

**Serious Mental Illness in Texas Medicaid:
Descriptive Analysis and Policy Options
Year 2 Final Report**

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Table of Contents

Executive Summary	2
I. Introduction	5
II. Data Acquisition and Linkage	9
III. Analysis of Linked Data	11
IV. Administrative and Legislative Issues Identified by Stakeholder Interviews	26
V. Conclusion	31
Appendix	34

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Executive Summary

Medicaid enrollees with serious mental illness (SMI) frequently qualify for health care services from multiple federal and state programs including the State Mental Hospital System, Local Mental Health Authorities, Medicare, and through the Criminal Justice System. In certain circumstances, they may also receive mental health services through the Foster Care program or in state-sponsored Centers for Individuals with Developmental Disabilities. Because each of these state programs maintains its own administrative data, there is limited ability to describe the overall use and cost of services provided to this population, or to assess effectiveness and efficiency across programs.

To demonstrate the value of linked data across state programs, in 2014 the Texas Institute of Health Care Quality and Efficiency and The Meadows Mental Health Policy Institute contracted with the University of Texas School of Public Health to obtain and link data on state-supported healthcare services for Medicaid enrollees with SMI and conduct basic descriptive analyses.

The initial data obtained was the Medicaid acute care enrollment, service, and payment data (covering physical and behavioral healthcare) for the five-year period 2008-2012. With these data, the research team identified all adults (19 years and older) with a service episode with one or more of three diagnoses (schizophrenia, major depression, and bipolar disorder) as the primary diagnosis. We then requested data for this population from four other programs for the period 2010-12: federal Medicare, Texas Department of Aging and Disability Services (DADS) Long-Term Services and Supports (LTSS), Texas Department of State Health Services (DSHS) Local Mental Health Authority (LMHA) and State Mental Hospital (SH) encounters, and Texas Health Care Information Collection (THCIC) hospital discharges. After cleaning and organizing these data sets, they were linked and our team began developing a profile of the characteristics of the Medicaid SMI population and their service use and cost across programs. The methods and procedures followed in this process and the findings from previously-accomplished analyses are

available in: [Interim Report 2014](#); [Final Report 2014/2015](#); [County-Level Enrollee Report 2015](#), and [Interim Report 2015](#).

This report provides a brief overview of this project, describes the linked database, and reports the latest results on cross-program utilization and costs for the Medicaid SMI population (including both SMI-related and non-SMI related, physical and behavioral, healthcare services). We also present results from recent interviews with representatives of Medicaid managed care organizations (MCOs) that complement the previously reported interviews of LMHA representatives regarding the state's strategy of expanding managed care to people with SMI.

Major findings on utilization and cost are the following:

- The vast majority of Medicaid enrollees with SMI, approximately 69%, are also receiving services through one or more other program; 42% are enrolled in Medicare.
- Of the Medicaid population with SMI, 52% had at least one hospitalization in the three-year time span (2010-2012), 32% received services from LMHAs (a large portion of funded by Medicaid), and 22% also received LTSS services.
- Average combined total health care cost per enrollee in 2012 (Medicaid, Medicare, plus LMHA/SH costs) was approximately \$15,000. The standard deviation was approximately \$25,000 indicating the substantial variability in costs and a modest portion with very high costs.
- Medicaid enrollees with SMI who had the highest costs in 2012 (top 10%) had average costs of approximately \$72,500, and accounted for 47% of the total costs for all SMI enrollees.
- Most Medicaid enrollees with SMI are SSI recipients (75%). Compared to non-SMI enrollees, these SMI enrollees have greater costs, on average, both overall and SMI-treatment related.
- SMI-related costs account for 21% of the total costs for all SMI enrollees enrollees. For SMI enrollees who were Medicaid-only, the SMI-related portion of total costs was 26%. For Medicaid-Medicare enrollees, SMI care accounted for 14% of total costs.
- LMHA/SH costs not covered by Medicaid or Medicare were approximately 1% of total costs for all Medicaid enrollees with SMI. This figure refers to costs for LMHA/SH services received by Medicaid enrollees with SMI but not paid by Medicaid or

Medicare.

- Average annual costs were higher for those with major depression (approximately \$16,000) than schizophrenia (\$12,000) or bipolar disorder (\$9,000). Further analysis is needed to explain the differences; it is possible that depression is more common among older adults with more costly co-morbid chronic illness.

Major findings from MCO interviews are the following:

- Interviews were conducted with representatives from MCOs representing 12 of the 14 MCO service areas directly involved with behavioral health.
- The state is providing strong support for the transition to managed care for this population, but a range of challenges exist. These include the key challenge of being able to hire or contract with psychiatrists, a difficulty attributed to low reimbursement rates.
- Suggestions for improvement include supporting additional types of care, including step- down care and partial hospitalization, under the per-member-per-month capitation payment.

We are continuing to work on this project to further develop and document the linked database and to extend the examination of the utilization and cost of care for the SMI population across state programs.

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I. Introduction

For many Texans, serious mental illness (SMI) interferes with the ability to sustain steady employment and obtain employer-sponsored or individual health insurance. Consequently, many with SMI rely on public programs to pay for necessary health care. Texas' largest public program for people with SMI is Medicaid, which pays for physician visits, counseling, case management, rehabilitation, crisis care, and inpatient care of those who meet the income, disability, and residency requirements. Texas Medicaid also pays for long-term care (nursing homes and community-based nursing and support services) for those who qualify through the Department of Aged and Disability Services (DADS) Long Terms Services and Supports program (LTSS). Individuals with SMI may also receive state-supported ambulatory services provided by Local Mental Health Authorities (LMHAs) and institutional care in State Mental Health Hospitals (SH) paid directly by the Texas Department of Health and Human Services (DSHS). If they are elderly or have long-term disability, individuals with SMI may qualify for services covered by Medicare as well as Medicaid. If incarcerated, they may receive mental health services paid by the Texas Department of Corrections. If in the Texas Foster Care Program or in a Center for Individuals with Developmental Disabilities (IDD), they may receive services paid by the Texas Department of Family and Protective Services. In addition, due to gaps in coverage or payment shortfalls, some individuals with SMI may incur uncompensated care costs in public or private hospitals that end up being paid by the state through Medicaid supplemental payment programs. Although the state collects and maintains data on these programs to meet a variety of payment and reporting requirements, the data have not been linked to provide a comprehensive picture of the patterns of care and costs for the Medicaid SMI population across programs.

To demonstrate the value of linked data, the Texas Institute of Health Care Quality and Efficiency and The Meadows Mental Health Policy Institute contracted with the University of Texas School of Public Health in 2014 to obtain and link administrative data on state-supported healthcare services and costs for Medicaid enrollees with SMI. The goal has been to develop a profile of the Medicaid SMI population including enrollment patterns across state programs, as

well as patterns of utilization and costs of the SMI population using these programs.

The project initially obtained Medicaid acute care enrollment, service, and payment data from the Texas Health and Human Services Commission (HHSC) for 2008-2012 (covering physical and behavioral healthcare) and identified the adult (age 19 years or greater) population of Medicaid enrollees with an SMI diagnosis. We then obtained, for the three-year period 2010-2012, service and payment data from federal Medicare claims, the DADS LTSS program, the DSHS LMHA and SH programs, and the THCIC hospital discharge reporting system. The data were linked for the Medicaid SMI adult population and we began developing a profile of the characteristics of this population and their health care utilization and costs across programs. It is important to note that the linked data do not cover all of the state programs noted above that directly provide or pay for services used by this population; data representing enrollment and utilization from the criminal justice system, IDD centers, and foster care programs have not yet been included. Table 1 summarizes the relevant data sets that are and are not included.

Table 1. SMI-Related Databases and Programs Included/Not Included.

Database	Agency and Program	Years Covered
Medicaid Acute Care Claims	Health and Human Services, Medicaid Purchased Health	2008-2012
Medicare Claims	Centers for Medicare and Medicaid Services, Medicare	2010-2012
Medicaid Long-Term Services and Support Encounters	Department of Disability and Assistive Services, Long-term Services and Supports Program	2010-2012
Local Mental Health and State Hospital Encounters and Payments	Department of State Health Services, Local Mental Health and State Hospital Programs	2010-2012
Hospital Discharges	Department of State Health Services, Texas Healthcare Information Collection	2010-2012
Medicaid Foster Care Claims Medical Care for Individuals with Developmental Disabilities	Texas Department of Family and Protective Services, Foster Care Program, Centers for Individuals with Developmental Disabilities	Not Included
Department of Corrections Medical Services Data	Department of Corrections, Medical Services Program	Not Included

In addition to the data linkage, the project also conducted interviews with LMHA providers and representatives of Medicaid MCOs regarding SMI care and administrative issues related to the state's expansion of the Medicaid managed care model. The results from these interviews are aimed at informing policymakers of knowledge and attitudes of stakeholders regarding recent changes in the Medicaid program for the SMI population.

This report describes the data sets that have been linked and presents initial results of cross-program service use and costs. We also present results from the key informant interviews that were conducted with representatives of Medicaid MCOs regarding their views on how well the state's strategies for addressing Medicaid-funded care for people with SMI are working in light of recent changes in Medicaid coverage and payment. The methods and procedures followed in this process and findings from previously-accomplished analyses are available in: [Interim Report 2014](#); [Final Report 2014/2015](#); [County-Level Enrollee Report 2015](#), and [Interim Report 2015](#).

II. Data Acquisition and Linkage

Having obtained the 2008-2012 Medicaid acute care claims data and linked them to the other state program data for 2010-2012, we have requested the FY 2013-2014 Medicaid claims, encounter, enrollment, pharmacy, diagnosis, and provider data, and a Medicaid data refresh for FY 2008-2012 with additional variables along with the variables already provided. This request encompasses data on the same programs that were requested for the period FY 2008-2012, i.e., Fee for Service, Primary Care Case Management, STAR, STAR+PLUS, STAR HEALTH, NorthSTAR, Dental Managed Care, Medically Needy Program, and Dual-Eligible enrollees. We also requested CHIP and long term care claims data, if available, for FY 2008-2012 and FY 2013- 2014. In working with the FY 2008-2012 data, we identified several additional variables that we also requested both for FY 2013-2014 and the prior period (FY 2008-2012). We also began the process of updating the legal agreement between our research team and HHSC by which we are able to receive, manage, and analyze the Medicaid claims data.

As we have described in earlier reports, we have been able to link five data sets (Medicaid, Medicare, DSHS LMHA/SH, THCIC, DADS LTSS) and describe the number of Medicaid SMI enrollees with utilization in each data set. Each of the additional data sets has its own unique content, corresponding to information needed for that program's functioning. We have aggregated the use and cost information from the Medicaid, Medicare, and LMHA/SA data sets and present findings below.

Although Medicare data are very similar to Medicaid data in terms of content, the Medicare claims are organized differently. In particular, Medicaid files are organized by the state's fiscal year, which extends from September through August, while Medicare files are organized by calendar year, extending from January through December. Thus, to build a Medicare data set to match the Medicaid FY 2012 data set (September, 2011-August, 2012), we combined data from the corresponding months from Medicare files for CY 2011 (September-December) and CY 2012 (January-August). Similarly, we matched the Medicaid file for FY 2011 (September, 2010-August, 2011) to Medicare data from CY 2010 (September 2010-December 2010) and CY 2011 (January 2011-August 2011). Since we did not receive Medicare data for CY 2009, we were not able to match Medicaid and Medicare data for FY 2010.

Finally, Medicaid and Medicare have separate eligibility/re-enrollment requirements, with Medicare enrollment being more continuous. In our analyses of Medicare data, we have taken care to identify and separate Medicare services that are provided during the time when an individual was enrolled in Medicaid versus not enrolled.

III. Analysis of Linked Data

The portion of FY 2010-2012 adult Medicaid enrollees with SMI who had any utilization in Medicare, LMHA/SH, THCIC, or LTSS data sets is reported in this section. Cost estimates for Medicare and LMHA/SH services are also presented for 2012, the most recent year for which we have data.

Cross-Program Utilization

Table 2 presents the portion of FY 2010-2012 Medicaid enrollees with SMI who had any utilization in the other four data sets, Medicare, LMHA/SH, THCIC, or LTSS, for any of those years. Approximately 69% of the Texas Medicaid SMI cohort used services from one or more non-Medicaid program: 42% were Medicaid/Medicare dual-eligible clients, 31% received services from LMHA/SH clinics or hospitals, and 22% received LTSS. A small portion (1%) received services from all three programs. Across all payers, a little over half (148,396 or 51%) had at least one inpatient hospital discharge reflected in the THCIC data (data not included in Table 2).

Table 2. Number and Percent of SMI Medicaid Enrollees with Utilization Across Programs (2010 to 2012).

	Number	Percent
Medicaid Acute Care	288,355	100.0%
Medicaid/Medicare	122,003	42.3%
DADS LTSS	62,595	21.7%
DSHS LMHA/SH	90,824	31.5%
Any	199,024	69.0%
All	3,520	1.2%

Combined Acute Care Costs

The following series of tables presents a summary of total costs, SMI-related (mental health treatment) and non-SMI-related (treatment for other conditions), for inpatient, outpatient,

and pharmacy services in FY 2012 for the Medicaid SMI cohort that includes the costs to Medicaid, Medicare, and the LMHAs/SHs not paid by Medicaid and Medicare . These costs are based on Medicaid (claims, encounters, and pharmacy), Medicare (including Part D/pharmacy claims), and LMHA/SH (beyond those reported in the Medicaid or Medicare claims and encounter files) payments. Costs billed to Medicaid and Medicare by the LMHAs/SHs were separated in the data so that the remaining estimates represent additional costs of LMHA/SH services not paid by Medicaid or Medicare. These combined cost figures do not include LTSS costs, nor do they include other costs such as those borne through criminal justice system or any other state-supported public health care program that might be serving Medicaid SMI patients. Because they are for the latest year available and are very similar to the FY 2011 data, we present only the FY 2012 results here. Results for FY 2011 are available on request.

Each table presented in the following tables contains the number of unique individuals in each program category, as well as the combined total costs and SMI-related costs. The tables include the total annual costs for the SMI population, the average cost per person (with standard deviation), the average number of months enrolled in Medicaid, the average cost per member per-month, and the percent of acute care costs that are attributable to SMI. With the exception of pharmacy costs, SMI-related costs were identified based on a claim or encounter with an SMI primary diagnosis. Non-SMI related costs included all other claims for the same individuals with a primary diagnosis other than SMI. All LMHA/SH costs were regarded as SMI-related. More detail on our methodology for determining SMI-related acute care costs is available on request.

To estimate SMI-related pharmacy costs in Medicaid and Medicare, we coded each prescription medication as SMI-related or not based on patient prescription information (coded per National Drug Code/NDC system), with the following exceptions. Dual-indication epilepsy/mood stabilizer medications were coded as SMI-related in the absence of an epilepsy (ICD: 345.xx or 780.3) diagnosis. Certain dual-indication blood pressure/anxiety medications were coded as SMI-related in the absence of a hypertension (401.xx-405.xx) or IHD (410.xx-414.xx) diagnosis. Certain dual-indication appetite suppressant/attention deficit-hyperactivity medications were coded as SMI-related in the presence of an ADHD (314.x) diagnosis. Overall, the dual-indication medications accounted for about 5% of all prescribed

drug fills, and about 11% of all fills classified as SMI-related. More specific descriptions of methods including resources used to identify dual-indication drugs is available on request.

Costs of care

Table 3 presents overall Medicaid, Medicare, and LMHA/SH costs for Medicaid enrollees with SMI in FY 2012. There were 232,348 Medicaid enrollees in the SMI cohort, representing 12% of all adult Medicaid enrollees. These 232,348 SMI enrollees represented 81% of all individuals enrolled throughout the FY2010-2012 period.

Total 2012 costs for Medicaid enrollees with SMI were \$3,593,605,695. Of this total, 44% was paid by Medicaid, 55% paid by Medicare, and 1% paid by LMHA/SH. The average (mean) annual total cost per Medicaid SMI enrollee was \$15,466 (\$25,124 SD). Individuals were enrolled in Medicaid for an average of 10.0 months in FY 2012. Of the combined costs, 21% were SMI-related.

Of these SMI-related costs, 26% were paid by Medicaid and 14% were by Medicare. As expected, median costs were substantially lower than average costs, indicating that the cost distributions within each group were highly skewed by high-cost individuals. This is typical of health care costs, and indicates how a small number of individuals with very high costs can have a large impact on the average. In the case of our 2012 SMI cohort, the 10% of patients with highest costs accounted for 47% of total costs, and had an average cost of \$72,482 compared to \$9,131 for the remaining 90%. The skewed cost distributions are evident in each of the remaining cost tables. Although not shown in Table 3, total SMI-related costs were \$738,065,030. The majority of SMI-related costs were paid by Medicaid (55%, versus 38% by Medicare and 6% by LMHAs).

Table 3. Combined Medicaid/Medicare/LMHA/SH cost for the Medicaid SMI cohort, FY2012.

	Enrollees receiving services	Percent of total enrollees	Total cost	Percent of total cost	Mean (SD) per SMI enrollee^a		Median	Lower quartile	Upper quartile	Avg. cost per month enrolled^a	Percent of total costs SMI-related	Average months enrolled
Total combined costs	232,348	100%	\$3,593,605,695	100%	\$15,466	(\$25,124)	\$7,000	\$2,370	\$18,144	\$1,551	21%	10
Medicaid	232,348	100%	\$1,575,233,471	44%	\$6,780	(\$13,276)	\$2,303	\$548	\$7,950	\$680	26%	10
Medicare	99,062	43%	\$1,971,569,568	55%	\$19,902	(\$30,190)	\$9,213	\$3,000	\$24,168	\$1,916	14%	10
LMHA/SH	43,846	19%	\$46,802,097	1%	\$1,067	(\$2,321)	\$445	\$166	\$1,068	\$102	100%	10

^a Average costs per enrollee and per enrolled month were calculated only for those Medicaid SMI enrollees who were receiving services within the noted system (e.g., receiving Medicare or LMHA services).

Table 4 provides average 12-month combined acute care costs for Medicaid-only enrollees and for dual eligibles. Although Medicaid-only enrollees accounted for 57% of the cohort, they accounted for only 36% (\$1,298,417,565) of combined total costs. Medicaid-Medicare enrollees accounted for the remaining 64% (\$2,295,187,290) of total combined costs. Medicaid-only enrollees had slightly shorter average lengths of enrollment (9.7 months) than dually enrolled (10.4 months), and lower costs per member month. The percentage of costs attributable to SMI-related care was substantially higher for the Medicaid-only enrollees (30%) than for dual-eligible enrollees (15%).

Table 4. Combined acute care costs, by dual Medicaid-Medicare enrollment status, Medicaid enrollees with SMI, Fiscal Year 2012.

	Number of enrollees	Percent of enrollees	Total Costs	Percent of total costs	Mean (SD) per SMI enrollee		Median	Lower quartile	Upper quartile	Avg. cost per month enrolled	Percent of total costs attributed to SMI-related care	Avg. months enrolled
Medicaid-Only	133,286	57%	\$1,298,417,565	36%	\$9,742	(\$16,365)	\$4,769	\$1,552	\$11,561	\$1,008	30%	10
Medicaid-Medicare	99,062	43%	\$2,295,187,290	64%	\$23,169	(\$31,887)	\$12,352	\$4,456	\$29,170	\$2,230	15%	10

Table 5 presents FY 2012 costs by SSI status. Most Medicaid enrollees with SMI were SSI enrollees for at least one month during FY 2012; consequently, a large majority of total costs (\$3,159,372,665 or 88%) were accounted for by SSI enrollees. Compared to non-SSI enrollees, SSI enrollees had longer mean lengths of enrollment, higher per person costs, and higher costs per member-month. Although the percentage of total costs attributable to SMI-related care was roughly equivalent (22% versus 20% for SSI and non-SSI enrollees, respectively), the higher total costs for SSI enrollees meant higher per-person SMI-related costs as well (\$3,709 versus \$1,609 for SSI versus non-SSI enrollees, respectively).

Table 5. Combined acute care costs by SSI eligibility status, Medicaid enrollees with SMI, Fiscal Year 2012.

	Number of enrollees	Percent of enrollees	Total costs	Percent of total cost	Mean (SD) per SMI Enrollee		Median	Lower quartile	Upper quartile	Avg. cost per month enrolled	Percent of total costs attributed to SMI related care	Avg. months enrolled
non-SSI	58,900	25%	\$434,232,593	12%	\$7,372	(\$14,655)	\$3,093	\$985	\$7,611	\$888	22%	8
SSI	173,448	75%	\$3,159,372,665	88%	\$18,215	(\$27,255)	\$9,211	\$3,374	\$22,034	\$1,735	20%	11

Table 6 presents FY 2012 costs by SMI diagnosis. Individuals with Major Depression alone accounted for the largest percentage of SMI enrollees (42%) and a similar percentage of the total costs (45%, or \$1,604,616,139). Interestingly, they had the smallest percentage of SMI-related costs (7%). As a result, although they represent 42% of SMI enrollees, they only accounted for 15% of SMI-related costs. Individuals with a diagnosis of Schizophrenia, alone or in combination with other SMI diagnoses, had the highest percentage of SMI-related costs (31% to 42%, depending on which other SMI diagnoses were present).

Per-person costs were generally higher for those with more than one diagnosis. Individuals with Major Depression alone, or in combination with other diagnoses, generally had higher per-person costs than other SMI enrollees (although, as noted above, the SMI-related costs for individuals with Major Depression alone were the lowest among the diagnostic groups). Individuals with all three diagnoses had the highest per-person and per-month costs.

Table 6. Combined acute care costs, by SMI diagnosis groups, Medicaid enrollees with SMI, Fiscal Year 2012.

	Number of enrollees	Percent of enrollees	Total cost	Percent of total cost	Mean (SD) per SMI enrollee		Median	Lower quartile	Upper quartile	Avg. cost per month enrolled	Percent of total costs attributed to SMI related care	Avg. months enrolled
Schizophrenia	25,029	11%	\$299,284,768	8%	\$11,958	(\$17,578)	\$6,575	\$2,436	\$14,817	\$1,128	41%	11
Major Depression	97,574	42%	\$1,604,616,139	45%	\$16,445	(\$28,290)	\$6,469	\$1,987	\$18,992	\$1,768	7%	9
Bipolar Disorder	35,670	15%	\$334,084,863	9%	\$9,366	(\$17,946)	\$4,137	\$1,401	\$10,070	\$986	22%	10
Schizophrenia and Major Depression	10,557	5%	\$211,226,990	6%	\$20,008	(\$24,975)	\$11,986	\$4,996	\$25,224	\$1,803	31%	11
Schizophrenia and Bipolar Disorder	11,014	5%	\$175,775,620	5%	\$15,959	(\$20,555)	\$9,781	\$4,074	\$20,357	\$1,438	45%	11
Major Depression and Bipolar Disorder	36,199	16%	\$552,489,771	15%	\$15,263	(\$23,989)	\$7,330	\$2,928	\$17,336	\$1,440	20%	11
All 3 SMI categories	16,305	7%	\$416,126,753	12%	\$25,521	(\$28,975)	\$16,790	\$7,471	\$33,265	\$2,259	42%	11

Table 7 compares the combined costs by diagnosis and SSI status for Medicaid-only and dual enrollees. Primarily because of their high representation, the highest percentage of total costs were attributable to SSI-enrolled individuals with Major Depression. They accounted for 25% of combined acute care costs among Medicaid-only enrollees and 48% among Medicaid-Medicare enrollees. If SSI and non-SSI enrolled individuals are combined, enrollees with Major Depression account for almost a third (31%) of combined acute care costs for Medicaid-only enrollees and more than half (53%) of combined costs for Medicaid-Medicare enrollees. In contrast, these individuals alone account for 12% of SMI-related costs among the Medicaid-only enrollees, and 19% of SMI-related costs among the Medicaid-Medicare enrollees. The highest per-person costs were for SSI enrollees, and among these Medicaid-only enrollees with all three diagnoses. Also, as before, individuals with a diagnosis of Schizophrenia, alone or in combination with another SMI diagnosis, had the highest percentage of SMI-related costs.

Table 7. Combined acute care cost by dual enrollment status, SMI diagnosis group, and SSI eligibility status, Medicaid enrollees with SMI, Fiscal Year 2012.

Medicaid-Only Enrollees													
	SSI Status	Number of enrollees	Percent of enrollees	Total costs	Percent of total cost	Mean (SD) per SMI enrollee		Median	Lower quartile	Upper quartile	Avg. cost per month enrolled	Percent of total costs attributed to SMI related care	Avg. mo. enrolled
Schizophrenia	non-SSI	424	0%	\$1,523,814	0%	\$3,594	(\$6,294)	\$1,765	\$526	\$4,343	\$599	45%	6
	SSI	13,799	10%	\$131,058,210	10%	\$9,498	(\$11,911)	\$5,879	\$2,165	\$12,503	\$897	52%	11
Major Depression	non-SSI	21,725	16%	\$80,756,822	6%	\$3,717	(\$8,013)	\$1,730	\$591	\$4,493	\$519	13%	7
	SSI	27,937	21%	\$320,763,974	25%	\$11,482	(\$21,025)	\$5,303	\$1,781	\$13,413	\$1,163	11%	10
Bipolar Disorder	non-SSI	8,108	6%	\$32,246,732	2%	\$3,977	(\$8,468)	\$1,983	\$680	\$5,016	\$561	22%	7
	SSI	16,267	12%	\$137,991,822	11%	\$8,483	(\$15,519)	\$4,339	\$1,531	\$9,916	\$835	29%	10
Schizophrenia and Major Depression	non-SSI	285	0%	\$1,974,070	0%	\$6,927	(\$10,392)	\$4,012	\$1,872	\$8,085	\$869	40%	8
	SSI	5,069	4%	\$73,873,376	6%	\$14,574	(\$16,653)	\$9,604	\$4,264	\$19,191	\$1,295	40%	11
Schizophrenia and Bipolar Disorder	non-SSI	337	0%	\$2,299,209	0%	\$6,823	(\$11,783)	\$4,076	\$1,543	\$8,289	\$863	43%	8
	SSI	6,167	5%	\$82,845,505	6%	\$13,434	(\$16,588)	\$9,002	\$4,014	\$17,628	\$1,203	51%	11
Major Depression and Bipolar Disorder	non-SSI	8,289	6%	\$49,121,857	4%	\$5,926	(\$9,650)	\$3,613	\$1,319	\$7,276	\$662	29%	9
	SSI	15,460	12%	\$194,722,101	15%	\$12,595	(\$17,778)	\$7,222	\$3,033	\$15,487	\$1,128	25%	11
All 3 SMI categories	non-SSI	565	0%	\$5,968,846	0%	\$10,564	(\$12,425)	\$6,699	\$2,820	\$13,678	\$1,143	53%	9
	SSI	8,854	7%	\$183,271,248	14%	\$20,699	(\$20,854)	\$14,934	\$6,921	\$27,793	\$1,809	48%	11

Medicaid-Medicare Enrollees

Schizophrenia	non-SSI	2,588	3%	\$23,789,388	1%	\$9,192	(\$14,297)	\$4,362	\$1,610	\$11,068	\$913	45%	10
	SSI	8,218	8%	\$142,913,403	6%	\$17,390	(\$24,306)	\$9,725	\$3,672	\$21,370	\$1,584	32%	11
Major Depression	non-SSI	7,518	8%	\$105,279,366	5%	\$14,004	(\$22,598)	\$5,969	\$2,197	\$15,915	\$1,493	7%	9
	SSI	40,394	41%	\$1,097,816,014	48%	\$27,178	(\$35,741)	\$15,464	\$5,914	\$34,990	\$2,718	5%	10
Bipolar Disorder	non-SSI	3,490	4%	\$34,499,976	2%	\$9,885	(\$16,595)	\$4,776	\$1,814	\$11,259	\$1,035	20%	10

Schizophrenia and Major Depression	SSI	7,805	8%	\$129,346,255	6%	\$16,572	(\$26,240)	\$7,584	\$2,722	\$19,363	\$1,584	15%	10
	non- SSI	793	1%	\$12,680,942	1%	\$15,991	(\$20,340)	\$9,042	\$2,920	\$20,877	\$1,563	41%	10
Schizophrenia and Bipolar Disorder	SSI	4,410	4%	\$122,698,592	5%	\$27,823	(\$31,374)	\$17,425	\$7,704	\$36,714	\$2,471	25%	11
	non- SSI	1,005	1%	\$15,048,056	1%	\$14,973	(\$18,584)	\$8,830	\$3,342	\$18,018	\$1,425	48%	11
Major Depression and Bipolar Disorder	SSI	3,505	4%	\$75,582,801	3%	\$21,564	(\$26,088)	\$13,210	\$5,194	\$27,369	\$1,900	39%	11
	non- SSI	2,588	3%	\$41,224,433	2%	\$15,929	(\$23,790)	\$8,526	\$3,698	\$18,569	\$1,524	19%	10
All 3 SMI categories	SSI	9,862	10%	\$267,421,444	12%	\$27,116	(\$34,134)	\$15,347	\$6,110	\$34,864	\$2,417	14%	11
	non- SSI	1,185	1%	\$27,819,273	1%	\$23,476	(\$27,041)	\$14,879	\$6,049	\$32,066	\$2,221	45%	11
	SSI	5,701	6%	\$199,067,347	9%	\$34,918	(\$37,568)	\$23,231	\$10,264	\$46,985	\$3,044	35%	11

Finally, Table 8 compares the combined costs of the sub-population of SMI enrollees in the Pregnant Women and Infant (PWI) Program. Since depression is known to occur during and post-pregnancy, we wanted to determine what the percentage representation was of these Medicaid enrollees in our SMI group, and what their costs were compared to our other SMI patients. Approximately 4% of our SMI patients were enrolled the PWI Program. They accounted for approximately 1% of the total costs, with both average costs (\$5,192 versus \$15,940, respectively) and the percent of costs attributable to SMI-related care (11% versus 21%, respectively) running substantially lower than the remainder of the group.

Table 8. Combined Acute Care Costs by Pregnant Women’s Program Enrollment Status, Medicaid Enrollees with SMI, Fiscal Year 2012.

	Number of enrollees	Percent of enrollees	Total cost	Percent of total cost	Mean (SD) per SMI enrollee		Median	Lower quartile	Upper quartile	Avg. cost per month enrolled	Percent of total costs attributed to SMI-related care	Avg. months enrolled
<i>Pregnant Women’s Program SMI Enrollees</i>	10,233	4%	\$53,133,829	1%	\$5,192	(\$8,412)	\$3,886	\$1,164	\$6,922	\$777	11%	7
<i>Non-Pregnant Women’s Program SMI Enrollees</i>	222,115	96%	\$3,540,470,898	99%	\$15,940	(\$25,534)	\$7,325	\$2,449	\$18,909	\$1,575	21%	10

IV. Administrative and Legislative Issues Identified by Stakeholder Interviews

In our first two reports, we addressed administrative and legislative issues related to state supported SMI care based on interviews with representatives of LMHA centers and a literature review of evidence-based practices for people with SMI. In this report, we provide additional information from interviewing representatives of the Medicaid MCOs paying for SMI-related services. Since our August 2015 “interim” report, we have interviewed additional representatives, expanding the MCO service areas to include Harris and Hidalgo as well as Bexar, Dallas, El Paso, Jefferson, Lubbock, MRSA Central, MRSA Northeast, MRSA West, Tarrant, and Travis.

Policy Background

Beginning in 2011, Texas has made major expansions in the number of Medicaid enrollees and services covered through MCOs. Under this model, Medicaid enrollees select an MCO that is paid a per-member-per-month (PMPM) amount from the state to arrange for all necessary care for the enrollee. The MCOs assure provision of care by contracting with providers including physicians, hospitals, LMHAs, and other mental health providers that serve the SMI population in a region.

Most Texas Medicaid enrollees, including those with SMI, are in one of two of the state’s Medicaid programs: either STAR or STAR+PLUS. STAR is the managed-care program for individuals who are eligible for Medicaid due primarily to low income, and STAR+PLUS is for those who are eligible primarily because of the presence of a disability that prevents the person from gainful employment, and also for those age 65 and older meeting certain criteria.

Some, but not all, MCOs subcontract behavioral health care to another organization that specializes in being able to arrange and coordinate behavioral health care providers and services. This can lead to better management of behavioral health care, but can also lead to less coordination of behavioral health and medical care, reducing the overall effectiveness of care.

Until 2013, intensive case management and rehabilitation services were not under the range of services to be paid as part of the per-member-per-month capitation to an MCO. The

2013 legislative change, SB58, brought these services “under the cap.” Since these services are intensive services often used for people with SMI, this is a significant change for Medicaid.

Along with establishing payment arrangements, there are also a set of quality and performance arrangements influencing the financing and delivery of care. The MCOs and providers have performance standards to satisfy state requirements, direct providers may have standards to fulfill for the health plans, and health plans may establish commitments to direct providers, such as timely reimbursement.

Interviews with MCO representatives

We conducted semi-structured interviews to get the opinions of several representatives of MCOs on how managed care policies were affecting SMI care. We identified and recruited MCO representatives whose duties involve the management and coordination of MCO-supported care for adult Medicaid enrollees with SMI being covered by STAR or STAR+PLUS plans. Medicaid managed care service regions represented by these interviewees include: Bexar, Dallas, El Paso, Harris, Hidalgo, Jefferson, Lubbock, MRSA Central, MRSA Northeast, MRSA West, Tarrant, Travis service.

Interviews were by telephone, and lasted from a half hour to an hour, with an assurance of anonymity for both the interviewees and their respective organizations. Interviews followed a semi-structured question template that is paralleled by the question/answer sets below, and were transcribed and analyzed in terms of these focus questions. We asked questions to identify the following:

- a. how well does the current arrangement support ideal serious mental illness care;
- b. how well is the managed care model working;
- c. what alternative state policies might work better;
- d. how is communication with clinical providers;
- e. how is communication with the state Medicaid state?

Following Framework Analysis methods (Ritchie and Spencer, 1994), responses were sorted into one of these focus questions, and a summary response was developed. Some of the responses were only provided by one or two interviewees, while some were more commonly reported. Further research efforts would be needed to empirically determine how broadly any of

these responses might be endorsed by stakeholders generally, to pinpoint areas of consensus and disagreement, and to assess the relative primacy or urgency of any problems or solutions. Summaries of responses on each topic follow.

How well is the managed care model working? Generally, this model is perceived as working well, and moving in the right direction. It was reported that the state has taken a gradual approach with a lot of communication and implementation support for the changes. This has allowed MCOs to get involved, and has allowed the existing service providers to adapt systems and processes that had been geared to the previous state policy.

The financial support for value-added services arising from budgetary discretion enabled by the PMPM capitated funding arrangement is allowing MCOs to be more flexible. An MCO that is also covering medical care has the opportunity to conduct multidisciplinary review of the needs and care of challenging patients with both medical and psychiatric needs.

The capitated financing model is perceived to favor good outcomes for patients, such as encouraging clinical care to reduce hospitalizations. It was noted that finding physicians willing to provide psychiatric care to Medicaid patients poses a challenge in meeting desirable outcomes, such as seven-day and 30-day service requirements.

A noted problem of the financial structure of MCO care is that some activities categorized as “administrative” may be “clinical” in nature but cannot be reimbursed as such. In order to ensure a satisfactory devotion to service delivery, the financial arrangement sets a limit on the portion of budget that can be spent on administrative activities. The problem is that a strong clinical management practice requires providers to review a patient’s case and see how services could be improved. More financial support for this clinical review and oversight may be obtained if deemed a medical rather than administrative service.

Finally, it was noted that the PMPM reimbursement rate is generally adequate, but it is not adequate to cover the excessive utilization needs of super-utilizers. This small portion of patients require drastically greater levels of services. These difficult-to-manage patients require a lot of “high-touch” care, including a lot of time with psychiatrists, which is limited.

What alternative state policies might work better? Responses regarding what could be improved fell into four categories: personnel-related aspects, aspects of clinical care, funding arrangements, and improvements in information sharing and analysis.

Personnel: Recruitment of licensed providers, especially psychiatrists, is difficult because of relatively low reimbursement rates.

Clinical Care: A range of services was identified that are not “covered” by the managed-care arrangement that should be. One example is step-down care: discharge to family or other eventual setting may not be as favorable as discharge to an intermediate, step-down setting. Could be better if coverage for Partial Hospitalization and Day Treatment programs. More coverage for telemedicine and for long-acting medications would be beneficial.

Funding Arrangements: Travel to meet with patients could be supported, when necessary or favorable. Home visits could be supported; these allow information to be gathered about the patient’s home setting and provide an opportunity for educating family members. There could be incentives for bilingual service delivery. MCOs could consider incentivizing decreased hospitalization rates. The state could discontinue the policy of allowing STAR+PLUS patients to switch MCOs each month; this interferes with continuity of care objectives.

Information Sharing and Analysis: MCO representatives are concerned with the duplicate reporting burden. One example is the set of service codes that must be followed for reimbursement. LMHAs have to provide the same service delivery information to multiple systems, since each contracting MCO has their own system. MCOs do not readily share client information with each other and this causes inefficient care when patients move from one MCO to another. MCOs, providers, and the state should collaborate to develop similar forms and processes across MCOs.

How is communication with clinical providers? Overall, interviewees report that communications with providers were open and collaborative. Answers addressed the nature and quality of communication with providers, including three categories: Payment issues; communication patterns; and building collaboration.

Interviewees reported a large amount of time spent in collaborative communication and view their job to listen for problems or concerns. Reportedly, most problems are being heard and many addressed. Interviewees noted many efforts to build a collaborative relation, including: listening for complaints or concerns; collaboratively developing processes; investigating high readmission rates; linking geographically or structurally diverse clinical providers; being involved in discharge planning.

How is communication with state Medicaid staff? Inquiries concerning communications with the state did not generate much response. This may be because the interviewees are not the MCO staff dealing with the more challenging aspects of this relationship. Interactions have been described as “pretty balanced,” with a great deal of involvement and support in advance of these policy changes.

V. Conclusion

The research team has obtained and linked five administrative data sets (Medicaid acute care, Medicare, LTSS, LMHA/SA, Hospital discharges) documenting publicly supported medical services in four state and one federal program for the 2010 to 2012 period. The databases contain program enrollment, utilization, and/or cost information for Medicaid adult enrollees with SMI across. Cross-program utilization and costs per enrollee for this population has been determined in three of the programs (Medicaid acute care, Medicare, and LMHA/SH).

The analyses show that the vast majority of Medicaid enrollees with SMI, approximately 69%, are also receiving services through one or more other programs, with 42% enrolled in Medicare. These findings demonstrate that a cross-program approach is necessary in order to evaluate costs and quality of state-supported care.

Of the Medicaid population identified with an SMI, 52% had at least one hospitalization in the three-year time span, 32% had involvement with the various LMHAs (where a great portion of that care was funded by Medicaid), and 22% also had DADS LTSS. This cross-program involvement indicates areas for evaluation of quality and efficiency, and opportunities for programs to have cross-communication, and cross-program patient management.

Average combined total health care cost per enrollee in 2012 (Medicaid, Medicare, plus LMHA costs) was approximately \$15,000. The standard deviation of approximately \$25,000 indicating the substantial variability in costs and a number of individuals with very high costs. In fact, the 10% of SMI Medicaid enrollees who had the highest costs in 2012 had average costs of approximately \$72,500 and accounted for 47% of the total costs for SMI enrollees overall.

Most Medicaid enrollees with SMI (75%) are SSI recipients. These recipients have greater costs, on average, both overall and SMI-related. This difference is to be expected, as the SSI recipients are likely to be more disabled.

SMI-related costs were estimated to be 21% of the combined costs for all enrollees. For Medicaid-only enrollees, this SMI portion was almost twice as high as it was for Medicaid-Medicare enrollees, with SMI (26% versus 14%). It's important to recognize that substantially higher costs for non-SMI care occur for dual eligible enrollees, and the lower percentage of SMI-related costs under Medicare is largely attributable to the higher non-SMI costs of care. This finding suggests cost savings to be gained from integrated care, particularly

aimed at this population. In general, the major portion of the cost of care for SMI enrollees is for non-SMI related care.

LMHA/SH costs not covered by Medicaid or Medicare are only 1% of total costs. This figure suggests the relative importance of Medicaid and Medicare in paying for SMI care as compared to other state support for LMHAs/SHs. It also reflects the ability of LMHAs/SHs to bill Medicare and Medicaid for the services they provide.

Annual average costs were greater for those with major depression, at approximately \$16,000, than for schizophrenia, at \$12,000, and \$9,000 for bipolar disorder. Further analysis is needed to explain the differences. We do not know if the lower level of costs for those with a schizophrenia diagnosis is in any part due to under-utilization of medical care by this population, a phenomenon that has been noted in other research. Regarding higher costs among those with a depression diagnosis, it is possible that depression diagnoses are more common among older adults, and so is coincident with chronic medical illness.

Enrollees with two or three diagnoses in 2012 were more expensive, on average, relative to those with only one diagnosis. Again, further analysis is needed, and administrative data sets may be limited into how finely these clinical differences can be explored and explained.

From discussions with representatives in MCOs coordinating this care, it is promising to hear that the state seems to have been providing strong support as the transition has been made to the managed-care model, but a range of challenges were mentioned. These included the challenge of being able to hire or contract with psychiatrists, a difficulty attributed to low reimbursement rates. A few suggestions were identified, such as supporting additional types of care including step-down care and partial hospitalization care, under the per-member-per-month cap.

Some pieces of the puzzle have been assembled regarding cross-program utilization and cost for the Medicaid population with SMI, but significant pieces are still missing. We are interested in continuing our examination of the delivery of care to this population, and we are also eager to identify further strategies for developing a more complete picture of this care across

We are grateful for the good will and the assistance from the staff at several state agencies that has made it possible to complete this project. We are also grateful for support from The Texas Institute of Health Care Quality and Efficiency, the Meadows Mental Health Policy Institute, and the Texas Health and Human Services Commission.

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Appendix: Psychiatric Drug Identification Methodology

We coded each prescription medication as “psychiatric” or “medical,” and included costs of psychiatric prescriptions in our overall accounting of Serious Mental Illness (SMI) care costs. The procedures for denoting each prescribed drug as “medical” or “psychiatric” are noted here. The Medicaid and Medicare data sets include patient prescription information, coded per [National Drug Code/NDC system](#), enabling medication costs to be added to other health care costs.

The NDC is a list of all FDA-approved “drugs,” including both prescription and over-the-counter drugs, commercially available in the United States. Available resources, including FDA-approved drug labeling information as well as peer-reviewed publications, were reviewed to determine whether drugs had a psychiatric indication. In the NDC system, drugs are grouped in 31 mutually exclusive categories, and the range of drugs used for psychiatric indications are nearly all found in the “Central Nervous System” category. Within this category, there are 21 classes of drugs. Of these, all in the following classes were coded as psychiatric drugs: anticonvulsants/benzodiazepines; antimanic agents; anxiolytics/sedatives/hypnotics; ASH, benzodiazepines; antidepressants; and major tranquilizers/antipsychotics.

Beyond this, some drugs have “dual indications,” having both medical and psychiatric indications. This includes three types of drugs: epileptic drugs (CNS category, “miscellaneous anticonvulsants” class) with psychiatric indications; blood pressure drugs (the “beta-blocker” class and “calcium channel blocker” class within the cardiovascular agents category) with psychiatric indications; and appetite suppressant drugs (“miscellaneous central nervous system agents” class, “amphetamine-type stimulants class,” and “non-amphetamine-type stimulants” class) within the central nervous system category. For these drugs, mere prescription does not

denote these as a psychiatric care cost; for these, it must be determined whether they were prescribed for their psychiatric or medical indication. This can be achieved by examining the diagnosis code for the episode of care associated with the prescription.

The dual-indication epilepsy/mood stabilizer drugs are in the “miscellaneous anticonvulsants” class. These include the following: carbamazepine; valproic acid; gabapentin; tiagapine; lamotrigine; oxcarbazepine; topiramate; lacosamide; levetiracetam; rufinamide; and zonisamide.

The dual-indication beta-blockers include the following: propranolol; atenolol; metoprolol; and nadolol. The dual-indication calcium channel blockers include the following: verapamil; nimodipine; and diltiazem.

The dual-indication appetite suppressant drugs from the amphetamine-type stimulants class include the following: amphetamine; desoxyephedrine; dexamethylphenidate; dextroamphetamine; lisdexamfetamine; mazindol; methamphetamine; and methylphenidate. The dual-indication appetite suppressant drug from the non-amphetamine-type stimulants class includes the following: pemoline.

Dual-indication epilepsy/mood stabilizer medications were coded as psychiatric in the absence of an epilepsy (ICD: 345.xx or 780.3) diagnosis. Certain dual-indication blood pressure/anxiety medications were coded as psychiatric in the absence of a hypertension (401.xx-405.xx) or IHD (410.xx-414.xx) diagnosis. Certain dual-indication appetite suppressant/attention deficit-hyperactivity medications were coded as psychiatric in the presence of an ADHD (314.x) diagnosis. Overall, this dual-indication issue affected a very modest portion of all prescribed drugs, so any misclassification will have a minimal bias at this scope of analysis. Further information is available from the authors.