

# A COMPARISON OF BEHAVIORAL HEALTH DATA ACROSS NORTHSTAR AND OTHER SELECTED SERVICE DELIVERY AREAS

The Texas Department of State Health Services contracts with 38 local mental health authorities and more than 200 substance abuse treatment providers to ensure the provision of behavioral health services to persons in crisis, Medicaid clients, and medically indigent persons living in communities across Texas. Local mental health authorities 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.

Medicaid clients and medically indigent persons who meet eligibility criteria residing in the seven-county service delivery area surrounding Dallas receive all behavioral health services through NorthSTAR—a publicly funded managed care program. NorthSTAR combines the following features that differ from the provision of behavioral health services throughout the rest of the state: at-risk model, behavioral healthcare services carved out of the physical health service delivery system, integration of mental health and substance abuse services, blended local, state, and federal funding, and authority-provider separation (i.e., the entity responsible for authorization is not the provider of services). The Texas Department of State Health Services, which manages NorthSTAR at the state-level, contracts directly with a private behavioral health organization, currently 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 entire NorthSTAR service area.

Behavioral health process indicators related to spending, utilization, and level and amount of care, comparing NorthSTAR to other selected service delivery areas, are mixed or unknown. Furthermore, inadequate measurement of behavioral health client outcomes prevents the state from determining NorthSTAR's overall effectiveness relative to the rest of the state. Improving the measurement and reporting of behavioral health client outcomes could help ensure that services effectively meet client needs, thus reducing spending on more expensive types of care, and improve the state's

ability to monitor program performance and make system improvements.

## FACTS AND FINDINGS

- ◆ Behavioral health process indicators related to spending, utilization, and level and amount of care, comparing NorthSTAR to other selected service delivery areas, are mixed. Furthermore, certain indicators for Medicaid clients are unknown due to data limitations.
- ◆ In general, it costs less to serve an indigent client in NorthSTAR than in most other comparison service delivery areas in Texas. For example, the average amount spent per adult indigent client on mental health services in NorthSTAR was \$2,303 during fiscal year 2009 while the average amount spent in the comparison service delivery areas ranged from \$1,872 to \$4,410 per client.
- ◆ One measure of access to care is the percentage of persons potentially eligible for treatment who receive services. Also known as a penetration rate, this percentage for medically indigent persons in NorthSTAR is equal to or greater than each of the other comparison service delivery areas.
- ◆ In contrast, a greater percentage of NorthSTAR clients were underserved than clients in most other comparison service delivery areas. Underserved means that the client was authorized to receive a set of services that were less intense than recommended. Clients may be underserved due to resource constraints, consumer choice, consumer need, or continuity of care.
- ◆ Clients are authorized to receive a package of services that includes one or more core services. The percentage of authorized clients who received at least one core service is usually lower in NorthSTAR than in the other comparison service delivery areas.
- ◆ NorthSTAR clients authorized in certain service packages received, on average, fewer core service hours than clients in most other comparison service delivery areas. Similarly, NorthSTAR clients received,

on average, a smaller amount of certain substance abuse treatment services.

## CONCERN

- ◆ The state cannot determine NorthSTAR's overall effectiveness relative to the rest of the state because behavioral health outcome data is incomplete. Furthermore, the reliability of existing outcome data is uncertain due to inadequate data collection procedures and oversight.

## RECOMMENDATIONS

- ◆ **Recommendation 1:** Include a rider in the 2012–13 General Appropriations Bill that would require the Texas Department of State Health Services to improve the measurement, collection, and reporting of behavioral health client outcome data.
- ◆ **Recommendation 2:** Include a rider in the 2012–13 General Appropriations Bill that would direct the Texas Department of State Health Services to submit a report on efforts planned or implemented to improve the measurement, collection, and reporting of behavioral health client outcome data to the Governor and the Legislative Budget Board by December 1 of each year of the biennium.
- ◆ **Recommendation 3:** Include a rider in the 2012–13 General Appropriations Bill that would direct the Texas Department of State Health Services, in consultation with the Texas 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 and the Governor by December 1, 2012.

## DISCUSSION

“Behavioral health” is a term used to encompass both mental and chemical dependency disorders and services. Multiple public programs finance behavioral health services in Texas. Funding sources include local funds, state general revenue, Medicaid, federal block grant funds, and other federal funding. Private non-profit and for-profit providers as well as public entities deliver publicly funded behavioral health services. This report does not include data or information on behavioral health services funded by CHIP or Medicare.

Services are available to the following categories of persons who meet financial and/or clinical eligibility criteria:

- **Persons in Crisis**—any individual experiencing a behavioral health crisis who requires stabilization may access crisis services. These persons may also qualify to receive temporary transitional or ongoing services. These services are funded with a combination of local, state, and federal funds and are provided primarily through the state's local mental health authorities (LMHAs). The Texas Department of State Health Services (DSHS) contracts with 38 locally governed LMHAs to ensure the provision of mental health services in communities across Texas.
- **Medicaid Clients**—Medicaid, financed with both federal and state funds, is a healthcare program for low-income families, the elderly, and persons with disabilities. Persons eligible for Temporary Assistance for Needy Families (TANF) or Supplemental Security Income (SSI) are automatically eligible for Medicaid. Other persons who do not receive cash assistance may be eligible for Medicaid depending on age, family income, pregnancy, or disability. Behavioral health services are available to Medicaid clients enrolled in fee-for-service and managed care delivery models. These clients may receive behavioral health services funded by Medicaid and/or other local, state, and federal programs. Medicaid clients enrolled in the non-capitated Primary Care Case Management (PCCM) model or in traditional fee-for-service receive Medicaid-funded behavioral health services on a fee-for-service basis. Medicaid clients enrolled in the capitated Health Maintenance Organization (HMO) model, also known as the State of Texas Access Reform (STAR) program, receive behavioral health services as a covered benefit through their STAR or STAR+PLUS HMO. Certain Medicaid-funded behavioral health services are excluded from the HMO capitation rate and are funded on a fee-for-service basis. For Medicaid HMOs participating in the Dallas service area, all behavioral health services are excluded from the HMO capitation rate and are provided through the NorthSTAR program (discussed below) or the Vendor Drug Program. Medicaid clients may also receive behavioral health services that are not covered by Medicaid through other public programs. Services are delivered through the state's LMHAs, DSHS contracted substance

abuse providers, and other behavioral health providers contracted with the Texas Medicaid program.

- **Medically Indigent**—medically indigent persons who reside in the service area and meet eligibility criteria may access behavioral health services through the state's LMHAs and through a network of more than 200 substance abuse providers contracted by DSHS. These services are funded with a combination of local, state, and federal funds. In the LMHA system, persons with countable incomes greater than 150 percent of the federal poverty level based on family size may have cost sharing requirements on a sliding scale. The primary source of public funding for substance abuse treatment is the federal Substance Abuse Prevention and Treatment (SAPT) block grant administered by DSHS. For SAPT-funded treatment services, persons with countable income greater than 200 percent of the federal poverty level based on family size may have cost sharing requirements on a sliding scale.

Persons who receive non-crisis mental health services paid for with state general revenue funds must be in the DSHS priority population. LMHAs can provide services to people other than those in the priority population using non-DSHS funds. The priority population for adult mental health services includes adults who have severe and persistent mental illnesses, such as schizophrenia, major depression, bipolar disorder, or other severely disabling mental disorders, who require crisis resolution or ongoing and long-term support and treatment. The children's mental health priority population includes children and adolescents ages 3 through 17 years with a diagnosis of mental illness who exhibit serious emotional, behavioral, or mental disorders and who (1) have a serious functional impairment (Global Assessment of Functioning of 50 or less currently or in the past year); or (2) are at risk of disruption of a preferred living or child care environment due to psychiatric symptoms; or (3) are enrolled in a school system's special education program because of a serious emotional disturbance.

#### **NORTHSTAR OVERVIEW**

NorthSTAR, which began in 1999, is a publicly funded managed care program that provides behavioral health services to certain Medicaid clients and medically indigent persons who meet eligibility criteria residing in the seven-county service delivery area surrounding Dallas (i.e., Collin, Dallas, Ellis, Hunt, Navarro, Rockwall, Kaufman). Medicaid clients in nursing facilities or intermediate care facilities for

the mentally retarded, clients in child protective foster care, or persons whose Medicaid eligibility is for an emergency situation only are not enrolled in NorthSTAR.

NorthSTAR combines the following features that differ from the provision of behavioral health services throughout the rest of the state: at-risk model, behavioral healthcare services carved out of the physical health service delivery system, integration of mental health and substance abuse services, blended local, state, and federal funding, and authority-provider separation (i.e., the entity responsible for authorization is not the provider of services). Once enrolled, NorthSTAR clients have access to a uniform benefit package as access to services is determined by clinical need, not funding source. Also, clients who lose Medicaid coverage, but who meet medically indigent eligibility criteria, may continue to receive services.

DSHS, which oversees NorthSTAR at the state-level, contracts directly with a private behavioral health organization (BHO), currently ValueOptions, to manage NorthSTAR. ValueOptions performs utilization management functions, manages a provider network, adjudicates provider claims, maintains a quality management program, and has customer service and complaint/appeals department. DSHS' contract with ValueOptions requires that they spend at least 88 percent of state funding on direct services. The remaining amount is retained by ValueOptions for administration and profit. ValueOptions is paid a prospective monthly capitation for Medicaid clients that adjust up to seven months after the initial payment based on Medicaid enrollment changes, and an annual budget for all other local, state, and federal funds paid out in equal monthly installments, or based on receipt of funds.

DSHS also contracts with the North Texas Behavioral Health Authority (NTBHA) to serve as the local behavioral health authority for the entire NorthSTAR service area. NTBHA is a local organization with a board appointed by county commissioners from the seven counties participating in NorthSTAR. NTBHA functions include local input and planning, local contract oversight, stakeholder education, and ombudsman services. NTBHA also secures local county funds and oversees jail diversion activities and the state hospital admission and discharge process. DSHS is working with NTBHA to strengthen their role related to contract oversight and decision-making.

Except for Medicaid, behavioral health program funding throughout Texas has not kept pace with utilization demands.

Medicaid premiums are re-based each year to account for increases in client enrollment, but other funding streams are fixed. The 37 LHMA's under contract with DSHS are allowed to maintain waiting lists for services whereas the NorthSTAR BHO is required to maintain open access to services at the system level. As a result, there is no waiting list for services or medications in NorthSTAR. NorthSTAR providers can, however, have capacity limitations.

The open access system coupled with finite funding has challenged the NorthSTAR program. Several changes have been implemented since NorthSTAR's inception to maintain financial viability of the model. The most recent change is implementation of a blended case rate beginning in October 2009. The blended case rate is a fixed monthly rate that is prepaid to certain outpatient mental health providers. The rate is intended to pay for services across all levels of care; however, certain services are excluded. There were also changes related to intensive outpatient and supportive outpatient services provided by substance abuse providers. The main change was to require intensive outpatient as a precondition for supportive outpatient services. DSHS is currently monitoring the impact of these changes on system performance.

Figure 1 shows the number of persons served in NorthSTAR and spending by client type during fiscal year 2009. Spending on behavioral services provided to NorthSTAR clients totaled \$131.3 million. Of this amount, \$119 million was for mental health services and \$12.3 million was for substance abuse treatment services.

Figure 2 describes the characteristics of each of the service delivery models in Texas that provide behavioral health services to medically indigent persons and Medicaid clients in Texas.

**COMPARISON OF BEHAVIORAL HEALTH DATA ACROSS SELECTED AREAS OF TEXAS**

The following report sections compare NorthSTAR performance on select performance indicators to behavioral health service delivery in seven service delivery areas in Texas—Bexar, El Paso, Harris, Lubbock, Nueces, Tarrant, and Travis. Services in these areas are provided by state and non-state mental health facilities, LMHAs, contracted substance abuse treatment providers, and other behavioral health providers contracted with the Texas Medicaid program or NorthSTAR. The performance indicators are grouped into the following categories:

**FIGURE 1  
NORTHSTAR: NUMBER OF PERSONS SERVED AND SPENDING BY CLIENT TYPE, FISCAL YEAR 2009**

	NUMBER OF CLIENTS SERVED	SPENDING (IN MILLIONS)
<b>Mental Health Services</b>		
<b>Medicaid</b>		
Adults	11,406	\$20.4
Children	13,454	\$18.7
<b>Indigent</b>		
Adults	30,593	\$70.4
Children	5,912	\$9.5
<b>SUBTOTAL<sup>1</sup></b>	<b>--</b>	<b>\$119.0</b>
<b>Substance Abuse Treatment Services</b>		
<b>Medicaid</b>		
Adults	1,363	\$1.9
Children	462	\$0.8
<b>Indigent</b>		
Adults	7,265	\$8.5
Children	1,068	\$1.1
<b>SUBTOTAL<sup>1</sup></b>	<b>--</b>	<b>\$12.3</b>
<b>TOTAL</b>	<b>--</b>	<b>\$131.3</b>

<sup>1</sup>The number of persons served cannot be summed because clients may have moved between client types during the fiscal year.

NOTE: Data on NorthSTAR services provided to clients whose county of residence fell outside the Dallas service delivery area is not included.

SOURCE: Legislative Budget Board.

- Per client spending—the average amount spent per medically indigent client (All Funds)
- Penetration rates—the percentage of medically indigent persons or Medicaid clients potentially eligible for treatment who received services.
- Service utilization by delivery setting—the percentage of medically indigent persons or Medicaid clients who received behavioral health services in an outpatient/community setting, in an inpatient/residential setting, or in both settings.
- Level and amount of care provided—the appropriateness of the package of services medically indigent persons or Medicaid clients were authorized to receive, the amount of core mental health services medically indigent persons or Medicaid clients received, the amount of substance abuse treatment

**FIGURE 2**  
**AN OVERVIEW OF THE SERVICE DELIVERY MODELS THAT DELIVER BEHAVIORAL HEALTH SERVICES IN TEXAS**  
**FISCAL YEAR 2009**

	LOCAL MENTAL HEALTH SERVICE DELIVERY SYSTEM	SUBSTANCE ABUSE BLOCK GRANT TREATMENT (SAPT) SYSTEM	NORTHSTAR	MEDICAID FEE-FOR-SERVICE AND PRIMARY CARE CASE MANAGEMENT	MEDICAID MANAGED CARE: STAR	MEDICAID MANAGED CARE: STAR PLUS
<b>Who oversees the program?</b>	DSHS	DSHS	DSHS	HHSC	HHSC	HHSC
<b>What geographic area is served?</b>	Statewide. Each LMHA has a designated service area	Statewide. Each SAPT funded provider has a designated service area	Limited to Collin, Dallas, Ellis, Hunt, Kaufman, Navarro and Rockwall counties	Statewide.	Most urban areas	Most urban areas
<b>Who are the eligible populations?</b>	Medicaid recipients with a mental health diagnosis who reside in the LMHA service area.  Non Medicaid persons who reside in the LMHA service area, and meet target diagnostic criteria	Medicaid recipients with a substance abuse/chemical dependency diagnosis who reside in the provider's service area.  Non Medicaid persons who reside in the provider's service area, with a substance abuse/chemical dependency diagnosis.	Most Medicaid recipients with a mental health and/or substance abuse/chemical dependency diagnosis who reside in the NorthSTAR service area.  Non Medicaid persons who reside in the NorthSTAR service area, and meet target diagnostic criteria and have incomes <= 200% federal poverty level (based on family size)	Qualify for Medicaid based on eligibility criteria.	Qualify for Medicaid based on eligibility criteria.	Qualify for Medicaid based on eligibility criteria.
<b>Is there a contract?</b>	Yes, between DSHS and individual LMHAs. Non competitive.	Yes, between DSHS and SAPT funded providers. Issued through a competitive process (RFP)	Competitive procurement with qualified Health Maintenance Organizations (HMO). Contract between DSHS and HMO. HMO contracts with providers.	No. Medicaid providers participate via an open enrolment process. Must be a recognized provider type.	Competitive procurement with qualified Health Maintenance Organizations (HMO). Contract between HHSC and HMO. HMO contracts with providers.	Competitive procurement with qualified Health Maintenance Organizations (HMO). Contract between HHSC and HMO. HMO contracts with providers.

**FIGURE 2 (CONTINUED)**  
**AN OVERVIEW OF THE SERVICE DELIVERY MODELS THAT DELIVER BEHAVIORAL HEALTH SERVICES IN TEXAS**  
**FISCAL YEAR 2009**

	LOCAL MENTAL HEALTH SERVICE DELIVERY SYSTEM	SUBSTANCE ABUSE BLOCK GRANT TREATMENT (SAPT) SYSTEM	NORTHSTAR	MEDICAID FEE-FOR-SERVICE AND PRIMARY CARE CASE MANAGEMENT	MEDICAID MANAGED CARE: STAR	MEDICAID MANAGED CARE: STAR PLUS
<b>How is this program funded?</b>	General revenue, mental health block grant, local funds, and other funds. Medicaid billed separately for Medicaid recipients. Other funding sources billed separately depending on coverage.	Federal Block Grant with DSHS general revenue maintenance of effort. Medicaid billed separately for Medicaid recipients. Other funding sources billed separately depending on coverage.	Funding sources in LMHA and SAPT systems.	State and federal Medicaid funds	State and federal Medicaid funds	State and federal Medicaid funds
<b>How are providers paid?</b>	LMHAs receive a prospective quarterly allocation of state funds. Depending on coverage of person served, LMHA may bill Medicaid, CHIP, Medicare or other insurance. LMHA subcontractors are paid in a manner acceptable by LMHA, subcontractor and DSHS.	SAPT funded providers are paid by DSHS on a cost reimbursement basis. Depending on coverage of person served, SAPT funded providers may bill Medicaid, CHIP, or other insurance.	HMO is paid prospectively on a capitated basis. HMO subcontracted providers bill NorthSTAR contracted HMO and are paid either fee for service or case rate models. Depending on coverage of person served, providers may bill CHIP, Medicare or other insurance.	Primarily fee for service, with some diagnosis related group (DRG) payment methodologies. Providers bill TMHP, the state's Medicaid claims administrator.	HMO is paid prospectively on a capitated basis. HMO subcontracted providers bill STAR contracted HMO and are paid either fee for service, case rate or capitated models. Depending on coverage of person served, providers may bill Medicare or other insurance.	HMO is paid prospectively on a capitated basis. HMO subcontracted providers bill STAR Plus contracted HMO and are paid either fee for service, case rate or capitated models. Depending on coverage of person served, providers may bill Medicare or other insurance.
<b>How are services provided?</b>	Thirty-seven (37) regional LMHAs oversee community mental health services in catchment area of one or multiple counties. In most areas of the state, a Community MHMR Center (CMHMRC) serves as the LMHA. CMHMRCs are the primary provider of mental health services, and also serve as the "providers of last resort."	Services are provided thru SAPT funded provider system	Services provided thru HMO network. Some out of network exceptions apply.	Service are provided thru provider system of Medicaid providers.	Services provided thru HMO network. Some out of network exceptions apply.	Services provided thru HMO network. Some out of network exceptions apply.

**FIGURE 2 (CONTINUED)**  
**AN OVERVIEW OF THE SERVICE DELIVERY MODELS THAT DELIVER BEHAVIORAL HEALTH SERVICES IN TEXAS**  
**FISCAL YEAR 2009**

	LOCAL MENTAL HEALTH SERVICE DELIVERY SYSTEM	SUBSTANCE ABUSE BLOCK GRANT TREATMENT (SAPT) SYSTEM	NORTHSTAR	MEDICAID FEE-FOR-SERVICE AND PRIMARY CARE CASE MANAGEMENT	MEDICAID MANAGED CARE: STAR	MEDICAID MANAGED CARE: STAR PLUS
How is treatment reviewed and/or authorized?	Treatment reviewed and/or authorized by LMHA	Treatment reviewed and/or authorized by SAPT funded providers (OSAR-residential)	Treatment reviewed and/or authorized by NorthSTAR HMO	Treatment reviewed and/or authorized by TMHP	Treatment reviewed and/or authorized by STAR HMO	Treatment reviewed and/or authorized by STAR Plus HMO

SOURCE: Legislative Budget Board.

services medically indigent persons or Medicaid clients received, and the percentage of Medicaid clients who received follow-up care in the community following a hospitalization for mental illness.

- Client outcomes—client outcome data is obtained from the Texas Recommended Assessment Guidelines (TRAG) assessment process, substance abuse claims data, client interviews conducted by contracted substance abuse treatment providers, and data analyzed by the Medicaid External Quality Review Organization (i.e., the Institute for Child Health Policy at the University of Florida).

Except when noted, the data is reported separately for Medicaid adults, Medicaid children, medically indigent adults, and medically indigent children. Data is also reported separately for mental health services and substance abuse treatment services. Due to data limitations, spending on prescription drugs related to behavioral health treatment is not included in this analysis.

Data by service delivery area includes services provided to clients whose county of residence fell within the given service delivery area. In most cases, clients receive services in the service delivery area that corresponds to their county of residence. Service delivery areas may encompass one or more LMHAs, multiple substance abuse treatment providers, and multiple Medicaid HMOs. This report does not include data on services provided to clients residing in the Dallas service delivery area, but not enrolled in NorthSTAR. This report also does not include data on NorthSTAR services provided to clients whose county of residence fell outside the Dallas service delivery area. Due to data limitations, non-NorthSTAR data does not include spending for certain services, such as emergency room visits and local inpatient

services pursuant to local LMHA agreements. Also, the comparative analysis did not control for all variables that might account for differences between service delivery areas, such as client health status.

**PER CLIENT SPENDING**

Figure 3 shows the average amount spent per client on behavioral health services administered by DSHS for indigent clients across selected service delivery areas in Texas. Mental health average per client spending for indigent adults ranged from \$1,872 in the Lubbock service delivery area to \$4,410 in the Bexar service delivery area. Mental health average per client spending for indigent children ranged from \$1,114 in the El Paso service delivery area to \$2,771 in the Tarrant service delivery area. Substance abuse treatment average per client spending for indigent adults ranged from \$1,137 in the Bexar service delivery area to \$1,887 in the Harris service delivery area. Substance abuse treatment average per client spending for indigent children ranged from \$996 in NorthSTAR to \$2,773 in the Harris service delivery area. The average amount spent per client on mental health and substance abuse treatment services provided to indigent adults and children is less in NorthSTAR than in most of the other comparison service delivery areas in Texas.

As shown in Figure 4, the average amount spent per indigent client on mental health and substance abuse outpatient/community services and inpatient/residential services is, in most cases, less in NorthSTAR than in the other comparison service delivery areas in Texas. The greatest spending differences are for mental health inpatient/residential services for adults.

Due to data limitations, it is not possible to compare spending on behavioral health services provided to Medicaid

**FIGURE 3**  
**BEHAVIORAL HEALTH AVERAGE PER CLIENT SPENDING FOR INDIGENT CLIENTS**  
**FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS (NORTHSTAR)
<b>MENTAL HEALTH SERVICES</b>								
Adults	\$4,410	\$3,636	\$4,232	\$1,872	\$2,794	\$3,121	\$2,973	\$2,303
Children	\$1,724	\$1,114	\$2,310	\$1,438	\$1,212	\$2,771	\$2,158	\$1,612
<b>SUBSTANCE ABUSE TREATMENT SERVICES</b>								
Adults	\$1,137	\$1,832	\$1,887	\$1,479	\$1,142	\$1,371	\$1,307	\$1,175
Children	\$1,181	\$1,373	\$2,773	\$1,327	\$1,626	\$1,608	\$1,860	\$996

Source: Legislative Budget Board.

**FIGURE 4**  
**BEHAVIORAL HEALTH AVERAGE PER CLIENT SPENDING FOR INDIGENT CLIENTS BY SERVICE TYPE**  
**FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS (NORTHSTAR)
<b>MENTAL HEALTH SERVICES</b>								
<b>Outpatient/Community Services</b>								
Adults	\$1,374	\$1,130	\$1,268	\$887	\$1,004	\$1,006	\$1,054	\$990
Children	\$1,255	\$635	\$1,281	\$1,109	\$805	\$1,202	\$1,199	\$782
<b>Inpatient/Residential Services</b>								
Adults	\$28,766	\$20,342	\$11,640	\$6,758	\$15,432	\$19,544	\$11,592	\$10,948
Children	\$6,785	\$6,252	\$6,487	\$7,681	\$7,832	\$17,138	\$9,073	\$7,090
<b>SUBSTANCE ABUSE TREATMENT SERVICES</b>								
<b>Outpatient/Community Services</b>								
Adults	\$574	\$769	\$1,067	\$662	\$662	\$702	\$780	\$619
Children	\$679	\$1,131	\$1,519	\$712	\$814	\$756	\$1,132	\$558
<b>Inpatient/Residential Services</b>								
Adults	\$1,910	\$2,798	\$2,589	\$2,006	\$1,646	\$1,971	\$2,125	\$1,686
Children	\$3,681	\$2,922	\$5,835	\$3,431	\$4,521	\$4,031	\$3,981	\$2,120

Source: Legislative Budget Board.

clients across service delivery areas and NorthSTAR. Medicaid clients not enrolled in NorthSTAR may receive Medicaid-funded behavioral health services from contracted Medicaid providers on a fee-for-service basis or through managed care. They may also receive behavioral health services that are not covered by Medicaid through other public programs. Spending data on services provided by Medicaid HMOs is incomplete. As a result, efforts to calculate the average amount spent on behavioral health services per Medicaid client are inaccurate.

**PENETRATION RATES**

Figure 5 shows the percentage of the estimated population at or below 200 percent of the federal poverty level who received publicly-funded behavioral health services across selected service delivery areas in Texas. These percentages, which are also referred to as penetration rates, are one measure of access to care. Data is reported for clients who received behavioral health services through state and non-state mental health facilities, LMHAs, DSHS' contracted substance abuse treatment providers, or NorthSTAR. The penetration rates

**FIGURE 5  
BEHAVIORAL HEALTH PENETRATION RATES FOR INDIGENT CLIENTS  
FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS (NORTHSTAR)
Mental Health Services*	1.0%	2.0%	1.0%	2.0%	2.0%	2.0%	3.0%	3.0%
Substance Abuse Treatment Services*	0.5%	0.4%	0.4%	0.6%	0.8%	0.6%	0.5%	0.8%

\*Due to duplication across the number of adults and children who received behavioral health services, the penetration rates for each service delivery area may be slightly over-reported.

NOTE: The poverty data used to calculate the penetration rates is based on 2008 data from the Texas Health and Human Services Commission.  
SOURCE: Legislative Budget Board.

were calculated by summing the number of indigent adults and children who received services and dividing by the estimated population at or below 200 percent of the federal poverty level for a given area. Penetration rates for medically indigent persons in NorthSTAR are equal to or greater than each of the other comparison service delivery areas. The percentage of the estimated population at or below 200 percent of the federal poverty level in the Dallas service delivery area who received mental health services through NorthSTAR is 3 percent while the penetration rate in other areas ranged from 1 percent to 3 percent. The penetration rate for substance abuse treatment services provided through NorthSTAR is 0.8 percent while the rate in other areas ranged from 0.4 percent to 0.8 percent.

Figure 6 shows the percentage of enrolled Medicaid clients who received publicly-funded behavioral health services across selected service delivery areas in Texas. Data is reported for clients who received behavioral health services through Medicaid fee-for-service/PCCM, Medicaid HMO, DSHS, or NorthSTAR. Due to movement across service delivery models and service delivery areas, the same client may receive services through Medicaid fee-for-service/PCCM, Medicaid HMO, DSHS, and NorthSTAR during the same fiscal year. The percentage of Medicaid clients enrolled in NorthSTAR who received mental health services through NorthSTAR is 13 percent for adults and 3 percent for children. The percentage of Medicaid clients enrolled in NorthSTAR who received substance abuse treatment services through NorthSTAR is 2 percent for adults and 0.1 percent for children. Due to data limitations, it is not possible to calculate an overall penetration rate across Medicaid fee-for-service/PCCM, Medicaid HMO, and DSHS for each service delivery area. As a result, it is difficult to compare NorthSTAR penetration rates to other service delivery areas.

**SERVICE UTILIZATION BY DELIVERY SETTING**

Clients accessing behavioral health services may receive care in an outpatient/community setting, in an inpatient/residential setting, or in both settings. As shown in Figure 7, the majority of indigent clients received behavioral health services in an outpatient or community setting. However, the percentage of clients who received services in this setting varies by service delivery area, by whether the client is a child or adult, and by whether the client is receiving mental health or substance abuse treatment services. For example, the percentage of total adult indigent service users in NorthSTAR who received mental health outpatient or community services is 98 percent while the percentage in other areas ranged from 79 percent in the El Paso service delivery area to 98 percent in the Bexar service delivery area.

Figure 7 also shows the percentage of total indigent service users who received behavioral health services in an inpatient or residential setting across selected service delivery areas in Texas. The percentage of total adult indigent service users who received mental health services in an inpatient or residential setting is lower in NorthSTAR than in all but one of the other service delivery areas—12 percent in NorthSTAR compared to 13 percent in Tarrant, 16 percent in Nueces, 22 percent in Lubbock, 27 percent in both Harris and Travis, and 36 percent in El Paso. However, for children, the percent of total indigent service users who received mental health services in an inpatient or residential setting is higher in NorthSTAR than all other areas. Non-NorthSTAR data does not include spending on local inpatient services pursuant to local LMHA agreements. As a result, the service utilization rate for inpatient or residential services in areas other than Dallas may be under-reported.

**FIGURE 6**  
**BEHAVIORAL HEALTH PENETRATION RATES FOR MEDICAID CLIENTS**  
**FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							DALLAS (NORTHSTAR)
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	
<b>MENTAL HEALTH</b>								
<b>Adults</b>								
FFS/PCCM	10.0%	6.0%	9.0%	8.0%	10.0%	11.0%	12.0%	--
HMO	11.0%	2.0%	8.0%	3.0%	10.0%	1.0%	8.0%	--
DSHS	2.0%	1.0%	1.0%	2.0%	2.0%	3.0%	3.0%	--
NorthSTAR	--	--	--	--	--	--	--	13.0%
<b>Children</b>								
FFS/PCCM	6.0%	4.0%	4.0%	6.0%	8.0%	3%	4.0%	--
HMO	5.0%	5.0%	3.0%	4.0%	6.0%	2%	2.0%	--
DSHS	1.0%	0.4%	0.4%	1.0%	1.0%	1%	1.0%	--
NorthSTAR	--	--	--	--	--	--	--	3.0%
<b>Substance Abuse Treatment Services</b>								
<b>Adults</b>								
FFS/PCCM	0.3%	0.4%	0.4%	1.0%	0.5%	1.0%	0.6%	--
HMO	0.7%	0.1%	0.8%	0.3%	0.8%	0.3%	1.2%	--
DSHS	0.5%	0.2%	0.4%	0.4%	0.6%	0.6%	0.6%	--
NorthSTAR	--	--	--	--	--	--	--	2.0%
<b>Children</b>								
FFS/PCCM	0.1%	0.1%	0.1%	0.4%	0.3%	0.1%	0.1%	--
HMO	0.1%	0.2%	0.1%	0.4%	0.3%	0.1%	0.1%	--
DSHS	0.2%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	--
NorthSTAR	--	--	--	--	--	--	--	0.1%

SOURCE: Legislative Budget Board.

As shown in **Figure 8**, most Medicaid clients who received mental health services through NorthSTAR received services in an outpatient or community setting while less than 10 percent received services in an inpatient or residential setting. For substance abuse treatment services, most clients received outpatient or community services while about one-third received inpatient or residential services. Due to data limitations, it is difficult to compare NorthSTAR utilization rates by service delivery setting for Medicaid clients to other service delivery areas. Similar to penetration rates, it is not possible to calculate overall utilization rates across Medicaid fee-for-service/PCCM, Medicaid HMO, and DSHS for each service delivery area. Also, the data on Medicaid-funded outpatient and community services provided outside of NorthSTAR includes physician and ancillary services provided to clients in inpatient settings. Consequently, the

outpatient and community service data category for non-NorthSTAR Medicaid clients is not a true representation of only outpatient and community services.

**LEVEL AND AMOUNT OF CARE PROVIDED**

**Appropriateness of Authorized Service Package:** Medically indigent persons and Medicaid clients who access mental health services through LMHAs or through NorthSTAR are assessed through a uniform assessment process known as the Texas Recommended Assessment Guidelines (TRAG) system. The TRAG assessment results in a recommended level of care or service package with specified types and amounts of services. **Figure 9** shows the service packages available to adult and child clients.

**FIGURE 7  
BEHAVIORAL HEALTH SERVICE UTILIZATION FOR INDIGENT CLIENTS BY SERVICE DELIVERY SETTING  
FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS (NORTHSTAR)
<b>MENTAL HEALTH SERVICES</b>								
<b>Outpatient/Community Services</b>								
Adults	98.0%	79.0%	85.0%	91.0%	92.0%	95.0%	88.0%	98.0%
Children	99.0%	99.0%	96.0%	99.0%	99.8%	99.8%	99.8%	97.0%
<b>Inpatient/Residential Services</b>								
Adults	11.0%	36.0%	27.0%	22.0%	16.0%	13.0%	27.0%	12.0%
Children	7.0%	1.0%	8.0%	2.0%	1.0%	2.0%	1.0%	12.0%
<b>SUBSTANCE ABUSE TREATMENT SERVICES</b>								
<b>Outpatient/Community Services</b>								
Adults	77.0%	79.0%	69.0%	56.0%	61.0%	77.0%	78.0%	84.0%
Children	90.0%	95.0%	81.0%	84.0%	82.0%	88.0%	80.0%	90.0%
<b>Inpatient/Residential Services</b>								
Adults	36.0%	44.0%	45.0%	55.0%	45.0%	42.0%	33.0%	39.0%
Children	15.0%	10.0%	26.0%	21.0%	21.0%	23.0%	24.0%	23.0%

SOURCE: Legislative Budget Board.

**FIGURE 8  
BEHAVIORAL HEALTH SERVICE UTILIZATION FOR NORTHSTAR MEDICAID CLIENTS BY SERVICE DELIVERY SETTING  
FISCAL YEAR 2009**

	MENTAL HEALTH SERVICES		SUBSTANCE ABUSE TREATMENT SERVICES	
	OUTPATIENT/COMMUNITY SERVICES	INPATIENT/RESIDENTIAL SERVICES	OUTPATIENT/COMMUNITY SERVICES	INPATIENT/RESIDENTIAL SERVICES
Adults	99.5%	9%	91%	36%
Children	99.0%	6%	84%	34%

NOTE: The percentages of clients receiving outpatient/community services and inpatient/residential services do not sum to 100 percent because clients could have received both types of services.

SOURCE: Legislative Budget Board.

**FIGURE 9  
MENTAL HEALTH SERVICE PACKAGES PROVIDED THROUGH LMHAS AND NORTHSTAR**

<b>ADULTS</b>	
Service Package 1.	Pharmacological Management and Case Management
Service Package 2.	Pharmacological Management, Case Management, and Counseling
Service Package 3.	Team-Based Psychosocial Rehabilitation
Service Package 4.	Assertive Community Treatment (ACT)
<b>CHILDREN</b>	
Service Package 1.1.	Brief Outpatient – Externalizing Disorders
Service Package 1.2.	Brief Outpatient – Internalizing Disorders
Service Package 2.1.	Intensive Outpatient – Externalizing Disorders – Multi-Systemic Therapy
Service Package 2.2.	Intensive Outpatient – Externalizing Disorders
Service Package 2.3.	Intensive Outpatient – Internalizing Disorders
Service Package 2.4.	Intensive Outpatient – Schizophrenia, Bipolar Disorder, Major Depressive Disorder with Psychosis, or Other Psychotic Disorders
Service Package 4.	After-Care

SOURCE: Texas Department of State Health Services.

After assessment and recommendation into a service package, clients are then authorized by LMHA or NorthSTAR staff into a service package. Some clients are not authorized in the service package recommended primarily due to resource constraints, consumer choice, consumer need, or continuity of care per utilization management guidelines. **Figure 10** shows the percentage of authorized clients who were appropriately served (i.e., authorized service package equals recommended service package), overserved (i.e., authorized service package is more intense than recommended service package), or underserved (i.e., authorized service package is less intense than recommended service package) across selected service delivery areas in Texas. The percentage of adult and child clients authorized to receive mental health services who were underserved is greater in NorthSTAR than

most other comparison service delivery areas. The percentage of NorthSTAR adults who were underserved is 16 percent, while the percentage in other areas ranged from 2 percent in El Paso to 21 percent in Harris. The percentage of NorthSTAR children who were underserved is 17 percent, while the percentage in other areas ranged from 8 percent in Travis to 21 percent in Harris. Similarly, the percentage of authorized months where the client was underserved is greater in NorthSTAR than in most other comparison service delivery areas.

As shown in **Figure 10**, in each service delivery area, for both adults and children, the percentage of authorized months where the client was appropriately served is greater than the percentage of authorized clients appropriately served. This

**FIGURE 10**  
**PERCENTAGE OF CLIENTS AND MONTHS APPROPRIATELY AUTHORIZED INTO SERVICE PACKAGE**  
**FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS* (NORTHSTAR)
<b>ADULTS</b>								
<b>Appropriate</b>								
Percentage of Clients	82%	81%	76%	76%	75%	83%	86%	79%
Percentage of Months	90%	87%	86%	87%	85%	91%	94%	87%
<b>Overserved</b>								
Percentage of Clients	6%	17%	3%	7%	5%	4%	4%	5%
Percentage of Months	4%	12%	2%	5%	3%	2%	2%	3%
<b>Underserved</b>								
Percentage of clients	11%	2%	21%	17%	20%	13%	10%	16%
Percentage of Months	6%	1%	12%	8%	12%	7%	4%	10%
<b>CHILDREN</b>								
<b>Appropriate</b>								
percentage of clients	81%	81%	64%	71%	78%	63%	79%	76%
percentage of months	86%	90%	77%	81%	87%	75%	88%	82%
<b>Overserved</b>								
percentage of clients	2%	0%	1%	1%	0.4%	3%	2%	0.5%
percentage of months	1%	0%	1%	1%	<1%	1%	1%	<1%
<b>Underserved</b>								
percentage of clients	12%	10%	21%	12%	13%	17%	8%	17%
percentage of months	10%	5%	14%	8%	7%	11%	3%	12%
<b>Indeterminate</b>								
percentage of clients	5%	9%	14%	15%	9%	18%	11%	7%
percentage of months	3%	5%	8%	10%	6%	13%	7%	5%

\*The data for the Dallas SDA includes a few clients that are not in NorthSTAR.  
 NOTE: Percentages may not sum to 100 percent due to rounding errors.  
 SOURCE: Texas Department of State Health Services.

shows that although some clients may have been overserved or underserved at some point during fiscal year 2009, many of these clients eventually moved into the appropriate service package during the fiscal year. For example, a client may be authorized to receive five months of treatment during the fiscal year. The client may be appropriately served for four months and underserved for one month. That client would be counted as underserved because they had one month where they were underserved. However, the four months where the client was appropriately served would be included in the percentage of authorized months where clients were appropriately served.

**Receipt of Core Mental Health Services:** Each service package includes core services and add-on services that require additional authorization based on individual client need. **Figure 11** shows the percentage of clients authorized into a given service package who received at least one core service and the average monthly number of core service hours for these clients across selected service delivery areas in Texas. For example, in Bexar, 77 percent of adult clients authorized into Service Package 1 received at least one core service. These clients received, on average, 1.8 hours of core services per month and were enrolled an average of 6.7 months. For each adult and child mental health service package, the percentage of authorized clients who received at least one core service is most always lower in NorthSTAR than in the other SDAs. Among clients who received core services, the average number of hours received per client is sometimes higher or lower in NorthSTAR depending on the service package. **Figure 11** also shows the average number of months clients who received core services were enrolled. This data is important to consider when comparing core service hours across service delivery areas because the number of core service hours can be affected by the length of time clients are enrolled.

**Receipt of Substance Abuse Treatment Services:** **Figure 12** shows the average number of units per client for substance abuse treatment services accessed through providers under contract with DSHS or through NorthSTAR across selected service delivery areas in Texas. NorthSTAR clients received more or less substance abuse treatment services depending on the specific service. On average, NorthSTAR clients received fewer days of residential detoxification and residential services than each of the other service delivery areas and fewer days of ambulatory detoxification than in all but one of the other service delivery areas. However, for outpatient services, NorthSTAR clients, on average, received

a greater number of hours than clients in five of the other service delivery areas. NorthSTAR clients also received a greater number of opioid replacement doses—256 doses in NorthSTAR compared to a range of 117 in Tarrant to 208 in Nueces.

**Follow-up after Hospitalization for Mental Illness:** **Figure 13** shows the percentage of clients age six or older who received follow-up care in the community following a hospitalization for mental illness in NorthSTAR and Medicaid STAR HMOs. The figure also compares NorthSTAR to the national Medicaid HEDIS mean which includes data on Medicaid managed care plans reporting to the National Committee for Quality Assurance. Follow-up care includes outpatient visits, intensive outpatient encounters, and partial hospitalizations. The percentage of NorthSTAR clients who received seven-day follow-up care is less than the national Medicaid HEDIS mean and less than all but two of the Medicaid STAR HMOs. Similarly, the percentage of NorthSTAR clients who received 30-day follow-up care is less than the national Medicaid HEDIS mean and less than all of the Medicaid STAR HMOs. The STAR Medicaid HMO data includes follow-up care provided by any physician provider whereas the NorthSTAR data and the national Medicaid HEDIS mean only includes follow-up care provided by mental health practitioners. As a result, the STAR Medicaid HMO data may be inflated.

#### CLIENT OUTCOMES

The outcome measures or dimensions defined in **Figure 14** are tracked by DSHS for medically indigent persons and Medicaid clients who access mental health services through LMHAs or through NorthSTAR. The data for the outcome measures is taken from the TRAG assessment process that results in client ratings on several dimensions. Two of the dimensions for children (i.e., Ohio Youth Functioning Scale and the Ohio Youth Problem Severity Scale) are included in the TRAG, but are based on the psychometrically validated instrument, the Ohio Youth Problem Severity Scale. Clients are assessed through the TRAG upon intake and are re-assessed every 90 days, except for adults in service package one who are re-assessed every 180 days. A client's initial assessment is compared to subsequent re-assessments to determine whether their rating on a certain outcome measure or dimension has improved, worsened, or stayed the same. For this report, scores on a client's last assessment in fiscal year 2009 were compared to the scores on their first assessment in fiscal year 2009. Issues with the assessment process on which this data is based impacts the reliability of

**FIGURE 11**  
**PERCENTAGE OF CLIENTS RECEIVING CORE MENTAL HEALTH SERVICES AND AVERAGE NUMBER OF CORE SERVICE HOURS PER CLIENT BY AUTHORIZED SERVICE PACKAGE, FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS (NORTHSTAR)
<b>ADULTS</b>								
<b>Service Package 1</b>								
Percentage	77%	78%	78%	74%	80%	83%	80%	71%
Average Hours Per Month	1.8	2.1	1.8	2.0	2.2	2.3	2.6	3.6
Average Months Enrolled	6.7	7.2	6.7	6.7	7.1	7.2	6.7	7.2
<b>Service Package 2</b>								
Percentage	74%	100%	88%	61%	89%	83%	92%	72%
Average Hours Per Month	4.2	3.7	7.4	7.5	8.1	6.3	6.1	5.2
Average Months Enrolled	2.9	2.3	4.0	3.4	3.5	2.9	2.7	3.2
<b>Service Package 3</b>								
Percentage	88%	94%	89%	95%	93%	87%	97%	82%
Average Hours Per Month	19.3	23.9	28.3	25.7	28.6	25.3	30.5	26.7
Average Months Enrolled	4.1	5.5	5.1	5.4	5.4	5.2	4.5	4.9
<b>Service Package 4</b>								
Percentage	97%	94%	94%	99%	98%	96%	98%	93%
Average Hours Per Month	56.4	52.9	62.5	64.7	55.2	52.7	53.1	45.4
Average Months Enrolled	5.7	5.3	5.6	6.1	5.6	5.4	4.8	7.1
<b>CHILDREN</b>								
<b>Service Package 1.1</b>								
Percentage	95%	95%	97%	95%	95%	88%	94%	84%
Average Hours Per Month	11.2	13.6	13.3	12.7	11.4	11.8	10.2	15.4
Average Months Enrolled	3.7	5.2	4.8	4.2	4.6	4.2	3.6	4.7
<b>Service Package 1.2</b>								
Percentage	88%	92%	92%	97%	93%	83%	91%	72%
Average Hours Per Month	6.0	8.8	9.2	9.3	5.9	6.3	7.4	6.5
Average Months Enrolled	3.0	4.3	4.3	3.1	3.2	3.2	3.1	3.4
<b>Service Package 2.1*</b>								
<b>Service Package 2.2</b>								
Percentage	96%	100%	85%	85%	100%	95%	98%	85%
Average Hours Per Month	11.4	44.0	17.8	17.0	18.4	21.1	18.4	15.3
Average Months Enrolled	2.4	3.6	3.2	2.9	3.9	4.0	3.0	3.3
<b>Service Package 2.3</b>								
Percentage	89%	86%	92%	96%	100%	88%	95%	80%
Average Hours Per Month	7.9	39.7	16.5	9.8	8.1	13.1	12.2	11.2
Average Months Enrolled	2.3	2.8	3.3	2.0	1.9	2.8	2.5	2.7

**FIGURE 11 (CONTINUED)**  
**PERCENTAGE OF CLIENTS RECEIVING CORE MENTAL HEALTH SERVICES AND AVERAGE NUMBER OF CORE SERVICE HOURS PER CLIENT BY AUTHORIZED SERVICE PACKAGE, FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS (NORTHSTAR)
<b>Service Package 2.4</b>								
Percentage	93%	100%	96%	94%	67%	100%	91%	80%
Average Hours Per Month	13.4	26.3	10.8	9.2	11.0	8.7	8.4	9.4
Average Months Enrolled	2.4	2.0	2.0	2.0	1.5	2.0	2.4	2.7
<b>Service Package 4</b>								
Percentage	71%	76%	85%	86%	74%	72%	68%	69%
Average Hours Per Month	1.4	1.9	3.4	2.6	1.9	1.8	1.6	3.3
Average Months Enrolled	4.2	6.7	3.8	3.7	3.9	4.7	5.9	5.1

\*Data for Service Package 2.1 is not reported because the numbers are too small and therefore, not valid for comparison purposes. SOURCES: Legislative Budget Board; Texas Department of State Health Services.

**FIGURE 12**  
**AVERAGE NUMBER OF UNITS PER CLIENT FOR SUBSTANCE ABUSE TREATMENT SERVICES**  
**FISCAL YEAR 2009**

SERVICE	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS (NORTHSTAR)
Residential Detox (days)	5	7	6	5	8	7	6	3
Residential Services (days)	43	42	35	25	38	31	33	14
Ambulatory Detox (days)	7	9	35	29	3	8	9	6
Outpatient Services (hours)	27	29	46	26	26	27	37	32
Opioid Replacement (dose)	122	177	158	130	208	117	130	256
Other Services	8	9	17	7	13	7	10	21

SOURCE: Texas Department of State Health Services.

the reported outcomes. These issues are discussed in more detail later in this report.

Figure 15 shows outcome data for clients accessing mental health services through LHMAAs or through NorthSTAR across selected SDAs in Texas. Clients with ratings that stayed the same in cases where there was no room for improvement are included in the improved or acceptable category. Except for the adult functioning measure and the child juvenile justice involvement measure, the percentage of clients with an improved or acceptable score at re-assessment is almost always lower in NorthSTAR than in the other SDAs.

Figure 16 shows the outcome measures for medically indigent persons and Medicaid clients who access substance abuse treatment services through providers under contract with DSHS or through NorthSTAR. Each substance abuse

treatment provider under contract with DSHS or participating in NorthSTAR is required to conduct follow-up client interviews between 60 and 90 days after discharge from all services. During the interview, the provider obtains self-reported outcome data related to substance use, legal status, employment status, and school attendance. Data is also collected on whether the client returned to substance abuse treatment after a 15-day break in service (i.e., recidivism rate).

Figure 17 shows outcome data for clients accessing substance abuse treatment services through providers under contract with DSHS or through NorthSTAR across selected SDAs in Texas. Clients enrolled in NorthSTAR have a higher recidivism rate than clients in other SDAs. Specifically, the recidivism rate in NorthSTAR for adults and children is 27 percent while the recidivism rate in other areas ranged from

**FIGURE 13**  
**FOLLOW-UP AFTER HOSPITALIZATION FOR MENTAL ILLNESS**  
**FISCAL YEAR 2007**

HMO	7-DAY FOLLOW-UP	30-DAY FOLLOW-UP
HEDIS 2007 Medicaid Mean	39.1%	57.7%
NorthSTAR	28.9%	55.0%
Amerigroup Community Care*	34.2%	60.9%
Community First Health Plans	35.3%	70.5%
Community Health Choice	38.2%	60.4%
Cook Children's Health Plan	25.6%	65.1%
Driscoll Children's Health Plan	35.8%	73.5%
El Paso First Premier Plan	24.0%	68.0%
FirstCare STAR	34.1%	63.6%
Molina Healthcare of Texas	53.1%	68.8%
Parkland HEALTHfirst*	--	--
Superior HealthPlan	37.9%	71.6%
Texas Children's Health Plan	46.5%	77.2%
UniCare Health Plans of Texas*	--	--

\*Data on clients in the Dallas service delivery area are excluded because they receive behavioral health services through NorthSTAR.  
 NOTE: Data for Aetna and United Healthcare is not included because the number of clients eligible for the measure is less than 30.  
 SOURCE: Texas Health and Human Services Commission.

**FIGURE 14**  
**OUTCOME MEASURES FOR CLIENTS ACCESSING MENTAL HEALTH SERVICES THROUGH LMHAS OR NORTHSTAR**  
**FISCAL YEAR 2009**

OUTCOME MEASURE	DEFINITION
<b>ADULTS</b>	
Functional impairment	The level of functional impairment is evaluated using several indicators, such as, ability to interact with others, maintain hygiene and functions of daily living, fulfill role responsibilities, and maintain activities (i.e., sleep, eating).
Housing Instability	The person's housing situation is examined to determine whether they experience no or minimal housing instability, or whether they are marginally or literally homeless.
Employment	The degree of employment problems experienced by the individual within the past year, including the person's number of jobs, number of days of employment, and whether or not the person has a need or desire to work.
Criminal Justice	The person's criminal justice contact, including their current involvement with parole or probation, history of arrests, and type of offense.
Co-occurring Substance Abuse	The person's co-occurring substance use (i.e., alcohol, illegal drugs, prescription medication, or over-the-counter medication), including the frequency and duration as well as the cognitive, behavioral, or physiological consequences of it during the past 90 days.
Support Needs	The extent to which support is unavailable from family, friends, and community sources, and the likelihood that these supports will be unable and unwilling to provide sufficient help when needed.

**FIGURE 14 (CONTINUED)**  
**OUTCOME MEASURES FOR CLIENTS ACCESSING MENTAL HEALTH SERVICES THROUGH LMHAS OR NORTHSTAR**  
**FISCAL YEAR 2009**

OUTCOME MEASURE	DEFINITION
<b>CHILDREN</b>	
Ohio Youth Functioning Scale	This scale assesses the functioning of children and adolescents receiving publicly-funded mental health services.
Ohio Youth Problem Severity Scale	This scale assesses the problem severity of children and adolescents receiving publicly-funded mental health services.
Juvenile Justice Involvement	The child's juvenile justice involvement in the last 90 days, including involvement with parole or probation, history of arrests, and type of offense.
School Behavior	The extent to which the child's behavior has resulted in problems in school or daycare.
Co-occurring Substance Use	The person's co-occurring substance use (i.e., alcohol, illegal drugs, prescription medication, or over-the-counter medication), including the frequency and duration as well as cognitive, behavioral, or physiological consequences.
Family Resources	The extent to which the family environment is stable and caregiver feels able to meet the current needs of the child or adolescent.
Severe Disruptive or Aggressive Behavior	The child's behavior is evaluated, such as whether they are engaging in verbal outbursts or threats, aggression towards objects or persons, assaults, or damage to property.

Source: Legislative Budget Board.

**FIGURE 15**  
**OUTCOME DATA FOR CLIENTS ACCESSING MENTAL HEALTH SERVICES THROUGH LMHAS OR NORTHSTAR**  
**FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS* (NORTHSTAR)
<b>ADULTS</b>								
<b>Functional Impairment</b>								
Improved or Acceptable	31%	33%	32%	32%	36%	32%	36%	33%
Worsened	19%	23%	16%	17%	17%	25%	22%	22%
Stayed the Same	50%	44%	51%	50%	47%	43%	42%	45%
<b>Housing Instability</b>								
Improved or Acceptable	63%	66%	67%	64%	63%	60%	52%	44%
Worsened	18%	18%	16%	24%	17%	19%	23%	22%
Stayed the Same	19%	16%	17%	11%	20%	21%	24%	35%
<b>Employment</b>								
Improved or Acceptable	82%	83%	79%	79%	87%	83%	79%	73%
Worsened	11%	10%	11%	19%	9%	11%	13%	16%
Stayed the Same	8%	7%	11%	3%	4%	6%	8%	11%
<b>Criminal Justice</b>								
Improved or Acceptable	40%	49%	41%	46%	36%	49%	47%	36%
Worsened	10%	13%	6%	5%	8%	7%	5%	6%
Stayed the Same	50%	38%	53%	49%	56%	44%	48%	59%

FIGURE 15 (CONTINUED)  
 OUTCOME DATA FOR CLIENTS ACCESSING MENTAL HEALTH SERVICES THROUGH LMHAS OR NORTHSTAR  
 FISCAL YEAR 2009

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS* (NORTHSTAR)
<b>Co-occurring Substance Abuse</b>								
Improved or Acceptable	82%	80%	82%	83%	84%	86%	83%	78%
Worsened	7%	10%	9%	9%	8%	8%	11%	11%
Stayed the Same	10%	9%	9%	9%	8%	6%	6%	11%
<b>Support Needs</b>								
Improved or Acceptable	64%	52%	69%	62%	58%	64%	63%	56%
Worsened	19%	22%	15%	24%	19%	26%	26%	21%
Stayed the Same	17%	26%	16%	14%	23%	10%	11%	23%
<b>CHILDREN</b>								
<b>Ohio Youth Functioning Scale</b>								
Improved or Acceptable	40%	41%	36%	35%	40%	42%	39%	36%
Worsened	18%	14%	18%	25%	20%	20%	22%	18%
Stayed the Same	42%	46%	47%	40%	40%	38%	40%	46%
<b>Ohio Youth Problem Severity Scale</b>								
Improved or Acceptable	49%	50%	39%	46%	42%	43%	44%	36%
Worsened	9%	9%	12%	11%	12%	13%	12%	13%
Stayed the Same	42%	41%	49%	44%	46%	44%	44%	51%
<b>Juvenile Justice Involvement</b>								
Improved or Acceptable	86%	90%	94%	82%	93%	92%	91%	98%
Worsened	15%	10%	6%	18%	7%	9%	9%	2%
Stayed the Same	0	0	0	0	0	0	0	0
<b>CHILDREN</b>								
<b>School Behavior</b>								
Improved or Acceptable	76%	85%	60%	77%	68%	70%	71%	54%
Worsened	6%	9%	11%	4%	6%	8%	9%	10%
Stayed the Same	19%	6%	29%	19%	26%	22%	21%	36%
<b>Co-occurring Substance Use</b>								
Improved or Acceptable	81%	83%	72%	77%	83%	78%	88%	76%
Worsened	10%	11%	9%	11%	8%	10%	7%	9%
Stayed the Same	9%	6%	19%	12%	10%	12%	5%	15%
<b>Family Resources</b>								
Improved or Acceptable	46%	58%	42%	41%	44%	48%	37%	31%
Worsened	21%	13%	20%	26%	15%	26%	24%	17%
Stayed the Same	32%	29%	39%	33%	41%	26%	39%	52%
<b>Severe Disruptive or Aggressive Behavior</b>								
Improved or Acceptable	52%	38%	31%	41%	44%	42%	44%	26%
Worsened	12%	22%	16%	18%	14%	22%	18%	17%
Stayed the Same	36%	39%	53%	41%	41%	36%	38%	57%

\*The data for the Dallas SDA includes a few clients that are not in NorthSTAR.  
 NOTE: Percentages may not sum to 100 percent due to rounding errors.  
 SOURCE: Legislative Budget Board.

**FIGURE 16  
OUTCOME MEASURES FOR CLIENTS ACCESSING SUBSTANCE ABUSE TREATMENT SERVICES  
FISCAL YEAR 2009**

OUTCOME MEASURE	DEFINITION
<b>ADULTS AND CHILDREN</b>	
Recidivism	Client returned to substance abuse treatment after a 15-day break in service.
<b>ADULTS ONLY</b>	
Abstinent	Client reports they have not used any substances during the preceding 30 days.
No legal involvement	Client reports they are not currently involved with the legal system (e.g., probation, parole, courts)
Employed	Client reports they are employed full or part-time.
<b>CHILDREN ONLY</b>	
Abstinent	Client reports they have not used any substances during the preceding 30 days.
No legal involvement	Client reports they are not currently involved with the legal system (e.g., probation, parole, courts)
School attendance	Client reports they are currently enrolled in school.

SOURCE: Department of State Health Services.

**FIGURE 17  
OUTCOME DATA FOR CLIENTS ACCESSING SUBSTANCE ABUSE TREATMENT SERVICES  
FISCAL YEAR 2009**

	SERVICE DELIVERY AREA							
	BEXAR	EL PASO	HARRIS	LUBBOCK	NUECES	TARRANT	TRAVIS	DALLAS (NORTHSTAR)
<b>ADULTS AND CHILDREN</b>								
Recidivism	12%	10%	9%	11%	13%	10%	15%	27%
<b>ADULTS ONLY</b>								
Abstinent	73%	81%	84%	70%	77%	78%	79%	77%
No legal involvement	51%	43%	42%	52%	40%	36%	43%	41%
Employed	54%	43%	45%	55%	46%	38%	47%	34%
<b>CHILDREN ONLY</b>								
Abstinent	78%	93%	86%	86%	82%	78%	71%	77%
No legal involvement	58%	16%	81%	70%	66%	55%	78%	37%
School attendance	87%	96%	90%	96%	85%	82%	89%	75%

SOURCE: Department of State Health Services.

9 percent in Harris to 15 percent in Travis. Fewer adult clients in NorthSTAR reported they are employed full or part-time as compared to the other SDAs (i.e., 34 percent in NorthSTAR compared to a range of 38 percent to 55 percent in other areas). Similarly, fewer child clients in NorthSTAR reported they are currently enrolled in school (i.e., 75 percent in NorthSTAR compared to a range of 82 percent to 96 percent in other areas). Except for El Paso, fewer child clients in NorthSTAR reported they had no legal involvement. There is less variability between NorthSTAR and the other SDAs for the other measures (i.e., adult abstinence, child abstinence, adult legal involvement).

Figure 18 shows the percentage of Medicaid clients readmitted within 30 days following an inpatient stay for mental health problems across NorthSTAR and Medicaid STAR HMOs. According to the Institute for Child Health Policy at the University of Florida, mental health readmissions are frequently used as a measure of adverse outcomes that potentially result from efforts to contain behavioral health care spending such as reducing initial lengths of stay. The percentage of NorthSTAR clients who were readmitted, 9.6 percent, is less than all but one of the Medicaid STAR HMOs (i.e., FirstCare).

**FIGURE 18**  
**READMISSION WITHIN 30 DAYS AFTER AN INPATIENT STAY**  
**FOR MENTAL HEALTH**  
**FISCAL YEAR 2007**

HMO	READMISSION
NorthSTAR	9.6%
Amerigroup Community Care*	15.5%
Community First Health Plans	21.7%
Community Health Choice	15.9%
Cook Children's Health Plan	35.8%
Driscoll Children's Health Plan	22.1%
El Paso First Premier Plan	23.5%
FirstCare	5.6%
Parkland HEALTHfirst*	--
Superior HealthPlan	14.3%
Texas Children's Health Plan	19.5%
UniCare Health Plans of Texas*	--
United Healthcare – Texas	24.3%

\*Data on clients in the Dallas service delivery area are excluded because they receive behavioral health services through NorthSTAR. NOTE: Data for Aetna and Molina is not included because the number of clients eligible for the measure is less than 30. SOURCE: Texas Health and Human Services Commission.

**IMPROVE THE MEASUREMENT AND REPORTING OF BEHAVIORAL HEALTH CLIENT OUTCOMES TO ENSURE CLIENT RECOVERY AND IMPROVE PROGRAM MONITORING**

Behavioral health process indicators related to spending, utilization, and level and amount of care, comparing NorthSTAR to other selected service delivery areas are mixed or unknown. Furthermore, the state cannot determine NorthSTAR's overall effectiveness relative to the rest of the state because behavioral health outcome data is incomplete. Also, the reliability of existing outcome data is uncertain due to inadequate data collection procedures and oversight.

Following are the sources and types of client outcome data collected by DSHS or the Health and Human Services Commission (HHSC) and the limitations of each:

- Persons who access mental health services through LMHAs or through NorthSTAR are assessed through the TRAG system. LMHA staff and NorthSTAR providers complete the assessments. The TRAG system results in client ratings on nine dimensions for adults and 10 dimensions for children. Of these dimensions, six are used to track adult client outcomes and seven are used to track child client outcomes. A client's initial TRAG assessment is

compared to their re-assessment to determine whether their rating on a certain outcome measure or dimension has improved, worsened, or stayed the same. The contracts between DSHS and LMHAs require that LMHAs either achieve certain TRAG dimension ratings or meet minimum service hour requirements, or be subject to a financial sanction. In NorthSTAR, DSHS can sanction the behavioral health organization (i.e., ValueOptions) if the behavioral health organization's contracted providers fail to either achieve certain TRAG dimension ratings or meet minimum service hour requirements. As a result, there is an inherent risk for LMHA staff or NorthSTAR providers to manipulate assessment data to show positive outcomes. Furthermore, the reliability of the TRAG data may be affected by differences in how the assessment tool is completed across the state making it difficult to compare data across LMHAs and NorthSTAR. Local staff turnover and limited centralized training at DSHS increase the risk that administration of the TRAG is inconsistent. Also, DSHS quality management oversight of TRAG administration is limited preventing the state from evaluating TRAG data reliability. For example, DSHS staff do not audit TRAG assessments to evaluate consistent application of the instrument. Finally, certain TRAG dimensions (e.g., housing) are partially affected by local conditions beyond the control of an individual LMHA or NorthSTAR. These factors make the reliability of the outcome data based on the TRAG uncertain.

- The contracts between DSHS and LMHAs and between DSHS and the NorthSTAR BHO require the tracking and reporting of other non-TRAG data that could be helpful for comparing client outcomes. For example, the rate at which clients are readmitted to a hospital is a key client outcome indicator. However, differences in how these outcome measures are defined prevent the comparison of data between LMHAs and NorthSTAR.
- The state's contracted external quality review organization tracks certain quality of care measures for NorthSTAR and Medicaid STAR HMOs. For example, the rate at which clients are readmitted within 30 days following an inpatient stay for mental health is tracked. This data, while useful, is limited to comparing performance between NorthSTAR and

Medicaid STAR HMOs, not between LMHAs and NorthSTAR.

- Each substance abuse treatment provider under contract with DSHS or participating in NorthSTAR is required to conduct follow-up client interviews between 60 and 90 days after discharge from all services. During the interview, the provider obtains self-reported outcome data related to substance use, legal status, employment status, and school attendance. The validity of the data is impacted because it is self-reported and there is no comparison to client status before treatment (i.e., pre-test).

Recommendation 1 would include a rider in the 2012–13 General Appropriations Bill to require DSHS to improve the measurement, collection, and reporting of behavioral health client outcome data. DSHS should evaluate and improve the tool used to measure client outcomes, remove incentives for data manipulation, provide continuing education on administration of the tool, improve state oversight of data collection, and post data on the agency's website on a regular basis.

Recommendation 2 would include a rider in the 2012–13 General Appropriations Bill that would direct DSHS to submit a report on efforts planned or implemented to improve the measurement, collection, and reporting of behavioral health client outcome data to the Governor and the Legislative Budget Board by December 1 of each year of the biennium.

Recommendation 3 would include a rider in the 2012–13 General Appropriations Bill that would direct DSHS, in consultation with HHSC, 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 Governor and the Legislative Budget Board by December 1, 2012. The comparative study should report data by client type (e.g., Medicaid, medically indigent) and by age (e.g., adults and children) and should include, at a minimum, an analysis of the following performance indicators:

- aggregate and per client spending overall and by service delivery setting;
- penetration rates;
- service utilization by delivery setting;
- level and amount of care provided; and
- client outcomes.

## FISCAL IMPACT OF THE RECOMMENDATIONS

The recommendations in this report direct DSHS to implement improvements to the measurement and reporting of behavioral health client outcome data, submit a report to the Governor and the Legislative Budget Board on improvements planned or implemented, and to conduct a comparative analysis of publicly funded behavioral health systems in Texas. The recommendations are intended to help ensure that Medicaid clients and medically indigent persons with behavioral health needs receive appropriate high-quality services, thus reducing spending on more expensive types of care, and improving the state's ability to monitor program performance and make system improvements. It is estimated that the recommendations would have no significant fiscal impact because they could be implemented using existing resources.

The introduced 2012–13 General Appropriations Bill includes a rider that implements Recommendations 1, 2 and 3.

