



A Comparative Analysis of NorthSTAR and Other Behavioral Health Service Delivery Areas

**As Required By
The 2014-15 General Appropriations Act, S.B. 1,
83rd Legislature, Regular Session, 2013
(Article II, Department of State Health Services, Rider 58)**



**Department of State Health Services
February 2015
REVISED**

- This page is intentionally left blank -

Table of Contents

Executive Summary	1
Measurement, Collection, and Reporting of Behavioral Health Outcome Data	1
Comparative Analysis of Publicly-funded Behavioral Health Systems.....	1
Introduction.....	2
Background	2
Measurement, Collection, and Reporting of Behavioral Health Outcome Data.....	2
Comparative Analysis of Publicly-Funded Behavioral Health Systems	3
Description of Service Delivery Systems through Fiscal Year 2014	3
Changes in the Service Delivery System since Fiscal Year 2014	3
Analysis	3
Cost per Person.....	4
DSHS and Medicaid Spending	4
Total Spending.....	5
Client Outcomes	5
Adults.....	6
Children	9
Conclusion	11
Cost	12
Outcomes	12
Appendix A: Comparison Service Areas	13

- This page is intentionally left blank -

Executive Summary

[The 2014-15 General Appropriations Act, S.B. 1, 83rd Legislature, Regular Session, 2013 \(Article II, Department of State Health Services, Rider 58\)](#) requires the Department of State Health Services (DSHS) to report on efforts to improve the collection and reporting of behavioral health outcome data and to conduct a comparative analysis of the publicly-funded behavioral health service systems.

Measurement, Collection, and Reporting of Behavioral Health Outcome Data

DSHS has implemented new assessment tools for both children and adults in order to improve the accuracy of client outcome data. These tools are validated, used nationally, and yield a reliable change index outcome measure when scores are compared over time. In addition, they provide greater assessment detail that includes individual needs and strengths. To ensure the integrity of the assessments, standardized training is required for all clinicians who administer the assessments, as well as ongoing certification. Improvements to information technology (IT) systems and processes have also been implemented to support direct data entry and data exchange between providers and DSHS.

Comparative Analysis of Publicly-funded Behavioral Health Systems

Medicaid clients and medically indigent individuals residing in the seven-county service delivery area surrounding Dallas receive all behavioral health services through NorthSTAR, a publicly funded managed care program. Individuals living in the rest of the state receive mental health services through 37 Local Mental Health Authorities (LMHAs).

Cost

DSHS compared the cost of mental health services delivered through NorthSTAR with the cost of services provided through LMHAs statewide using financial data from fiscal year 2013. Cost data were examined from two perspectives to provide a more complete picture.

In the first analysis, costs were calculated using only DSHS and Medicaid funds, which represent the state investment. From this perspective, the cost per person receiving any mental health service is higher for NorthSTAR than for LMHAs. The second analysis calculated costs using total expenditures, including local investment and revenue from other state and federal sources. Total spending per person receiving any service was lower for NorthSTAR than for LMHAs.

Outcomes

DSHS used mental health outcome data from fiscal year 2014 to compare NorthSTAR with LMHAs *statewide* on eight measures for adults and eight measures for children. On most measures, NorthSTAR had a lower percentage of clients with acceptable or improved functioning and a higher percentage of clients with worsened functioning.

A second analysis compared the outcomes in the NorthSTAR service area with outcomes in *seven comparison service areas* across the state. The percentage of adults in the NorthSTAR service area with an improved or acceptable score was similar to those in other comparison service areas, with NorthSTAR percentages falling in the middle of the range on every measure. The percentage of children with an improved or acceptable score in the NorthSTAR service area was generally lower than in most other comparison service areas.

Introduction

[The 2014-15 General Appropriations Act, S.B. 1, 83rd Legislature, Regular Session, 2013 \(Article II, Department of State Health Services, Rider 58\)](#) requires DSHS, in consultation with the Health and Human Services Commission, to conduct a comparative analysis of publicly-funded behavioral health systems in Texas that serve medically indigent persons and Medicaid clients, and submit a report on the study findings to the Legislative Budget Board (LBB) and the Governor during fiscal year 2015.

Background

The 2011 Texas State Government Effectiveness and Efficiency Report (GEER) included a comparison of behavioral health data across NorthSTAR and other selected service delivery areas, but noted that the state could not determine NorthSTAR's overall effectiveness relative to the rest of the state because behavioral health outcome was incomplete and data collection procedures were inadequate. The LBB recommendations related to this finding were accepted and codified in the 2012-13 General Appropriations Act, H.B. 1, 82nd Legislature, Regular Session, 2011 (Article II, Department of State Health Services, Rider 65).

After evaluating options, DSHS identified the need for new assessment instruments. In order to allow sufficient time to employ the new instruments, train staff, and collect sufficient data, DSHS received approval to submit the final comparative analysis during fiscal year 2015. The LBB recommendations were readopted in the next biennium as 2014-15 General Appropriations Act, S.B. 1, 83rd Legislature, Regular Session, 2013 (Article II, Department of State Health Services, Rider 58).

This report presents the results of the first year of mental health outcome data collected using the new assessment tools. To provide context, DSHS also compared costs for NorthSTAR and the LMHAs.

Measurement, Collection, and Reporting of Behavioral Health Outcome Data

DSHS has implemented new assessment tools for both children and adults in order to improve the accuracy of client outcome data. The new child and adolescent tool is the *Child and Adolescent Needs and Strengths* (CANS). The adult tool is the *Adults Needs and Strengths Assessment* (ANSA). The new tools improve Behavioral health outcome data in the following ways:

1. The new tools are validated, used nationally, and yield a reliable change index outcome measure when scores are compared over time.
2. The new tools provide greater assessment detail and include the individual's needs and strengths.
3. Standardized training is required for all clinicians who administer the assessments. All clinicians who provide the assessment are required to have ongoing certification.

DSHS and providers have updated their IT systems and have implemented new processes that support direct data entry and data exchange between providers and DSHS for the CANS and ANSA.

Details of the implementation have been described in previous reports. The new assessment tools were implemented September 1, 2013. DSHS continues to support training, certification, and recertification for provider staff responsible for administering the CANS and ANSA.

Comparative Analysis of Publicly-Funded Behavioral Health Systems

Description of Service Delivery Systems through Fiscal Year 2014

Texas has two publicly-funded behavioral health systems. In most areas of the state, DSHS contracts with 37 LMHAs to ensure the provision of behavioral health services to persons in crisis, Medicaid clients, and medically indigent persons living in communities across Texas. LMHAs are responsible for planning, policy development, coordination, resource development and allocation, and for ensuring the provision of mental health services in designated regions. Behavioral health services are funded with a combination of local, state and federal funds. Medicaid clients may also receive behavioral health services through other behavioral health providers contracted with the Texas Medicaid program.

Eligible Medicaid clients and medically indigent persons residing in the seven-county service delivery area surrounding Dallas receive all behavioral health services through NorthSTAR—a publicly funded managed care program. NorthSTAR is an at-risk behavioral health carve-out of the physical healthcare system that provides both mental health and substance abuse services. It is funded through a blend of local, state, and federal funding. DSHS contracts directly with a private behavioral health organization, ValueOptions, to manage NorthSTAR. The agency also contracts with the North Texas Behavioral Health Authority to serve as the local behavioral health authority for the NorthSTAR service area.

Changes in the Service Delivery System since Fiscal Year 2014

The 83rd Texas Legislature enacted fundamental changes to the delivery of behavioral health services outside of the NorthSTAR service area. Historically, the LMHAs have been the only entities authorized to provide mental health case management and mental health rehabilitation services to individuals enrolled in Medicaid. Senate Bill 58 (83rd Legislature, Regular Session, 2013) carved mental health case management and rehabilitation services into Medicaid managed care and required the integration of physical and behavioral health services within managed care. The new system was implemented September 1, 2014.

More recently, the [Sunset Advisory Commission](#) has recommended that NorthSTAR transition to an updated model. Behavioral health services for the Medicaid population would be integrated into managed care organizations, and local communities would develop plans for serving the indigent population.

Analysis

This report focuses on mental health outcomes for individuals enrolled in ongoing outpatient services, using data collected using the CANS and ANSA. As noted in the previous section, these new assessment instruments yield valid and reliable data and provide greater detail than the

previous assessment tools. First, the outcomes of outpatient clients served by NorthSTAR are compared with the outcomes of outpatient clients served by all LMHAs. A second analysis compares the performance in the NorthSTAR area with seven comparison service areas across the state—the same service areas examined in the 2011 GEER. The El Paso comparison service area has only one county and is the local service area for Emergence Health Network. Each of the other comparison areas is comprised of one urban population center and five to eight surrounding counties and includes counties from the local service areas of multiple LMHAs (See Appendix A for a listing of counties in each service area).

To provide context, DSHS also compared the cost of mental health services for NorthSTAR and for the LMHA service delivery system, using an overall cost per person. Two methodologies were used to provide a complete picture. Because most of the seven service areas include counties from multiple LMHAs, it was not possible to compare costs by service area.

Financial data are from fiscal year 2013, the last year in which complete financial data are available. When final 2014 data is available, updated figures will be made available. The outcome data are from fiscal year 2014, the last year before implementation of SB 58. It should be noted that the results are limited to the service delivery systems as they operated historically and cannot be used to draw conclusions about services delivered subsequent to implementation of SB 58.

Cost per Person

To provide a complete picture of cost per person, DSHS conducted two analyses of mental health spending per person, which excludes spending for substance abuse services. The first analysis examines the cost per person based on DSHS and Medicaid funds. These include state and federal funds distributed through DSHS and Medicaid. Using this approach, the mental health spending per person was computed based on all persons served, including individuals receiving only crisis, residential, or inpatient services as well as those receiving ongoing outpatient services. The cost per person was calculated for the entire population, including both Medicaid and indigent clients. The second analysis repeated the calculations using all funds expended, including other state and federal funding as well as local contributions.

DSHS and Medicaid Spending

The following analysis shows spending per person based only on DSHS and Medicaid funds to provide a view of the services produced by the state's investment of funds. DSHS and Medicaid funds include state general revenue, Medicaid revenue, and other federal funding that is distributed through the DSHS Performance Contract, such as Title XX funds. Local contributions and other funds not allocated through the DSHS contract are excluded. Expenditures include the cost of services and administrative costs, but exclude local authority costs for LMHAs and for NorthSTAR.

Table 1 shows the average DSHS and Medicaid spending per person for individuals receiving any mental health service. The data includes both Medicaid clients and the medically indigent population. Persons served include all adults and children receiving crisis services, ongoing outpatient services, residential services, or inpatient care. In this analysis, the NorthSTAR cost per person is higher than the LMHA cost per person.

Table 1. DSHS and Medicaid Spending per Person Receiving Any Service (Medicaid and Indigent) Fiscal Year 2013

	NorthSTAR	LMHAs
Expenditures	\$114,211,467	\$405,044,969
Persons Served	70,156	301,776
Cost per Person	\$1,628	\$1,342

Total Spending

The following analysis shows spending per person based on all funds. This includes not only DSHS and Medicaid spending, but all other revenue used to serve the state’s priority population. For NorthSTAR, the additional funding includes the required local match and funding from the Texas Council on Offenders with Medical and Mental Impairments (TCOOMMI). Additional LMHA funding includes the required local match, additional local contributions, TCOOMMI funding, other state and federal contracts, and grants. As in the previous analysis, expenditures include the cost of services and administrative costs, but exclude local authority costs.

Table 2 shows the average total spending per person receiving any mental health service, including both Medicaid clients and the medically indigent population. Persons served include all adults and children receiving crisis services, ongoing outpatient services, residential services, or inpatient care. In this analysis, the total cost per person receiving any service is lower for NorthSTAR than for LMHAs.

Table 2. Total Spending per Person Receiving Any Service (Medicaid and Indigent) Fiscal Year 2013

	NorthSTAR	LMHAs
Expenditures	\$119,260,873	\$596,860,867
Persons Served	70,156	301,776
Cost per Person	\$1,700	\$1,978

Client Outcomes

Table 3 describes the CANS and ANSA components included in this analysis. A client’s initial assessment using the ANSA or the CANS during the fiscal year is compared to subsequent re-assessments to determine whether his or her rating on a certain measure has improved, worsened, or stayed the same. Significant change is evaluated using a reliable change index (RCI) benchmark value. In addition to statistical stringency, the RCI takes both the inter-rater reliability and the variability of each measure into account when assessing change. As utilized, changes over time that exceed the RCI benchmark value offer 90 percent assurance of actual changes in client functioning (as opposed to day-to-day fluctuation in scores).

**Table 3. Outcome Measures for Mental Health Services
Fiscal Year 2014**

OUTCOME MEASURE	DESCRIPTION
ADULTS	
Risk Behaviors	Identifies behaviors that put the individual in serious risk of harm.
Life Functioning	Rates how an adult is functioning in the physical, social, family, employment, intellectual, school, employment, housing, self-care, and community realms.
Strengths	Describes the assets of an adult that can be used to advance healthy development.
Mental Health Needs	Relates information regarding an adult's behavioral health and emotional issues.
Crime	Rates criminal behavior and status offenses that may result from the individual failing to follow required behavioral standards. It does not include substance abuse.
Substance Use	Assesses use of alcohol and other drugs, the misuse of prescription medications and the inhalation of any substance.
Vocational/Career	Rates the performance of an individual in work setting including issues of behavior, attendance, or productivity.
Psych. Hospital History	Number of hospitalizations in the last 180 days.
CHILDREN	
Risk Behaviors	Identifies behaviors that put the child or adolescent in serious risk of harm.
Life Functioning	Rates how a child or an adolescent is functioning in the individual, family, peer, school, and community realms.
Strengths	Describes the assets of the child that can be used to advance healthy development.
Behavioral/Emotional Needs	Relates information regarding a child's or adolescent's behavioral and emotional issues.
Juvenile Justice	Rates the level of penetration into the juvenile justice system including history and seriousness of infractions, planning of delinquent acts, impact on community safety, legal compliance, peer influences on delinquent behavior and environmental influences related to illegal activity including parental criminal activity/history.
Substance Use	Rates the severity of the child's substance use which includes alcohol, illegal drugs and inappropriate use of prescription medications.
School	Assesses functioning in the areas of school achievement, school attendance, and school behavior.
Psych. Hospital History	Time since last hospital discharge.

Adults

Table 4 shows the statewide outcome data for adults receiving ongoing outpatient mental health services. On all but one measure, the percentage of clients with acceptable (i.e., no room for improvement) or improved functioning was lower for NorthSTAR than for LMHAs. The pattern is less uniform for the percentage of clients with worsened functioning; NorthSTAR had a higher percentage of clients with worsened functioning than LMHAs on six measures, and NorthSTAR had a smaller percentage on two measures.

Table 4. Outcome Data for Adults Receiving Ongoing Outpatient Services: Statewide Comparison Fiscal Year 2014

	NorthSTAR	LMHAs
ADULTS		
Risk Behaviors		
Improved/Acceptable	78.0%	80.5%
Worsened	14.7%	12.1%
Unchanged	7.3%	7.5%
Life Functioning		
Improved/Acceptable	26.0%	31.4%
Worsened	16.3%	15.5%
Unchanged	57.6%	53.1%
Strengths		
Improved/Acceptable	21.6%	24.3%
Worsened	12.2%	13.5%
Unchanged	66.3%	62.2%
Mental Health Needs		
Improved/Acceptable	29.4%	35.9%
Worsened	16.8%	16.4%
Unchanged	53.7%	47.8%
Crime		
Improved/Acceptable	97.6%	98.1%
Worsened	2.4%	1.8%
Unchanged	0.0%	0.1%
Substance Use		
Improved/Acceptable	94.9%	95.0%
Worsened	3.9%	3.4%
Unchanged	1.3%	1.6%
Vocational/Career		
Improved/Acceptable	57.4%	66.4%
Worsened	16.9%	13.6%
Unchanged	25.7%	20.1%
Psychiatric Hospital History		
Improved/Acceptable	94.9%	94.4%
Worsened	4.8%	5.2%
Unchanged	0.4%	0.4%

Table 5 compares performance in the NorthSTAR area with the seven comparison service areas. Except for El Paso, these comparison service areas are comprised of six to nine counties from

multiple LMHA service areas, including one major population center (See Appendix A for a listing of counties in each service area).

NorthSTAR’s percentage of adults with an improved or acceptable score was higher than some service areas and lower than others on every measure. On average, NorthSTAR had a larger percentage of adults with acceptable or improved functioning than four of the seven comparison service areas. NorthSTAR’s percentage of adults with worsened function was also near the middle of the range when compared to other service areas. On average, NorthSTAR had a smaller percentage of adults with worsened functioning than three of the seven comparison service areas.

Table 5. Outcome Data for Adults Receiving Ongoing Outpatient Services: Comparison Service Areas* Fiscal Year 2014

	COMPARISON SERVICE DELIVERY AREA							
	Bexar	El Paso	Harris	Lubbock	Nueces	Tarrant	Travis	NorthSTAR
ADULTS								
Risk Behaviors								
Improved/Acceptable	76.4%	72.4%	83.4%	75.3%	76.9%	76.2%	80.0%	78.0%
Worsened	14.4%	18.3%	10.3%	14.4%	11.6%	15.0%	12.7%	14.7%
Unchanged	9.2%	9.3%	6.3%	10.3%	11.5%	8.8%	7.3%	7.3%
Life Functioning								
Improved/Acceptable	24.9%	26.0%	39.0%	24.8%	24.2%	19.2%	37.3%	26.0%
Worsened	24.6%	25.1%	14.1%	14.9%	12.6%	17.7%	13.2%	16.3%
Unchanged	50.4%	48.9%	47.0%	60.4%	63.2%	63.1%	49.5%	57.6%
Strengths								
Improved/Acceptable	22.2%	21.5%	28.9%	25.9%	15.4%	16.7%	24.9%	21.6%
Worsened	17.7%	20.2%	15.2%	11.2%	9.0%	11.0%	14.2%	12.2%
Unchanged	60.2%	58.3%	55.9%	62.9%	75.6%	72.4%	60.9%	66.3%
Mental Health Needs								
Improved/Acceptable	24.0%	25.8%	45.9%	32.4%	30.2%	23.4%	33.2%	29.4%
Worsened	24.6%	27.8%	14.6%	16.1%	13.3%	18.6%	18.1%	16.8%
Unchanged	51.4%	46.4%	39.5%	51.5%	56.6%	58.0%	48.7%	53.7%
Crime								
Improved/Acceptable	97.3%	97.8%	98.5%	97.1%	96.9%	98.3%	97.7%	97.6%
Worsened	2.6%	2.1%	1.4%	2.8%	2.7%	1.5%	2.2%	2.4%
Unchanged	0.1%	0.0%	0.1%	0.1%	0.4%	0.2%	0.1%	0.0%
Substance Use								
Improved/Acceptable	93.7%	95.6%	94.6%	92.8%	93.8%	94.8%	94.2%	94.9%
Worsened	4.4%	3.1%	4.0%	5.0%	3.2%	3.5%	4.1%	3.9%
Unchanged	1.8%	1.3%	1.5%	2.1%	3.1%	1.8%	1.7%	1.3%

COMPARISON SERVICE DELIVERY AREA

	Bexar	El Paso	Harris	Lubbock	Nueces	Tarrant	Travis	NorthSTAR
Vocational/Career								
Improved/Acceptable	55.9%	68.4%	71.6%	57.4%	69.9%	39.7%	81.8%	57.4%
Worsened	20.1%	19.9%	12.0%	15.8%	10.3%	12.9%	7.1%	16.9%
Unchanged	24.0%	11.8%	16.4%	26.8%	19.8%	47.4%	11.1%	25.7%
Psychiatric Hospital History								
Improved/Acceptable	93.2%	92.0%	93.8%	95.5%	94.0%	95.1%	93.3%	94.9%
Worsened	6.2%	7.5%	5.8%	4.4%	5.5%	4.7%	6.1%	4.8%
Unchanged	0.6%	0.5%	0.5%	0.1%	0.5%	0.3%	0.6%	0.4%

** Except for El Paso, the comparison service areas are comprised of 6 to 9 counties drawn from multiple LMHA service areas, including one major population center. See Appendix A.*

Children

Table 6 shows the statewide outcome data for children receiving mental health services. The percentage of clients with improved or acceptable functioning was lower for NorthSTAR than for LMHAs on all measures. The percentage of clients with worsened functioning was higher for NorthSTAR than for on LMHAs five of the eight measures. The percentage of clients with worsened functioning was smaller in the NorthSTAR service area on three measures.

Table 6. Outcome Data for Children Receiving Ongoing Outpatient Services: Statewide Comparison Fiscal Year 2014

	NorthSTAR	LMHAs
CHILDREN		
Risk Behaviors		
Improved/Acceptable	61.3%	69.4%
Worsened	18.3%	13.9%
Unchanged	20.4%	16.8%
Life Functioning		
Improved/Acceptable	32.1%	44.0%
Worsened	21.9%	12.8%
Unchanged	46.0%	43.3%
Strengths		
Improved/Acceptable	19.7%	26.6%
Worsened	11.7%	18.3%
Unchanged	68.6%	55.1%
Behavioral/Emotional Needs		
Improved/Acceptable	27.0%	34.4%
Worsened	12.4%	14.0%
Unchanged	60.6%	51.6%

	NorthSTAR	LMHAs
Juvenile Justice		
Improved/Acceptable	94.9%	96.8%
Worsened	0.0%	3.0%
Unchanged	5.1%	0.2%
Substance Use		
Improved/Acceptable	92.7%	94.3%
Worsened	4.4%	3.4%
Unchanged	2.9%	2.3%
School		
Improved/Acceptable	54.8%	66.6%
Worsened	27.0%	18.5%
Unchanged	18.3%	15.0%
Psychiatric Hospital History		
Improved/Acceptable	88.3%	90.8%
Worsened	6.6%	3.9%
Unchanged	5.1%	5.3%

Table 7 examines performance by service area. The percentage of children with an improved or acceptable score in the NorthSTAR service area was generally smaller than in other comparison service areas. On four measures, NorthSTAR was the service area with the smallest percentage of children with an improved or acceptable score. On the remaining four measures, NorthSTAR was one of the four service areas with the smallest percentages of children in this category. On average, one service area had a smaller percentage of children with an improved or acceptable score.

Looking at the percentage of clients with worsened functioning, on three measures NorthSTAR was among the three service areas with the smallest percentage of children in this category. For the five other measures, NorthSTAR was one of the two service areas with the largest percentage of children with worsened functioning. On average, two service areas had a larger percentage of children with worsened function.

Table 7. Outcome Data for Children Receiving Ongoing Outpatient Services: Comparison Service Areas Fiscal Year 2014

	COMPARABLE SERVICE DELIVERY AREA*							
	Bexar	El Paso	Harris	Lubbock	Nueces	Tarrant	Travis	NorthSTAR
CHILDREN								
Risk Behaviors								
Improved/Acceptable	68.9%	79.6%	69.1%	72.0%	67.7%	67.8%	65.8%	61.3%
Worsened	13.7%	11.6%	13.5%	13.5%	16.2%	14.3%	17.7%	18.3%
Unchanged	17.4%	8.9%	17.4%	14.5%	16.1%	18.0%	16.6%	20.4%

COMPARABLE SERVICE DELIVERY AREA*								
	Bexar	El Paso	Harris	Lubbock	Nueces	Tarrant	Travis	NorthSTAR
Life Functioning								
Improved/Acceptable	42.6%	46.0%	38.7%	56.9%	43.5%	38.0%	44.8%	32.1%
Worsened	13.8%	21.4%	14.8%	8.6%	11.7%	18.0%	14.1%	21.9%
Unchanged	43.7%	32.6%	46.5%	34.5%	44.8%	44.0%	41.1%	46.0%
Strengths								
Improved/Acceptable	24.5%	18.5%	22.8%	36.8%	22.0%	16.5%	26.5%	19.7%
Worsened	15.9%	22.3%	22.3%	16.8%	19.8%	19.7%	23.5%	11.7%
Unchanged	59.6%	59.2%	54.9%	46.4%	58.2%	63.8%	50.0%	68.6%
Behavioral/Emotional Needs								
Improved/Acceptable	44.1%	39.1%	32.9%	39.5%	32.8%	31.4%	37.0%	27.0%
Worsened	11.9%	15.2%	13.9%	11.5%	14.4%	19.4%	13.6%	12.4%
Unchanged	44.0%	45.7%	53.2%	49.0%	52.8%	49.3%	49.4%	60.6%
Juvenile Justice								
Improved/Acceptable	97.5%	97.8%	96.3%	95.7%	94.5%	97.6%	96.1%	94.9%
Worsened	2.3%	2.1%	3.5%	4.3%	4.8%	2.0%	3.6%	0.0%
Unchanged	0.2%	0.2%	0.2%	0.0%	0.7%	0.4%	0.4%	5.1%
Substance Use								
Improved/Acceptable	93.6%	96.0%	93.4%	92.1%	92.0%	95.5%	91.8%	92.7%
Worsened	3.2%	2.2%	3.9%	4.9%	4.2%	2.6%	4.3%	4.4%
Unchanged	3.2%	1.7%	2.7%	3.0%	3.8%	1.9%	3.9%	2.9%
School								
Improved/Acceptable	72.1%	67.6%	63.3%	75.0%	63.9%	60.1%	64.4%	54.8%
Worsened	13.3%	22.9%	21.1%	12.2%	16.4%	24.1%	18.5%	27.0%
Unchanged	14.6%	9.5%	15.6%	12.8%	19.7%	15.8%	17.1%	18.3%
Psychiatric Hospital History								
Improved/Acceptable	85.7%	85.9%	93.1%	94.4%	90.8%	88.8%	89.7%	88.3%
Worsened	4.9%	4.9%	3.3%	2.0%	3.7%	4.3%	4.0%	6.6%
Unchanged	9.5%	9.2%	3.6%	3.6%	5.5%	6.9%	6.3%	5.1%

* Except for El Paso, the comparison service areas are comprised of 6 to 9 counties drawn from multiple LMHA service areas, including one major population center. See Appendix A.

Conclusion

NorthSTAR and LMHAs represent two fundamentally different service models, and it is difficult to make direct comparisons. Conclusions are also limited by the fact that NorthSTAR data are drawn from a single service area, while the LMHA data are an average of 37 distinct service areas. As shown in the outcome data for comparison service areas, results are influenced by local factors as well as by the model of service delivery.

Cost

The results of a cost comparison depend on how cost per person is defined. Looking only at DSHS and Medicaid funding, the NorthSTAR cost per person receiving any service is higher than the LMHA cost. However, the NorthSTAR cost is lower when funds from all sources are included. This indicates that although the cost per person is higher among LMHAs, the additional spending is supported by other sources of revenue.

Outcomes

There are some modest differences in outcomes between NorthSTAR and LMHAs, but NorthSTAR results generally fall within the range of outcomes found in other service areas across the state. Looking at statewide data, NorthSTAR had a lower percentage of clients with acceptable or improved functioning and a higher percentage of clients with worsened functioning on most measures. For a different perspective, NorthSTAR outcomes were compared to outcomes in seven similar service areas, most of which were comprised of six to nine counties drawn from multiple LMHA service areas. In this comparison, NorthSTAR had better results than one or more of the comparison service areas on most measures. NorthSTAR had results that fell in the middle range for adults, while results for children were at the lower end of the range.

Appendix A: Comparison Service Areas

Comparison Service Area	County	Local Authority
Dallas (NorthSTAR)	Collin	North Texas Behavioral Health Authority
	Dallas	North Texas Behavioral Health Authority
	Ellis	North Texas Behavioral Health Authority
	Hunt	North Texas Behavioral Health Authority
	Kaufman	North Texas Behavioral Health Authority
	Navarro	North Texas Behavioral Health Authority
	Rockwall	North Texas Behavioral Health Authority
Bexar	Atascosa	Camino Real Community Services
	Bexar	Center for Healthcare Services
	Comal	Hill Country Mental Health and Developmental Disability (MHDD) Centers
	Guadalupe	Bluebonnet Trails Community Services
	Kendall	Hill Country MHDD Centers
	Medina	Hill Country MHDD Centers
	Wilson	Camino Real Community Services
El Paso	El Paso	Emergence Health Network
Harris	Brazoria	Gulf Coast Center
	Fort Bend	Texana Center
	Galveston	Gulf Coast Center
	Harris	Mental Health and Mental Retardation (MHMR) Authority of Harris County
	Montgomery	Tri-County Services
	Waller	Texana Center
Lubbock	Crosby	StarCare Specialty Health System
	Floyd	Central Plains Center
	Garza	West Texas Centers
	Hale	Central Plains Center
	Hockley	StarCare Specialty Health System
	Lamb	Central Plains Center

Comparison Service Area	County	Local Authority
	Lubbock	StarCare Specialty Health System
	Lynn	StarCare Specialty Health System
	Terry	West Texas Centers
Nueces	Aransas	Coastal Plains Community Center
	Bee	Coastal Plains Community Center
	Calhoun	Gulf Bend Center
	Jim Wells	Coastal Plains Community Center
	Kleberg	Coastal Plains Community Center
	Nueces	Nueces County MHMR Community Center
	Refugio	Gulf Bend Center
	San Patricio	Coastal Plains Community Center
	Victoria	Gulf Bend Center
Tarrant	Denton	Denton County MHMR Center
	Hood	Pecan Valley Centers
	Johnson	Pecan Valley Centers
	Parker	Pecan Valley Centers
	Tarrant	MHMR of Tarrant County
	Wise	Helen Farabee Regional MHMR Centers
Travis	Bastrop	Bluebonnet Trails Community Services
	Burnet	Bluebonnet Trails Community Services
	Caldwell	Bluebonnet Trails Community Services
	Hays	Hill Country MHDD Centers
	Lee	Bluebonnet Trails Community Services
	Travis	Austin Travis County Integral Care
	Williamson	Bluebonnet Trails Community Services