁵ Under the program, hospitals were required to implement the seven best practices or be subject to nonpayment of non-emergency ED visits. Since implementation in June 2012, all hospitals have incorporated the seven best practices.

Exhibit 16: Best Practices in Hospital Settings



²⁵Washington State Health Care Authority. "ER is for Emergencies, Seven Best Practices," available at <https://www.wsha.org/images/activEdit/ERisforEmergenciesSevenPractices.pdf>, accessed 6 June 2015.

According to a March 2014 report from the Washington State Health Care Authority, the rate of ED visits declined by 9.9% and the rate of frequent users declined by 10.7% from implementation in June 2012 to June 2013.²⁶ The Washington State Health Care Authority also reported that savings reached its Medicaid savings goal of \$33.6 million in FFS emergency care costs.

As noted in a Brookings report, Washington State did not provide direct funding to hospitals to implement the program.²⁷ Hospitals incurred upfront and ongoing costs to operate the best practices, including an estimated \$10,000 and \$20,000 per site to implement the electronic health information exchange (HIE), along with \$10,000 to \$15,000 per year in annual program costs.

Applying Success in Oklahoma

While the initial approach in Washington State focused on disincentives (that is, nonpayment for non-urgent services), it was modified to reflect a “carrot-stick” model. The same could be done in Oklahoma. As noted in the report, there are alternative payment incentives that could support the development of “ER is for Emergencies” in Oklahoma. These include a PMPM capitated payment or a shared savings arrangement implemented through a Medicaid integrated care management SPA. Nonpayment after three non-urgent services can also be considered in hospitals that do not adopt the changes.

Wisconsin

The Milwaukee Health Care Partnership is a public/private partnership comprising of Milwaukee’s five health care systems, four FQHCs, the Medical College of Wisconsin, as well as health departments at the city, county, and State levels. In 2007, the Milwaukee Health Care Partnership launched the Emergency Department Care Coordination Initiative, a program to reduce inappropriate ED use by Medicaid and uninsured patients, which has resulted in better access to primary care, better linkage to a medical home, and reduced ED visits.

The ED initiative uses a standard process in Milwaukee County EDs and FQHCs to identify targeted patients and refer them to a health home.²⁸ Designated ED case managers employed by the ED use the region’s HIE to review a patient’s medical record to determine whether a patient meets the qualifications of the target population. Patients targeted for the initiative are those who are enrolled in Medicaid or are uninsured, have a chronic condition, are pregnant, or have four or more ED visits over a twelve month period.

After a patient has been identified, the ED case manager educates patients about appropriate ED use and the importance of having a primary care medical home and then schedules a follow-up

²⁶Washington State Health Care Authority. “Emergency Department Utilization: Update on Assumed Savings from Best Practices Implementation,” available at http://www.hca.wa.gov/documents_legislative/EmergencyDeptUtilization.pdf, accessed 6 June 2015.

²⁷The Brookings Institution. “Washington State Medicaid: Implementation and Impact of “ER is for Emergencies” Program,” available at <http://www.brookings.edu/~media/Research/Files/Papers/2015/05/04-emergency-medicine/050415EmerMedCaseStudyWash.pdf?la=en>, accessed 6 June 2015.

²⁸Agency for Healthcare Research and Quality. “Emergency Department-Based Case Managers throughout County Electronically Schedule Clinic Appointments for Underserved Patients, Allowing Many to Establish a Medical Home,” available at <https://innovations.ahrq.gov/node/4993>, accessed 4 June 2015.

appointment with a primary care physician at an FQHC or clinic. An electronic scheduling system displays available appointments with the FQHCs and clinics, and allows the ED case manager to schedule the appointment directly. Before the medical home appointment, the FQHC or clinic staff calls the patient with encouragement to keep the appointment.

In 2012, ED case managers scheduled more than 6,700 appointments at FQHCs and other safety net clinics. Of the appointments scheduled at FQHCs, 41% were fulfilled the first time. Fifty-seven percent of those patients who kept their initial appointment returned for a second appointment within six months. For patients who kept their scheduled appointments, there was a 44% reduction in the number of ED visits.²⁹

Applying Success in Oklahoma

The participating hospitals, the FQHCs, the State of Wisconsin, and the Robert Wood Johnson Foundation provide operating costs for the initiative. A similar ED care coordination initiative could be applied in Oklahoma through a Medicaid enhanced or primary care case management arrangement. Reimbursement for case management could be defined as a FFS payment, case management, or care coordination fee with the potential for shared savings in a SPA. It should be noted that operating costs provided by non-state entities, including the Robert Wood Johnson Foundation, hospitals, and FQHCs constitute a “donation” and cannot be counted towards a federal Medicaid match.

²⁹Ibid.

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Conclusion

With the mission “...to responsibly purchase state and federally funded health care in the most efficient and comprehensive manner possible; and to analyze and recommend strategies for optimizing the accessibility and quality of health care; and to cultivate relationships to improve the health outcomes of Oklahomans,” the Oklahoma Health Care Authority (OHCA) is looking to fully understand emergency (ED) utilization in the state and employ strategies for most appropriately managing utilization in the best manner for the SoonerCare population. The state of Oklahoma is not alone in the challenges it faces managing ED utilization. This is a multifaceted issue facing all states and delivery systems, fee-for-service (FFS) and capitated managed care. There are multiple stakeholders, sometimes with competing interests and needs. As evidenced in Oklahoma’s health management and care management programs, there is no one technique that works for all members. There is no one approach that fits all, no silver bullet.

Exhibit 17: The Role of Key Stakeholders in ED Utilization



The graphic above (Exhibit 17) represents key stakeholders that have a role in ED utilization. Data (both qualitative and quantitative) from each of these stakeholders was used throughout this report.

What is the role of the member in ED utilization? There are times and events where an ED visit is the most appropriate course of action for a member to ensure his or her health and safety. However, both the statistical information presented in the comprehensive report, as well as anecdotal information gathered throughout the project indicate that there are ED visits that meet the OHCA’s definition of primary care treatable and low-acuity non-emergent (PCT/LANE). Some ED visits are a matter of convenience; the ED is open 24 hours a day, 7 days a week, 365 days per year, no appointment needed. For some members going to the ED has become a matter of routine; it is considered the primary resource for medical care.

What is the role of hospitals in ED utilization? EDs are very important and serve a key role in the hospital system and health care delivery. They are also an important revenue stream for hospitals. As such, it is in the hospital’s interest to advertise the services and convenience available. However, the opportunity for revenue and drawing patients in has led to some challenges for hospitals in overcrowding, patient management, and use of the ED for primary care treatable and low-acuity non-emergent (PCT/LANE) conditions.

What is the role of the primary care provider (PCP) in ED utilization? As evidenced by the OHCA program initiatives, PCPs are considered a key link to high quality health care for SoonerCare members and have an opportunity to impact ED utilization. As the data show in this evaluation, physical proximity to a member's PCP may impact the number of ED visits. One challenge is the limited number of PCPs, particularly those providing care to SoonerCare members, throughout the state. Fewer PCPs results in less availability of primary care. Additionally, in contrast to EDs, who are always open, PCP practices have scheduled office hours with specific appointment availability and may be perceived as inconvenient.

While initiatives are often focused on one of the stakeholders or topics described above, the most positive outcomes are often realized when ED utilization is addressed with members, hospitals and PCPs as a whole.

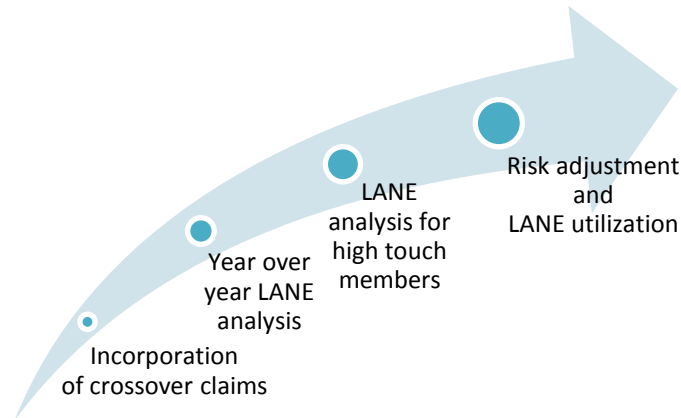
Although the state is not an individual receiving or providing direct care it does have a role in ED utilization. As described in the early sections of this issue brief, the SoonerCare Choice delivery model developed by the OHCA provides additional reimbursement to a PCP selected by a member serving as a medical home to engage that member in care through proactive outreach, delivery of care coordination services and/or linking them to community programs and services in an effort to assist the member in navigating the health care system and receiving care in the most appropriate and cost effective setting.

In addition to the delivery models the state has also developed several initiatives to assist members and ensure high quality care and health outcomes while managing cost. Continued development of the current health access networks (HANs) and recognition of provider practices as patient centered medical homes, as well as the care coordination and case management services provided by the OHCA to members who have need of these services provide opportunity for the state to impact utilization of the ED for those conditions that are considered primary care treatable and low-acuity non-emergent (PCT/LANE).

Next Steps for Analysis

There are additional analysis steps that Mercer would propose to develop an even more complete picture of ED utilization as presented in Exhibit 18.

Exhibit 18: Next Steps for Analysis



This issue brief presents information based on data available for the eighteen month time period July 2012 through December 2013 for claims paid by Medicaid. Incorporating crossover claims for beneficiaries who are dually eligible for Medicare and Medicaid would provide a more robust picture of ED utilization and may allow for more reliable delivery system and intervention analysis.

As more data are analyzed over a longer period of time there will be opportunity to identify trends in ED utilization, particularly for low-acuity non-emergent ED visits. Over time more and more SoonerCare members have been engaged in SoonerCare Choice while at the same time more and more providers have established patient-centered medical homes (PCMH) and are providing “enhanced” primary care case management (PCCM) through the OHCA’s PCMH model. Evaluating the impact of these care delivery changes and the impact they have on ED utilization and LANE in particular will be very valuable.

In addition to evaluating changes in delivery over time, developing a methodology for analyzing SoonerCare members based on periods of enrollment in the various OHCA initiatives and engagement with PCPs and care managers would be beneficial. Do those SoonerCare members who have more intensive case management or strong engagement with PCPs use the ED less or for fewer low-acuity non-emergent visits?

Risk adjustment is used for a variety of purposes in the health care industry. Because of differences in health status and treatment needs, utilization and cost of health care will vary from person to person. By measuring the relationship between these demographic characteristics, health conditions and costs for a large group, a formula is developed to calculate a risk score for each individual. A risk score is an individual’s relative cost compared with the average for the population. For example, a 50 year old enrollee who is diabetic and has a hypertension diagnosis may be expected to cost 40 percent more than average. A child who has asthma may be expected to cost 20 percent more than average. Conducting risk analysis on the Medicaid population, evaluating ED utilization, and particularly low-acuity non-emergent utilization based on various risk populations may be very helpful in evaluating the impact of OHCA initiatives and targeting future initiatives.



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