



SEBASTIAN COUNTY CRISIS STABILIZATION UNIT PATIENT UTILIZATION AND EXPENDITURES PROFILE

ACHI

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Executive Summary

The findings in this report offer a first look into the experience of individuals who were patients at the Sebastian County crisis stabilization unit (CSU) in its initial year of providing services and the potential impact of CSUs on healthcare utilization and jail involvement. The report follows our baseline assessment of healthcare utilization, diagnoses, and expenditures for jail detainees in Sebastian and Pulaski counties in the year prior to the opening of the CSUs, highlighting the extent of serious and persistent mental illness (SPMI) among those who were jailed and suggested significant opportunity for intervention among jailed individuals who had been diagnosed with SPMIs.

Using the Arkansas Healthcare Transparency Initiative's All-Payer Claims Database (APCD) for the study period of September 2017–June 2019, we assessed inpatient acute care hospital stays (IP), ED visits (ED), hospital observation stays of less than 24 hours (OB), and outpatient visits (OP) and their associated costs for Sebastian County CSU patients with 12 months of continuous healthcare coverage ("cohort"). Using jail booking data for the same period, we also assessed jail involvement among the CSU patient cohort over the same period. CSU patients were assessed for changes in healthcare utilization and jail involvement in the six months following CSU intervention compared to the six months prior to CSU intervention. IP, ED, and OB stays and jail bookings were considered undesirable events for purposes of the assessment.

The following are highlights from our report:

- The overwhelming majority of the CSU patient cohort obtained their healthcare coverage through the state Medicaid program, either through traditional Medicaid (70.6%) or the Arkansas Works Medicaid expansion program (15.7%).
- Considerable portions of the CSU patient cohort experienced improvements in appropriate medical utilization or jail involvement following CSU intervention. Overall, there was a decrease in the number of CSU patients who experienced any undesirable event (either medical- or jail-related) in the post-CSU period, and nearly half of those who experienced an undesirable event did so less often.
- Much of the improvement observed in the cohort following CSU intervention was in jail involvement. Reductions in the number of CSU patients booked, total bookings, and total jail days were observed in the post-CSU period, with the most discernible reduction being a 27.5% decrease in total jail days. Improvements in medical utilization among CSU patients were less apparent.
- Total and per member per month costs to Medicaid — either through the traditional fee-for-service Medicaid program or the Arkansas Works expansion program — increased in the post-CSU period, which could be the result of increased utilization of more costly ED and inpatient services or an increase in reimbursement rates from year to year in the Arkansas Works program.



- Total and per member per month costs for CSU patients with commercial coverage outside of Medicaid decreased in the post-CSU period, despite more patients incurring costs. This suggests that CSU patients in commercial coverage likely experienced less medical utilization or utilized less costly services.

Case series data included in the report provide individual-level information about the experience of each CSU patient, demonstrating that, for some individuals, CSU intervention changed the trajectory of undesirable healthcare utilization and jail involvement. To assess the impact of the CSUs, continued analyses are warranted, and future assessments could include longer observation periods, larger cohorts, and experience from additional CSUs in the state.



Background

In December 2019, the Arkansas Center for Health Improvement (ACHI) produced a report titled “Healthcare Utilization, Diagnoses, and Expenditure Profile of Sebastian and Pulaski County Jail Detainees.” The report provided an assessment of jailed individuals in each of the two counties for the following:

- Prevalence of a serious and persistent mental illness (SPMI)¹ as a diagnosis on any medical claim from Jan. 1, 2015, through Dec. 31, 2018.
- Number of emergency department (ED) visits.
- Number of inpatient acute care hospital stays.
- Number of filled prescriptions.
- Healthcare expenditures.²

The aim of the report was to offer a baseline assessment of healthcare utilization, diagnoses, and expenditures among jailed individuals in the year prior to the opening of the crisis stabilization units (CSUs) in each of the counties profiled. The report presented new and important knowledge about the relationship between the healthcare and criminal justice systems and suggested that opportunity for intervention existed among jailed individuals who had been diagnosed with SPMIs.

The report noted that additional analyses in future years were needed to understand changes in prevalence of SPMI diagnoses and care-seeking patterns of jailed individuals. It also signaled that focused analyses of the Sebastian County CSU patient population were anticipated upon data availability. ACHI has since received data to conduct an assessment of the Sebastian County CSU patient experience. Our findings are presented in this report.

Analytic Approach

This assessment tracked Sebastian County CSU patients’ healthcare utilization and costs as recorded in the Arkansas Healthcare Transparency Initiative’s All-Payer Claims Database (APCD) during the study period (September 2017–June 2019), with supplemental Sebastian County jail data used to assess bookings over the same period.

For the purposes of assessing utilization, medical services were categorized as either inpatient acute care hospital stays (IP), ED visits (ED), outpatient visits (OP), or hospital observation stays of less than 24 hours (OB). Identification of IP, ED, and OB utilization was based on definitions in the Healthcare Effectiveness Data and Information Set (HEDIS) 2019

¹ SPMIs included schizoaffective disorder, manic affective disorder, major depressive disorder, bipolar disorder, borderline personality disorder, delusional disorder, manic episodes, and mood disorder. A comprehensive list of diagnosis codes is in Appendix I.

² Expenditures were based on paid amounts from the individual’s coverage source including medical and pharmaceutical payments. These amounts did not include any cost sharing paid by the covered individual.

manual. Outpatient visits were those that were either billed using evaluation and management (E&M) codes or visits with a mental health provider. The number of prescriptions and the number of jail bookings were also determined for each individual during the study period.

Utilization at the individual level was assessed in a case series format, and IP, ED, and OB visits and bookings were categorized as undesirable events.³ For the case series, the individuals are listed by greatest change in number of undesirable events for the period six months prior to their CSU stay compared to the six months after their CSU stay.

Overall utilization per category was calculated based on counts of each type of utilization divided by the overall member months of enrollment for the cohort during the study period.

Costs were based on total amounts paid per enrollee, i.e., the sum of the amounts paid by both the payer and the enrollee, for the pre-CSU period compared to the post-CSU period. Cost results are stratified by payer type, with Arkansas Medicaid (including Arkansas Works) and commercial payments calculated separately.

DATA SOURCES

Data for this assessment were obtained from the Arkansas Healthcare Transparency Initiative's APCD, which contains data for the majority of healthcare covered lives in Arkansas. ACHI houses the APCD, which contains medical, pharmacy, and dental claims, as well as enrollment data and provider files.

The version of the APCD used for this analysis includes data from 2013 through June 2019 for Arkansas Medicaid, Medicare, fully-insured private payers, and self-insured payers receiving state funds. Data are submitted to the APCD on a quarterly basis pursuant to a mandate authorized by the Arkansas Healthcare Transparency Initiative Act of 2015. The data include some geographic and demographic information and a unique identifier permitting tracking of an individual over time and across datasets, but they do not include direct personal identifiers such as name or street address.

ACHI received data from the Sebastian County CSU for the period of March 2018 through October 2019. Sebastian County jail data were available for the period of March 2017 through December 2019.

POPULATIONS STUDIED

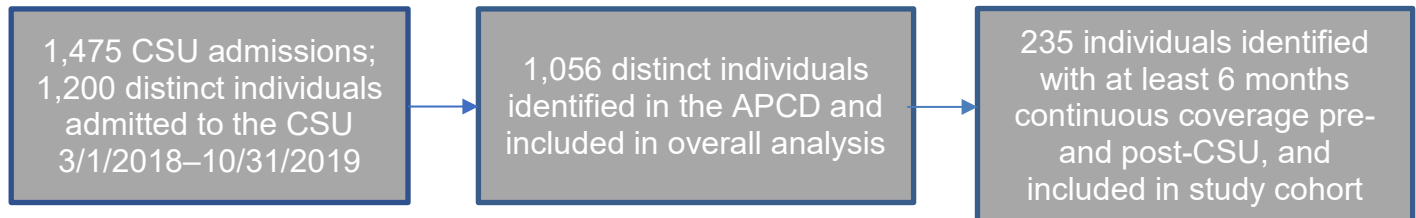
The primary populations included in this assessment are adults with evidence of having utilized the Sebastian County CSU and having at least 12 months of continuous enrollment in either Arkansas Medicaid or commercial coverage as identified in the APCD.

Individuals were considered to be continuously enrolled if they were enrolled in coverage within 15 days before and after their first CSU stay. Regardless of satisfying this condition, individuals

³ OP visits and prescriptions as desirable events are deserving of more detailed analysis.

would not be considered continuously enrolled if their coverage lapsed for any 30 days during the six months on either side of their first CSU stay.

SEBASTIAN COUNTY CSU PATIENTS FOUND IN THE APCD



OBSERVATION PERIODS

For assessment of utilization and costs within the Sebastian County CSU study population, individuals who had a CSU stay between March 2018 and October 2019 were identified. Based on available coverage enrollment and medical and pharmacy claims data, 12 months of continuous coverage was assessed for Arkansas Medicaid or commercial coverage for the period of September 2017 through June 2019. For assessment of Sebastian County jail bookings, data were available covering the period of March 2017 through December 2019. Jail bookings were subsequently assessed for the period of September 2017 through June 2019, the same period as medical and pharmacy utilization and costs.

TRACKING INDIVIDUALS FOR ASSESSMENT OF UTILIZATION AND COSTS

The APCD contains a unique identifier (hash ID) generated from last name and date of birth, resulting in approximately 97% non-duplicative identifiers when combined with gender. This hash ID enables tracking of an individual over time and across coverage sources. The study population was determined from Medicaid and commercial insurer enrollment files. From the Sebastian County CSU patient file that contained personal identifiers, Hash IDs were created and linked to the individual hash IDs from the APCD. The hash ID matching algorithm was strengthened by employing Medicaid member IDs in the APCD.

For the assessment of utilization prior to and following CSU admission, individuals with evidence of a CSU admission during the period from March 2018 through October 2019 were identified. From this population, a subgroup was selected based on individuals with evidence of at least 12 months of continuous enrollment in either Arkansas Medicaid or commercial insurance.

Limitations

Longitudinal analyses of individuals, particularly on a population basis across multiple payer groups, is inherently challenging. The mandatory aspect of the APCD results in the ability to analyze a majority of commercially-insured — and all Medicaid-covered — lives. Lack of personal identifiers in the APCD to link to identical individuals in the CSU patient population

required use of the hash ID tracking methodology. Individuals with the same last name, date of birth, and gender, or those whose last name changed during the study period, were unable to be linked and assessed over time. While it is unlikely that this limitation would lead to systematic bias, even a small observed change could influence the magnitude of our results.

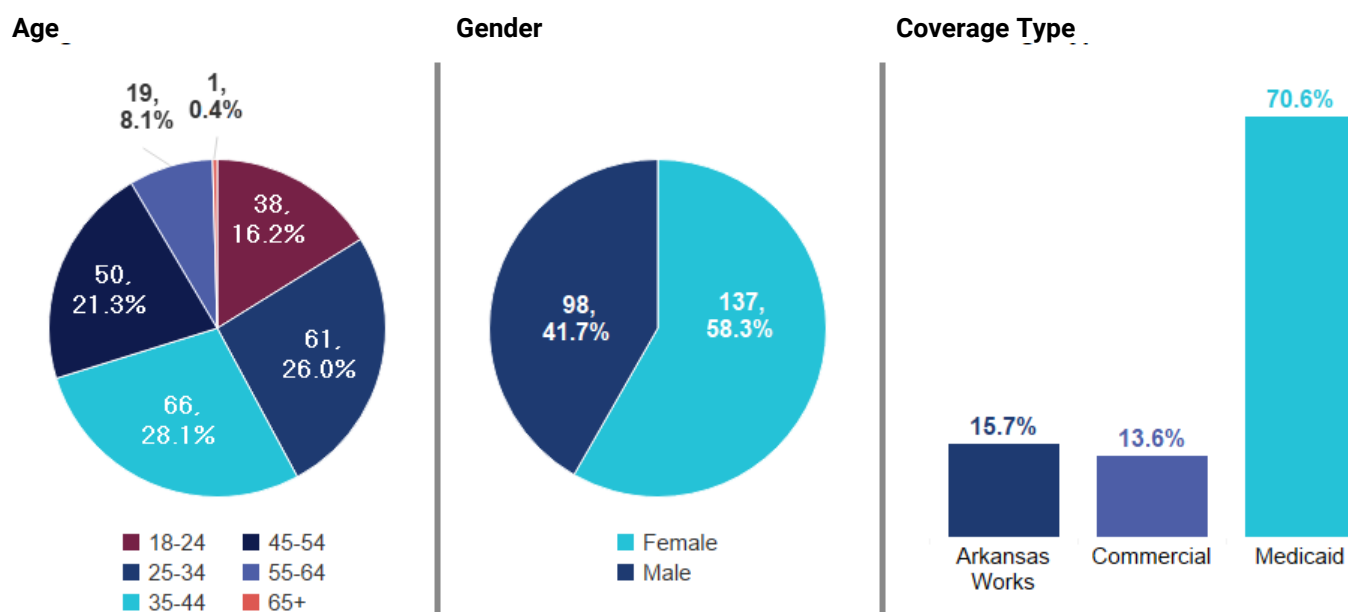
The limited observation period in this study, due to availability of claims data and relative recent opening of the CSU, impairs a long-term assessment. However, future assessments could include longer observation periods, larger cohorts, and experience from additional CSUs in the state.

Findings

DEMOGRAPHICS

For the Sebastian County CSU cohort with continuous healthcare coverage (n = 235), 137 (58.3%) were female and 98 (41.7%) were male. Thirty-eight patients (16.2%) were ages 18 to 24, 61 (26%) were ages 25 to 34, 66 (28.1%) were ages 35 to 44, 50 (21.3%) were ages 45 to 54, 19 (8.1%) were ages 55 to 64, and one (0.4%) was 65 or older (Figure 1).

FIGURE 1: GENDER, AGE, AND COVERAGE TYPE

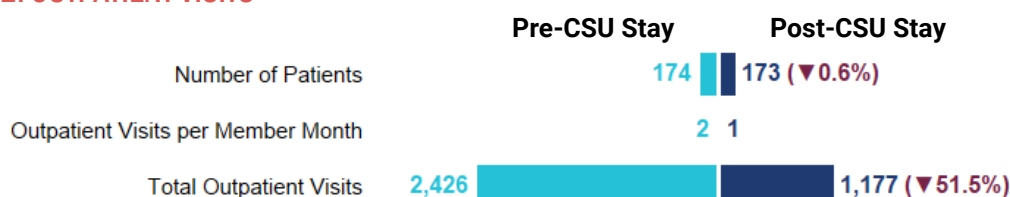


Of those who had continuous healthcare coverage, the overwhelming majority obtained coverage through the state Medicaid program (Figure 1), either through traditional Medicaid (70.6%) or the Arkansas Works Medicaid expansion program (15.7%). The remaining CSU patients in the cohort (13.6%) had healthcare coverage through commercial insurers.

HEALTHCARE UTILIZATION

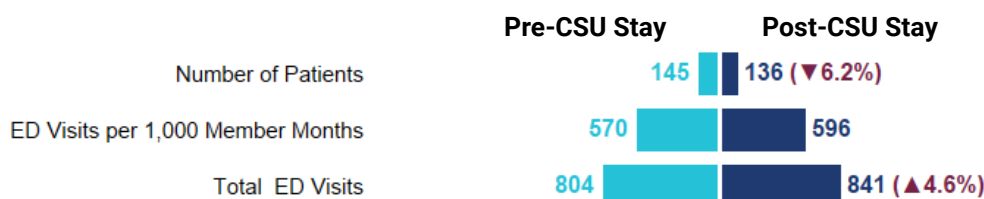
Figures 2–6 show medical utilization among patients in the cohort pre- and post-CSU stays. There was little change in the number of CSU patients in the cohort experiencing an outpatient visit. However, total outpatient visits decreased by 51.5% over the same period, from 2,426 to 1,177. Outpatient visits per member month decreased from two in the pre-CSU period to one in the post-CSU period.

FIGURE 2: OUTPATIENT VISITS



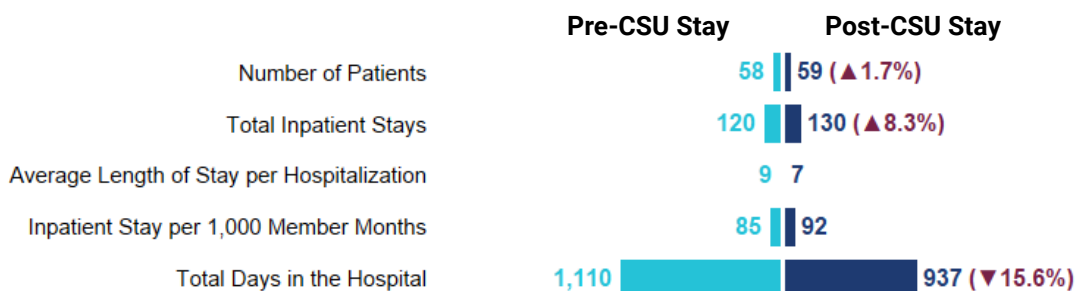
The number of patients experiencing an ED visit decreased by 6.2%, from 145 patients during the pre-CSU period to 136 patients in the post-CSU period. However, total ED visits for patients in the cohort increased by 4.6% over the same period, from 804 to 841. ED visits per 1,000 member months increased from 570 in the pre-CSU period to 596 in the post-CSU period.

FIGURE 3: ED VISITS



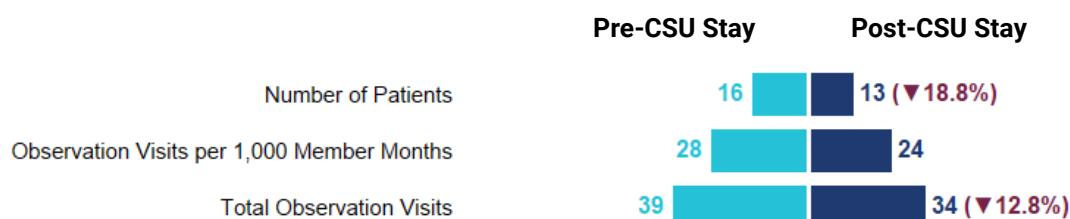
The number of CSU patients in the cohort experiencing an inpatient stay increased by only one from the pre-CSU period to the post-CSU period. The number of inpatient stays increased by 8.3% over the same period, from 120 to 130. However, total inpatient days in the hospital decreased by 15.6%, from 1,110 days in the pre-CSU period to 937 days in the post-CSU period. Average length of stay decreased by two days, from nine in the pre-CSU period to seven during the post-CSU period.

FIGURE 4: INPATIENT VISITS



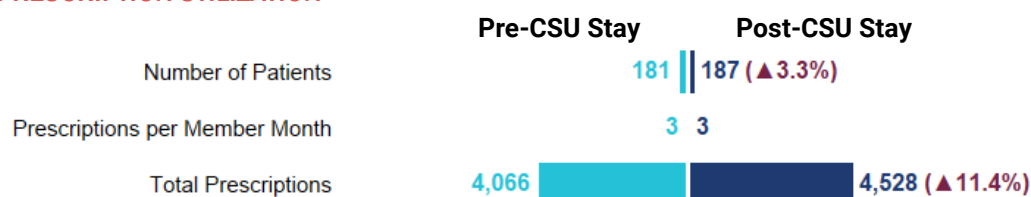
The number of CSU patients in the cohort experiencing an observation visit decreased by 18.8%, from 16 patients in the pre-CSU period to 13 in the post-CSU period. Total observation visits similarly decreased by 12.8% over the same period, from 39 to 34. Observation visits per 1,000 member months declined from 28 visits in the pre-CSU period to 24 in the post-CSU period.

FIGURE 5: OBSERVATION VISITS



The number of CSU patients in the cohort with a prescription increased by 3.3%, from 181 patients in the pre-CSU period to 187 in the post-CSU period. The total number of prescriptions increased over the same period by 11.4%, from 4,066 to 4,528. Prescriptions per member per month remained unchanged across the pre- and post-CSU periods at three prescriptions per member per month.

FIGURE 6: PRESCRIPTION UTILIZATION



COSTS

The number of CSU patients in the cohort who incurred Medicaid costs (either in traditional Medicaid or Arkansas Works) increased by only four, from 193 patients in the pre-CSU period to 197 patients in the post-CSU period, although the number of member months over the same period declined from 1,262 months to 1,259. Total Medicaid costs for CSU patients increased from \$1,766,357 in the pre-CSU period to \$1,829,449 in the post-CSU period, and the cost per member per month similarly increased, from \$1,399 to \$1,453. (Figure 7).

Within the commercially insured CSU patient population, the number of patients who incurred costs increased from 66 in the pre-CSU period to 77 in the post-CSU period, representing a 16.7% increase. The number of member months increased over the same period by 6.7%, from 517 months to 552. However, total costs decreased by 10% over the same period, from \$496,618 to \$446,810. Costs per member per month decreased by \$150, from \$960 in the pre-CSU period to \$810 in the post-CSU period. (Figure 7).

Per member per month costs for CSU patients in the Medicaid population were 31% higher than costs for the commercially covered population in the pre-CSU period and 44% higher in the post-CSU period.

FIGURE 7: MEDICAID AND COMMERCIAL COSTS

Medicaid and Arkansas Works Costs

	Pre-CSU Stay	Post-CSU Stay	Percent Change
Patients Who Incurred Costs	193	197	▲ 2.1%
Number of Member Months	1,262	1,259	▼ 0.3%
Total Costs (\$)	1,766,357	1,829,449	▲ 3.6%
Cost per Member Month (\$)	1,399	1,453	▲ 3.9%

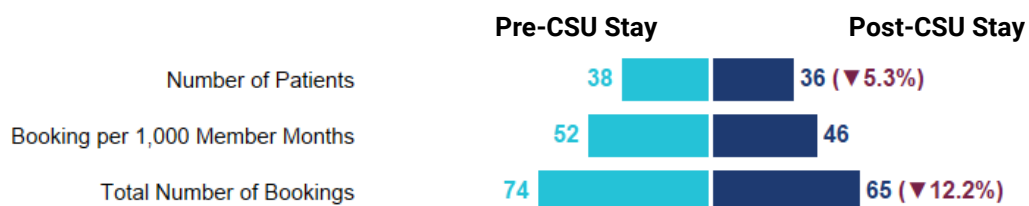
Commercial Costs

	Pre-CSU Stay	Post-CSU Stay	Percent Change
Patients Who Incurred Costs	66	77	▲ 16.7%
Number of Member Months	517	552	▲ 6.7%
Total Costs (\$)	496,618	446,810	▼ 10.0%
Cost per Member Month (\$)	960	810	▼ 15.7%

JAIL INVOLVEMENT

The number of CSU patients who experienced a jail stay declined by 5.3%, from 38 in the pre-CSU period to 36 in the post-CSU period, and the total number of bookings among CSU patients declined over the same period by 12.2%, from 74 to 65. Bookings per 1,000 member months declined from 52 in the pre-CSU period to 46 in the post-CSU period. (Figure 8).

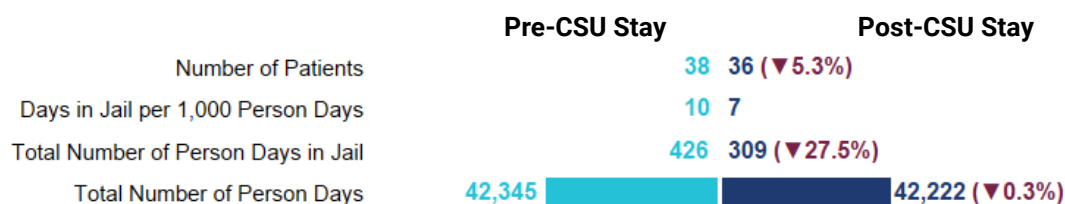
FIGURE 8: JAIL BOOKINGS



The total number of days spent in jail among CSU patients declined by 27.5%, from 426 in the pre-CSU period to 309 in the post-CSU period. To normalize the assessment of days spent in jail by CSU patients, the total number of days a CSU patient could have spent in jail (i.e., person days) was calculated for the pre- and post-CSU periods. The

number of days in jail per 1,000 person days was then calculated using the total number of person days for each period as the denominator and the actual total of days spent in jail by CSU for each period as the numerator. The resulting number of days in jail per 1,000 person days declined from 10 in the pre-CSU period to seven in the post-CSU period. (Figure 9).

FIGURE 9: JAIL STAYS

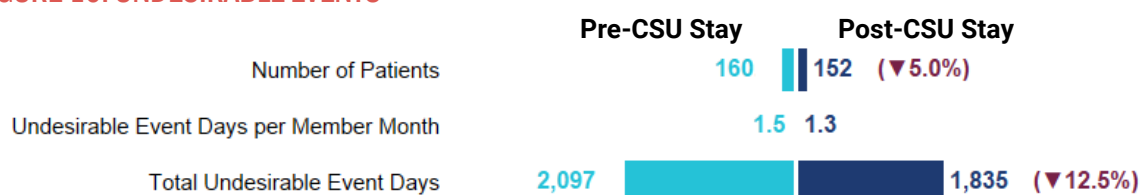


COMBINED OUTCOMES

Outcomes for medical utilization and jail involvement were combined to assess CSU impact. ED, IP, and OB utilization were categorized as undesirable medical events, and for jail involvement, a greater number of bookings or days in jail was categorized as an undesirable outcome.

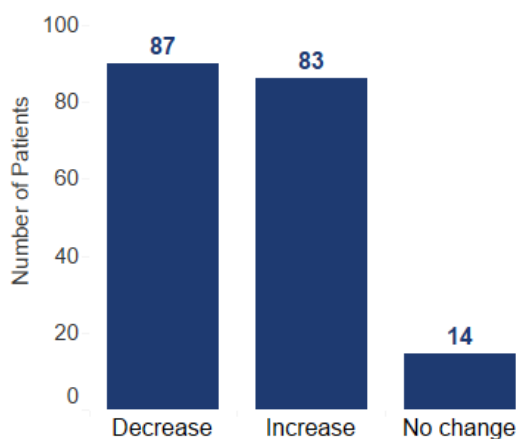
As shown in Figure 10, the number of patients experiencing an undesirable event — either medical or jail-related — decreased by 5%, from 160 patients in the pre-CSU period to 152 in the post-CSU period. The number of days on which CSU patients experienced an undesirable event, however, decreased over the same period by 12.5%, from 2,097 to 1,835. Undesirable event days per member per month also decreased, from 1.5 days in the pre-CSU period to 1.3 in the post-CSU period.

FIGURE 10: UNDESIRABLE EVENTS



Of the patients who experienced an undesirable event during the study period (n = 184), 47.3% had a decrease in undesirable events (n = 87), while 7.6% experienced no change (n = 14). Another 45.1% had an increase in undesirable events (n = 83) (Figure 11). For a more detailed case series for each CSU patient, see Appendix B.

FIGURE 11: PATIENTS BY CHANGE IN UNDESIRABLE EVENTS FROM PRE- TO POST-CSU STAY



Discussion

Findings from both the case series and the assessment of outcomes show that considerable portions of the CSU patient cohort experienced improvements in appropriate medical utilization or jail involvement. Overall, there was a decrease in the number of CSU patients who experienced any undesirable event in the post-CSU period, and nearly half of those who experienced an undesirable event did so less often. Notably, however, a comparable number of CSU patients had an increase in undesirable events.

Much of the improvement observed among CSU patients was in jail involvement. Reductions in the number of CSU patients booked, total bookings, and total jail days were observed in the post-CSU period, with the most discernible reduction being a 27.5% decrease in total jail days. Further examination of the characteristics of this population is needed to better understand these observations.

Improvements in medical utilization among CSU patients were less apparent. In fact, an increase in the total number of ED and inpatient visits was observed. A considerable reduction in the number of outpatient visits, a desirable medical event, was also observed in the post-CSU period. Notably, prescription utilization increased in the post-CSU period, suggesting continuity of access to medication despite the decline in outpatient visits. The individual-level case series may offer additional explanation for these utilization changes in the CSU patient population.

Total and per member per month costs to Medicaid — either through the traditional fee-for-service Medicaid program or the Arkansas Works expansion program — increased in the post-CSU period. This could be the result of increased utilization of more costly ED and inpatient services or an increase in reimbursement rates from year to year in

the Arkansas Works program, which utilizes individual health plans offered through the Health Insurance Marketplace.

Total and per member per month costs for CSU patients with commercial coverage outside of Medicaid decreased in the post-CSU period, despite more patients incurring costs. Because it is unlikely that reimbursement rates for services decreased from the pre-CSU period to the post-CSU period, this suggests that CSU patients in commercial coverage likely experienced less medical utilization or utilized less costly services.

Higher per member per month costs for the Medicaid population compared to the commercially covered population are not unexpected. Medicaid beneficiaries tend to have more disability, a greater disease burden, and less access to primary and specialty care than commercially covered populations, which leads to care-seeking behavior in more costly settings such as the ED.



Appendices

APPENDIX A: SPMI DIAGNOSIS CODES

SPMI Diagnosis Codes	
Code	Description
29540	Schizophreniform disorder, unspecified
29570	Schizoaffective disorder, unspecified
29610	Manic affective disorder, recurrent episode, unspecified
29611	Manic affective disorder, recurrent episode, mild
29612	Manic affective disorder, recurrent episode, moderate
29613	Manic affective disorder, recurrent episode, severe, without mention of psychotic behavior
29614	Manic affective disorder, recurrent episode, severe, specified as with psychotic behavior
29615	Manic affective disorder, recurrent episode, in partial or unspecified remission
29616	Manic affective disorder, recurrent episode, in full remission
29620	Major depressive affective disorder, single episode, unspecified
29621	Major depressive affective disorder, single episode, mild
29622	Major depressive affective disorder, single episode, moderate
29623	Major depressive affective disorder, single episode, severe, without mention of psychotic behavior
29624	Major depressive affective disorder, single episode, severe, specified as with psychotic behavior
29625	Major depressive affective disorder, single episode, in partial or unspecified remission
29626	Major depressive affective disorder, single episode, in full remission
29630	Major depressive affective disorder, recurrent episode, unspecified
29631	Major depressive affective disorder, recurrent episode, mild
29632	Major depressive affective disorder, recurrent episode, moderate
29633	Major depressive affective disorder, recurrent episode, severe, without mention of psychotic behavior
29634	Major depressive affective disorder, recurrent episode, severe, specified as with psychotic behavior
29635	Major depressive affective disorder, recurrent episode, in partial or unspecified remission
29636	Major depressive affective disorder, recurrent episode, in full remission
29640	Bipolar I disorder, most recent episode (or current) manic, unspecified
29641	Bipolar I disorder, most recent episode (or current) manic, mild
29642	Bipolar I disorder, most recent episode (or current) manic, moderate
29643	Bipolar I disorder, most recent episode (or current) manic, severe, without mention of psychotic behavior
29644	Bipolar I disorder, most recent episode (or current) manic, severe, specified as with psychotic behavior



29645	Bipolar I disorder, most recent episode (or current) manic, in partial or unspecified remission
29646	Bipolar I disorder, most recent episode (or current) manic, in full remission
29650	Bipolar I disorder, most recent episode (or current) depressed, unspecified
29651	Bipolar I disorder, most recent episode (or current) depressed, mild
29652	Bipolar I disorder, most recent episode (or current) depressed, moderate
29653	Bipolar I disorder, most recent episode (or current) depressed, severe, without mention of psychotic behavior
29654	Bipolar I disorder, most recent episode (or current) depressed, severe, specified as with psychotic behavior
29655	Bipolar I disorder, most recent episode (or current) depressed, in partial or unspecified remission
29656	Bipolar I disorder, most recent episode (or current) depressed, in full remission
29660	Bipolar I disorder, most recent episode (or current) mixed, unspecified
29661	Bipolar I disorder, most recent episode (or current) mixed, mild
29662	Bipolar I disorder, most recent episode (or current) mixed, moderate
29663	Bipolar I disorder, most recent episode (or current) mixed, severe, without mention of psychotic behavior
29664	Bipolar I disorder, most recent episode (or current) mixed, severe, specified as with psychotic behavior
29665	Bipolar I disorder, most recent episode (or current) mixed, in partial or unspecified remission
29666	Bipolar I disorder, most recent episode (or current) mixed, in full remission
2967	Bipolar I disorder, most recent episode (or current) unspecified
29680	Bipolar disorder, unspecified
29681	Atypical manic disorder
29682	Atypical depressive disorder
29689	Other and unspecified episodic mood disorder
29690	Unspecified episodic mood disorder
29699	Other specified episodic mood disorder
2971	Delusional disorder
30183	Borderline personality disorder
F2081	Schizophreniform disorder
F209	Schizophrenia, unspecified
F22	Delusional disorders
F259	Schizoaffective disorder, unspecified
F3010	Manic episode without psychotic symptoms, unspecified
F3011	Manic episode without psychotic symptoms, mild
F3012	Manic episode without psychotic symptoms, moderate
F3013	Manic episode, severe, without psychotic symptoms
F302	Manic episode, severe with psychotic symptoms
F303	Manic episode in partial remission
F304	Manic episode in full remission



F308	Other manic episodes
F3110	Bipolar disorder, current episode manic without psychotic features, unspecified
F3111	Bipolar disorder, current episode manic without psychotic features, mild
F3112	Bipolar disorder, current episode manic without psychotic features, moderate
F3113	Bipolar disorder, current episode manic without psychotic features, severe
F312	Bipolar disorder, current episode manic severe with psychotic features
F3130	Bipolar disorder, current episode depressed, mild or moderate severity, unspecified
F3131	Bipolar disorder, current episode depressed, mild
F3132	Bipolar disorder, current episode depressed, moderate
F314	Bipolar disorder, current episode depressed, severe, without psychotic features
F315	Bipolar disorder, current episode depressed, severe, with psychotic features
F3160	Bipolar disorder, current episode mixed, unspecified
F3161	Bipolar disorder, current episode mixed, mild
F3162	Bipolar disorder, current episode mixed, moderate
F3163	Bipolar disorder, current episode mixed, severe, without psychotic features
F3164	Bipolar disorder, current episode mixed, severe, with psychotic features
F3173	Bipolar disorder, in partial remission, most recent episode manic
F3174	Bipolar disorder, in full remission, most recent episode manic
F3175	Bipolar disorder, in partial remission, most recent episode depressed
F3176	Bipolar disorder, in full remission, most recent episode depressed
F3177	Bipolar disorder, in partial remission, most recent episode mixed
F3178	Bipolar disorder, in full remission, most recent episode mixed
F3181	Bipolar II disorder
F3189	Other bipolar disorder
F319	Bipolar disorder, unspecified
F320	Major depressive disorder, single episode, mild
F322	Major depressive disorder, single episode, severe without psychotic features
F323	Major depressive disorder, single episode, severe with psychotic features
F324	Major depressive disorder, single episode, in partial remission
F325	Major depressive disorder, single episode, in full remission
F3289	Other specified depressive episodes
F329	Major depressive disorder, single episode, unspecified
F330	Major depressive disorder, recurrent, mild
F331	Major depressive disorder, recurrent, moderate
F332	Major depressive disorder, recurrent severe without psychotic features
F333	Major depressive disorder, recurrent, severe with psychotic symptoms
F3341	Major depressive disorder, recurrent, in partial remission
F3342	Major depressive disorder, recurrent, in full remission
F339	Major depressive disorder, recurrent, unspecified
F3481	Disruptive mood dysregulation disorder This is a new code appropriate for these purposes
F3489	Other specified persistent mood disorders



F39	Unspecified mood [affective] disorder
F603	Borderline personality disorder



APPENDIX B: DETAILED CASE SERIES OF SEBASTIAN COUNTY CSU PATIENTS AT LEAST 6 MONTHS CONTINUOUS COVERAGE PRE- AND POST-CSU, RANK ORDERED BY GREATEST REDUCTION IN UNDESIRABLE EVENTS FROM PRE- TO POST-CSU STAY

