

RHP 9 Community Health Needs Assessment

To develop the Community Needs Assessment, a regional Task Force was convened by representatives from the following organizations: Baylor Health Care System, Children's Medical Center, Dallas County Medical Society, Dallas County Behavioral Health Leadership Team, HCA North Texas, Methodist Health System, North Texas Behavioral Health Authority, Parkland Health & Hospital System, Scottish Rite Hospital for Children, Texas Health Resources, UT Southwestern Medical Center, and ValueOptions of Texas.

This Task Force reviewed and identified the regional needs through data analysis, expert presentations, and committee discussions. The major criteria used to identify and rank regional priorities included population impact, alignment with intervention categories, and whether solutions lend to regional based approaches. The following priorities were identified as the region's major community health needs:

Capacity - Primary and Specialty Care - The demand for primary and specialty care services exceeds that of available medical physicians in these areas, thus limiting healthcare access.

Behavioral Health - Adult, Pediatric and Jail Populations - Behavioral health, either as a primary or secondary condition, accounts for substantial volume and costs for existing healthcare providers, and is often utilized at capacity, despite a substantial unmet need in the population.

Chronic Disease - Adult and Pediatric - Many individuals in North Texas suffer from chronic diseases that present earlier in life, are becoming more prevalent, and exhibit complications.

Patient Safety and Hospital Acquired Conditions – Hospitals in the region address patient safety and care quality on a daily basis. It is a continuous improvement initiative and is always at the forefront of any strategy for a health care entity. An ongoing coordinated effort among providers is needed to improve patient safety and quality throughout the region.

Emergency Department Usage and Readmissions - Emergency departments are treating high volumes of patients with preventable conditions, or conditions that are suitable to be addressed in a primary care setting. Additionally, readmissions are higher than desired, particularly for those with severe chronic disease or behavioral health.

Palliative Care - Overall, costs are high in skilled nursing facilities, long term care facilities, hospice and home health sectors, and slightly higher in physician services.

Oral Health - In Texas, preventive dental visits are below the recommended levels, and access can be a problem for minorities, the elderly, children on Medicaid, and other low income children. Compounding the issue is the shortage of dentists in Texas at approximately 60% of the national ratio of dentists to the population.

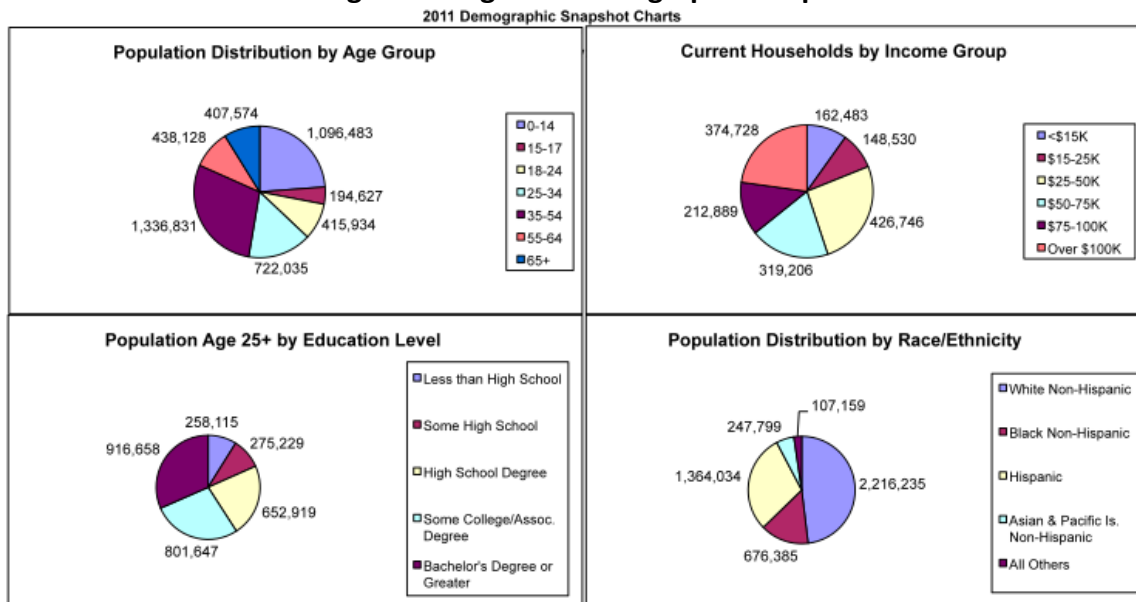
Demographics and Regional Description

Based on population alone, Texas is the second largest state in the nation with more than 25 million people. From 2000 to 2010, Texas experienced a 20% growth in population, as compared to only a 9.7% increase nationally. Originally, the North Texas RHP 9 Region was defined to include Collin, Dallas, Denton, Ellis, Fannin, Grayson, Kaufman, Navarro, and Rockwall counties. The broader demographics were considered to be representative of the narrower final RHP boundaries and as demonstrated in Figure 3 below, there is considerable in-migration from the original RHP counties to Dallas County for health care services.

In the North Texas RHP 9 region (original definition), the 2011 population is estimated to be 4,611,612 and is expected to grow by 9.5% by 2016 to 5,048,283 residents.¹ The most prevalent age group is 35-54 years (27.6%), followed by the 0-14 age group (20.2%). While 15.1% of adults have less than some high school level of education, approximately 85% of adults have at least a high school degree.

White non-Hispanics represent 48.1% of the population, followed by Hispanics, Black non-Hispanics, Asians, and others, respectively.² Approximately 44% of Dallas-Fort Worth residents are New Americans (defined as either foreign born or the children of foreign born) of which 46% are undocumented. English is not the language spoken in 32% of homes in North Texas and over 239 languages are spoken in the North Texas Area, with more than 1/3 reflecting African cultures new to the region.³

Figure 1: Regional Demographic Snapshot



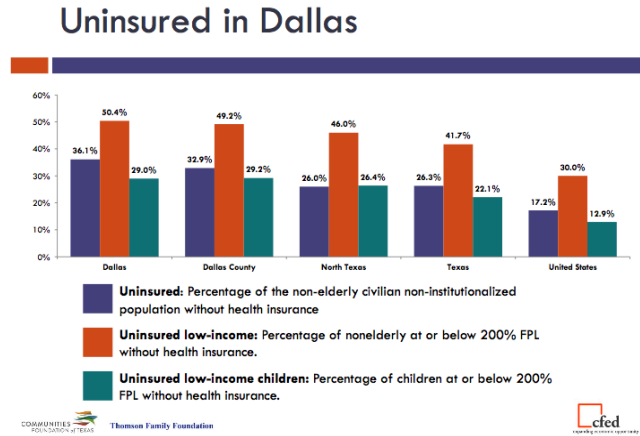
¹ US Census Data, Thompson Reuters/Claritas Market Expert Data Extract, 2012.

² *ibid.*

³ DFW International Community Alliance. 2010 North Texas Progress Report.

Within Dallas County specifically, 29.6% of children under 18 live below the federal poverty level and 15.8% of adults between 18 to 64 years live below the federal poverty level.⁴

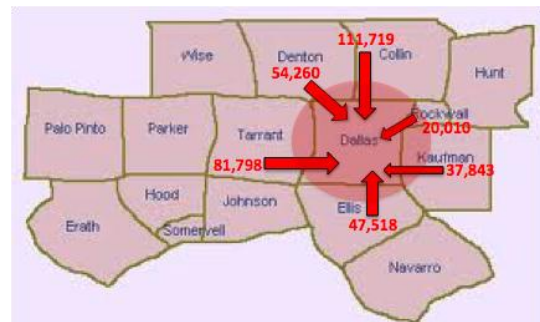
Figure 2: Summary of Uninsured in Dallas County⁵



Health Delivery System and Patient Migration Patterns

Data analysis identified patient migration patterns within multiple RHP regions. Many individuals receive healthcare services in nearby counties. In the pediatric population, Dallas County residents account for 75% of the outpatient services and 74% of the inpatient services. In the adult population, Dallas County residents account for 77% and 73% of the outpatient and inpatient population, respectively.⁶

Figure 3: Interconnectedness of Healthcare Delivery System: Dallas County Encounters from Patients with Adjacent County of Residence, 2011⁷



The locations of charitable clinics in Dallas County are shown on the map below. Additional analysis is warranted to determine the causal factors of the patient flow and migration patterns and how they relate to the locations of clinics/other service sites in the region. It is apparent though that the data presents strong justification to consider a broader geographic area for the purposes of this assessment.

⁴ US Census Data. www.census.gov, 2011.

⁵ Communities Foundation of Texas, Assets and Opportunities Profile. February 2012.

⁶ DFWHC Foundation, Information and Quality Services Data Warehouse, 2011

⁷ *ibid.*

Figure 4: Location of Charitable Clinics in North Texas⁸



Regional Health Care Capacity

Physician Supply and Availability

RHP 9 is affected by the limited physician capacity in primary and select specialties. According to the Health Professions Resource Center, primary care physician supply trends have consistently increased to a current statewide rate of 70 per 100,000 people in 2011.⁹ In 2011, the RHP 9 region demonstrated a physician need in excess of over 30% of the current workforce and by 2016 the physician need is expected to be 50% higher than projected availability.¹⁰ With such a shortage of physicians, which is disparately worse in rural areas of Texas, many residents seek primary care and non-emergent treatment in emergency departments, resulting in increased healthcare costs and higher volumes of preventable and avoidable cases in the ED.

Medical Education

Dallas County is home to the University of Texas Southwestern Medical Center, an academic medical center that trains over 1000 medical students and approximately 1300 clinical residents annually. Many training and residency placements are completed within the DFW Metroplex providing an important source of physicians to the local healthcare system.

Medically Underserved and Shortage Areas

A Health Professional Shortage Area (HPSA) is a federally designated geographic area, a facility or population group with a shortage of primary care physicians (or dental or mental health providers) as defined by a population-to-primary care physician ratio of at least 3,500:1 in

⁸ Parkland Health & Hospital System. Charitable Clinic Locations Report. 2012.

⁹ Health Professions Resource Center, Center for Health Statistics, Department of State Health Services, October 2011.

¹⁰ *ibid.*

addition to other requirements designated by the U.S. Department of Health and Human Services.¹¹ Poverty rate, infant mortality rate, fertility rate and physical distance from care are all considerations in scoring for HPSA designation.

Medically Underserved Areas or Populations (MUA/MUP) are generally defined by the federal government to include areas of populations with a shortage of personal health care services or groups of people who may have cultural or linguistic barriers to health care. In RHP 9, Dallas County has significant HPSA and MUA regions that overlap and Kaufman County is a county-level HPSA with no MUAs.

Children/Youth

The impact of the limited primary and specialty care is profound for children and families in the region. The current pediatric need is more than 80% of the current supply in the region. In Dallas County alone, over 36.2% of children were enrolled in Medicaid in 2010, exacerbating the issue of availability of pediatric primary care access and treatment.¹² Data also indicates that many of the pediatric specialists have limited capacity, creating a backlogged pipeline for those needing specialty services after seeking primary care.

Behavioral Health

Behavioral Health System Structure and Funding

The behavioral health system (including mental health and substance use) in RHP 9 differs from that of the rest of the state in that the majority of behavioral services for Medicaid and indigent patients are delivered through the NorthSTAR program instead of the traditional Local Mental Health Authority (LMHA) system. It is a managed behavioral healthcare carve-out program, administered by ValueOptions of Texas under a Medicaid 1915(b) waiver under the oversight of the North Texas Behavioral Health Authority (NTBHA), and it provides both mental health and substance use treatment to over 60,000 Medicaid enrollees and indigent uninsured annually.

Over the past decade, the NorthSTAR program has greatly expanded access to care. However, this high level of access results in funding and infrastructure challenges. Since the program's inception, the growth in enrollment has outpaced funding such that the funding per person served is 30% less than when the program started in 1999 and is half that of the state average for other LMHAs¹³. Given that Texas is 50th in mental health funding nationwide¹⁴, the funding per person served in RHP 9 is among the lowest in the nation.

Mortality Trends in the Behavioral Health Population

An inadequate supply of behavioral health services is one of the most significant unmet health needs of RHP 9. A recent study in Texas found that NorthSTAR was one of only four LMHAs in which age-adjusted mortality rates were significantly higher for the mental health population compared to the general population. Consistent with the NASMHPD study, the majority of

¹¹ US Department of Health and Human Services. 2012.

¹² Children's Medical Center. Beyond ABC Report, 2011.

¹³ TriWest/Zia Partners. Assessment of the Community Behavioral Health Delivery System in Dallas County, 2010.

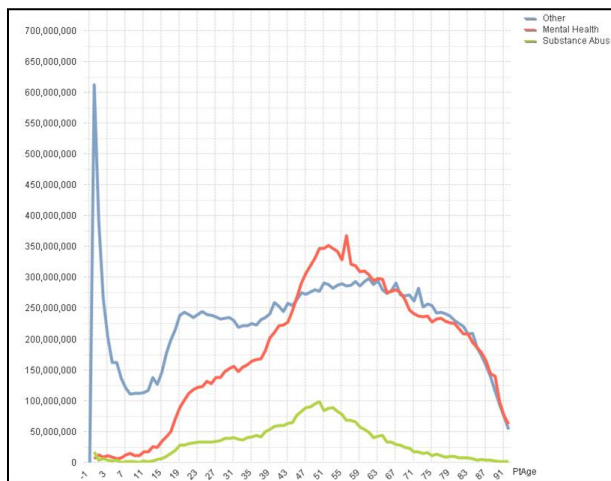
¹⁴ National Alliance on Mental Illness. State Mental Health Cuts: The Continuing Crisis. March 2011.

deaths in this region were due to medical illness, and most of those were due cardiovascular disease.¹⁵ The NorthSTAR system differs from the rest of the state in that it includes patients with primary diagnoses of substance use disorders, a preliminary analysis of death records showed similar mortality rates between the mental health and substance abuse populations.¹⁶

Cost Trends in the Behavioral Health Population

The financial implications of caring for those with behavioral health conditions are substantial and impact resources within the healthcare institutions of RHP 9. Analysis of DFW Hospital Council Foundation data demonstrates that charges associated with the care of mental health patients more than doubles from \$50,000,000 to over \$100,000,000 between the ages of 17 through 21. Charges continue to rise through adulthood, and between the ages of 47-65, the estimated charges for mental health encounters are higher than those of all other conditions combined. When substance abuse encounters are included, this difference is even greater.¹⁷

Figure 5: Age and Charge Distribution by Mental Health and Substance Abuse Encounter (2010Q3-2011Q3)¹⁸



In RHP 9, the presence of a co-occurring behavioral health condition is associated with increased case severity of medical encounters and a 36% increase in the average charges per encounter. In RHP 9, 100% of the 10 most frequently admitted patients had a co-occurring behavioral health diagnosis depicted in Figure 5. These 10 individuals incurred a cost of more than \$26 million between 2007 and 2011; however only 1/5 of their hospital emergency department visits were for a mental health or substance abuse issue. Sixty-one percent were uninsured (24% Medicaid, 12% Medicare, and 3% Insured).

¹⁵ Mortality of Public Mental Health clients treated at the Local Mental Health Authorities of Texas, 2012.

¹⁶ Personal communication between EA Becker and M Balfour

¹⁷ Dallas Fort Worth Hospital Council Foundation, Readmission Patterns by Mental Health & Substance Abuse, 2012

¹⁸ DFWHC Foundation, Information and Quality Services Data Warehouse, 2012.

Figure 6: Mental Health and Substance Abuse: Intersection

Mental Health and Substance Abuse Intersection

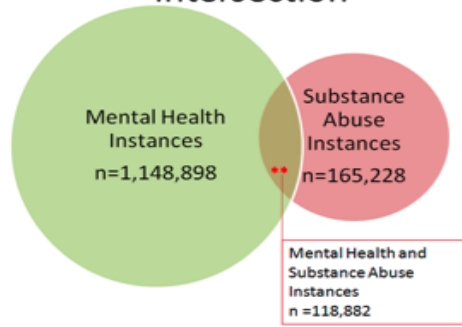


Figure 7: Top Ten High Emergency Department Utilizers: Mental Health and Substance Abuse Integration - Behavioral Health and Primary Care

DFWHC Foundation, Information and Quality Services (IQSC) Data Warehouse
Mental Health and Substance Abuse Interactions with Readmissions Patterns: Most Frequent 10 Patients (In and Outpatient)
RHP9 Cohort: 2007Q1 - 2011Q3

QUID	Total Cases	Mental Health	Substance Abuse	2007	2008	2009	2010	2011	Hospitals Visited	Average LOS (Days)	Uninsured	Insured	Medicaid	Medicare	Total Charges	Average Total Charges
430172	571	356	111	98	137	109	138	89	6	1.7375	2%	6%	86%	5%	\$1,326,311.	\$2,323.
811367	537	396	17	110	117	109	125	76	22	1.0152	0%	0%	0%	100%	\$931,952.	\$1,735.
1495682	490	267	35	77	125	125	83	80	26	1.3313	6%	15%	79%	0%	\$2,310,619.	\$4,716.
3554434	397	266	34	45	39	115	121	77	4	3.2897	99%	1%	0%	0%	\$577,739.	\$1,455.
3358467	379	297	10	15	38	56	116	154	7	1.4190	4%	39%	0%	57%	\$369,397.	\$975.
3048466	370	297	14	62	143	82	52	31	23	1.9093	11%	4%	24%	61%	\$2,145,038.	\$5,797.
1590501	362	245	94	60	2	118	101	81	4	10.5363	14%	1%	3%	82%	\$289,747.	\$800.
1993887	362	201	7	63	68	124	66	41	24	0.9448	7%	8%	84%	1%	\$1,805,928.	\$4,989.
1308998	361	235	133	37	51	93	122	58	9	1.2975	48%	2%	50%	0%	\$1,804,562.	\$4,999.
1411963	334	312	1	71	106	26	10	121	19	1.5736	45%	5%	50%	0%	\$637,233.	\$1,908.

The percentage of residents below 200% Federal Poverty Level in Dallas County who receive behavioral healthcare in primary care settings is 19.8% which is significantly lower than the national average of 37.1%.¹⁹ Parkland, the largest primary care provider to low-income populations in Dallas County, is not a NorthSTAR provider and consequently, some who may be successfully served in primary care settings are referred to NorthSTAR. This may result in dilution of limited NorthSTAR resources, as well as coordination of care issues for those with high complexity co-occurring illness. An analysis of the diabetic population at Parkland revealed that diabetics receiving antipsychotic medications from the NorthSTAR system were twice as likely to receive second-generation antipsychotics, which adversely affect metabolic indicators associated with poor diabetes outcomes, compared to those receiving antipsychotics from the Parkland pharmacy.²⁰

¹⁹ TriWest/Zia Partners. Assessment of the Community Behavioral Health Delivery System in Dallas County, 2010.

²⁰ Balfour, ME et al. Highlighting High Utilizers: How can our systems better meet their needs? Institute on Psychiatric Services Annual Meeting, 2011.

The funding challenges combined with the complexity of the behavioral health system may adversely impact sub-populations with the highest needs. The number of NorthSTAR enrollees booked into jail has been steadily increasing as shown below in Figure 8²¹, and 27% of all book-ins to the Dallas County Jail are currently referred to jail behavioral health services.²² Homeless individuals with behavioral health conditions cost three times as much and are booked into jail twice as often as the general NorthSTAR population.²³ Among high utilizers, these relationships are magnified, as illustrated below.

Figure 8: Behavioral Health Patient Factors for Top 20% Utilizers of NorthSTAR, Dallas County Jail, and Terrell State Hospital, 2010

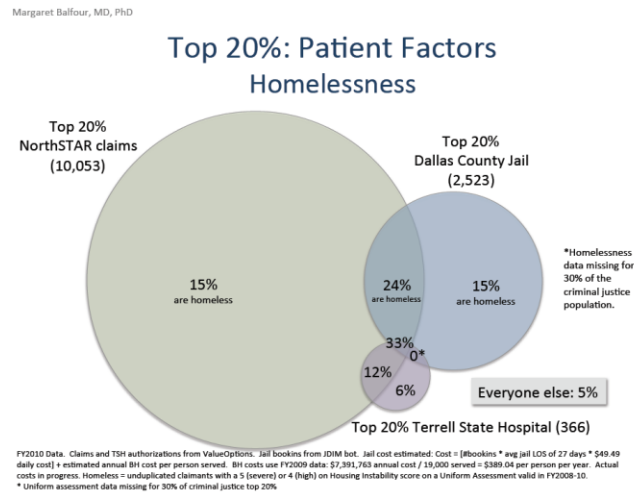
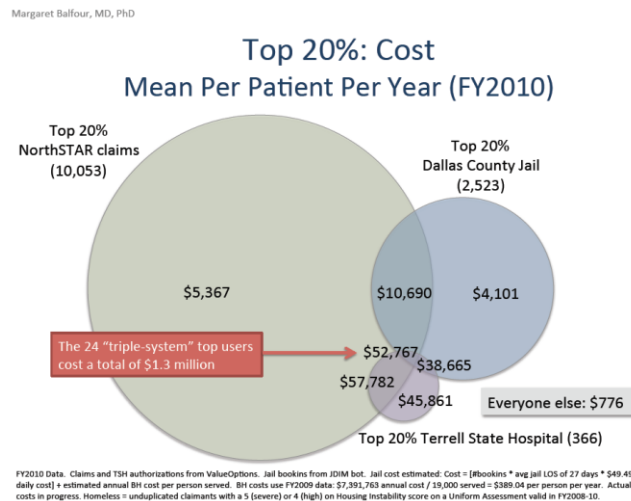


Figure 9: Behavioral Health Costs for Top 20% Utilizers of NorthSTAR, Dallas County Jail, and Terrell State Hospital, 2010



²¹ Ron Stretcher and Jill Reese, Dallas County Criminal Justice Department

²² Communication between Wassem Ahmed, Medical Director-Parkland Jail Behavioral Health and M. Balfour, MD

²³ Balfour, ME. Homelessness, Criminal Justice, and the NorthSTAR Top 200 Report, 2011.

Children/Youth

The number of Dallas County children receiving publicly funded mental health services has tripled from 2000 to 2010. In Dallas County, the number of children identified with a diagnosable emotional disturbance or addictive disorder has increased to approximately 142,000 children with 5% of those children experiencing a significant impairment as a result. Among youth between the ages of 12-17, 7.2% have experienced a major depressive episode.

Cultural and Linguistic Minorities

Hispanics comprise 40% of the population but only 25% of the NorthSTAR population.²⁴ While there is a lack of services available and written materials available in Spanish, it is difficult to characterize the extent of the need, because data on primary language is not collected.

Demand for Behavioral Health Services

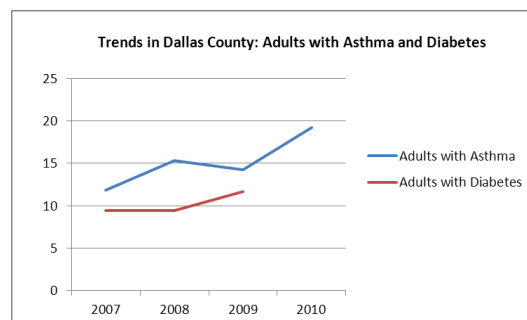
Following the economic downturn in 2009, there was a 17% increase in 23-hour observation visits at Green Oaks Hospital, mostly accounted for by new enrollees to NorthSTAR. More recently, there has been a sharp spike in 23-hour observation utilization, with Feb 2012 visits 26% higher compared to Dec 2011 (and 25% higher compared to Feb 2011).²⁵ This increase coincided with both regulatory oversight limiting the capacity of Parkland's Psychiatric ED by 50% and a reduction in funding for outpatient services in the NorthSTAR system.

In addition to hospital-type services, there is also a need for less-acute levels of behavioral care in order to prevent the need for these high-cost services. A sub-acute crisis residential level of care exists but there are only 21 beds for the entire NorthSTAR region. The Behavioral Health Leadership Team has identified the highest need for service development to be post-crisis "wraparound" services to reduce the 20% 30-day readmission rate to crisis services, and peer-driven services to engage clients early in order to prevent crisis episodes.

Chronic Disease

Similar to national trends, North Texas is experiencing increasing rates of many chronic diseases, including heart disease, cancer and stroke. Also there are increasing rates of asthma and diabetes in adults within the Dallas County Metropolitan Statistical Area as shown below.

Figure 10: Dallas County Adults with Asthma and Diabetes



In an assessment of ED utilization, the five encounter types that were most frequent and of highest volume are those for chronic conditions of asthma, chronic bronchitis, pain/aching of

²⁴ TriWest/Zia Partners. Assessment of the Community Behavioral Health Delivery System in Dallas County, 2010.

²⁵ ValueOptions of Texas

joints, sinusitis, and hay fever.²⁶ There were slight variations presented when encounters were analyzed by payer type. More Medicaid and uninsured patients sought treatment for asthma than those with insurance or Medicare and for the uninsured specifically, diabetes was listed as the 5th top condition, while not even listed as a top 5 condition for the insured or Medicaid.

Figure 11: Volume for Adult Outpatient Emergency Department Encounters (2010Q3 - 2011Q3)²⁷

Highest Volume	1	2	3	4	5
<i>All</i>	Low Back Pain	Hypertension	Pain/Aching of Joints	Chronic Bronchitis	Asthma
<i>Insured</i>	Low Back Pain	Hypertension	Pain/Aching of Joints	Chronic Bronchitis	Asthma
<i>Medicaid</i>	Low Back Pain	Pain/Aching of Joints	Asthma	Chronic Bronchitis	Depression / Anxiety
<i>Medicare</i>	Low Back Pain	Hypertension	Chronic Bronchitis	Pain/Aching of Joints	Diabetes
<i>Uninsured</i>	Low Back Pain	Pain/Aching of Joints	Hypertension	Asthma	Diabetes

Asthma

Over the past decade, asthma has become a widespread public health problem that has increased in both Texas and the United States. Asthma has a major impact on the health of the population and the burden falls unevenly on some populations. According to Texas Behavioral Risk Factor Surveillance System in 2005, approximately 1.5 million adults (ages 18 and older) and 389,000 children (ages 0-17) were reported to have asthma at the time.²⁸ And in 2006, the state of Texas spent over \$391.5 million for inpatient admissions with a primary discharge diagnosis of asthma.²⁹

In 2008, the state of Texas had a risk-adjusted admission rate of 72.5 per 100,000 cases.³⁰ Although Dallas County had a slightly higher rate at 89.1 per 100,000 cases, six of the ten counties surrounding Dallas County were significantly more burdened with a risk-adjusted admission rate of greater than 92.2 per 100,000 cases. Only one county of the ten had a lower risk-adjusted rate (Rockwall County) at 70.5 per 100,000 cases. Other North Texas counties' asthma admission rates are shown in the table below.

²⁶ Dallas Fort Worth Hospital Council Foundation, Information and Quality Services Data Warehouse. March 2011.

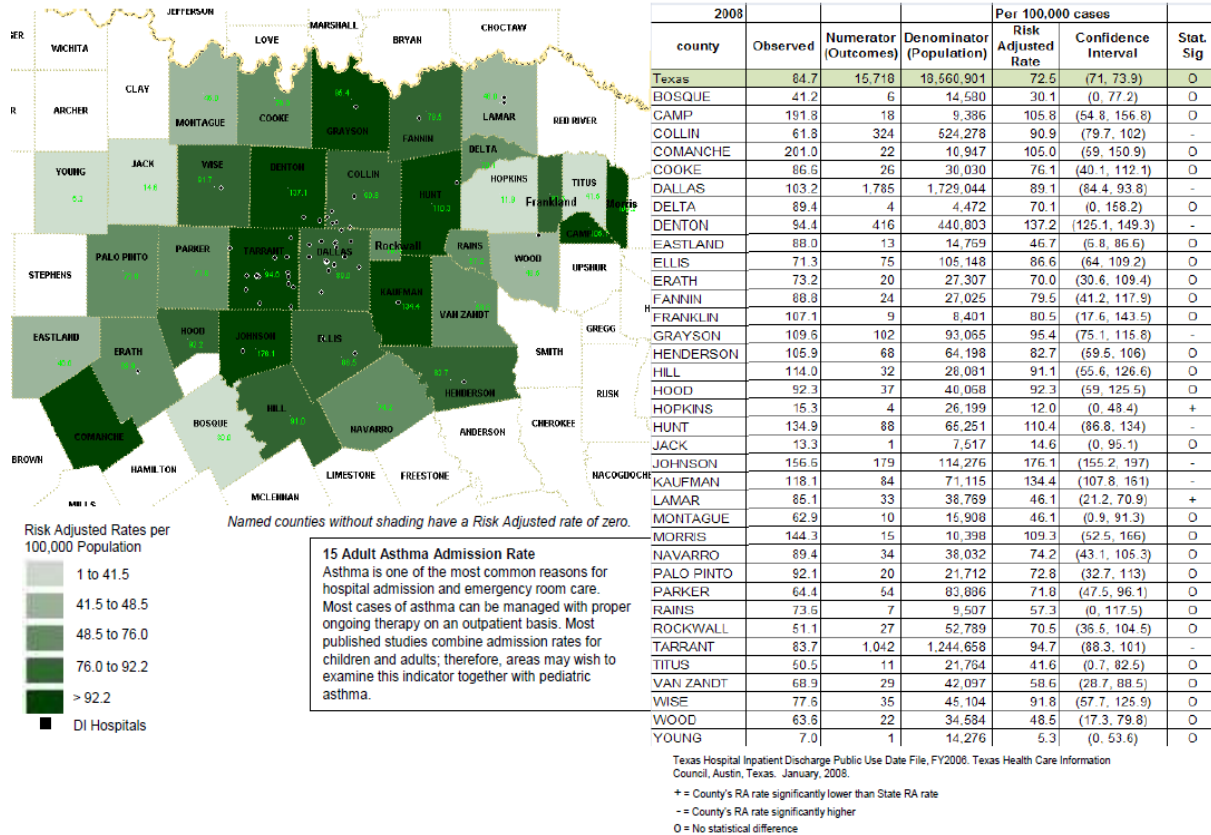
²⁷ Dallas Fort Worth Hospital Council Foundation, Information and Quality Services Data Warehouse. March 2011.

²⁸ Asthma Coalition of Texas. Texas Asthma Plan. 2007-2010.

²⁹ Asthma Coalition of Texas. 2012.

³⁰ AHRQ Prevention Indicators. Adult Asthma Admission Rate. 2008

AHRQ Prevention Quality Indicators Adult Asthma Admission Rate - 2008



Diabetes

Diabetes affects 11.4% of the population in Dallas County, which is above both the state average of 10% and the national average of 8%. In patients seen throughout the regional healthcare system and who are residents of Dallas County, the top five primary diagnoses, those patients with an underlying condition of diabetes were 29% for pneumonia, 39% for septicemia, 31% for other rehabilitation, 34% of urinary tract infection and 45% of acute kidney failure.³¹ Those with diabetes had a higher mortality percentage than those without in four of the five top inpatient diagnoses revealing that a co-morbidity of diabetes increases your risk for mortality.

Dallas County's top seven diagnoses for ER patients were Acute URI Unspecified, Otitis Media, abdominal pain, chest pain unspecified, urinary tract infection, headache and other chest pain. Within those top seven diagnoses, 20%-45% had an underlying condition of diabetes. Specifically, of all patients who came to the ER with chest pain as a diagnosis, 21%-25% had a comorbidity of diabetes. Of patients presenting with abdominal pain, urinary tract infections and headache, 10% also had diabetes.

³¹ Doughty, P. et al. Diabetes in Dallas County: Provider Report. 2011

Figure 12: Prevalence of Co-Occurring Diabetes, Dallas County 2009-2010

Top Five Diagnosis INPATIENTS 2009-2010 Dallas County	Number of Patients	Number of Patients with Diabetes	% with Diabetes	Mortality %	Mortality % with Diabetes
Pneumonia	4,359	1,279	29%	3.1%	3.5%
Septicemia	3,142	1,217	39%	21.4%	23.0%
Other Rehabilitation	2,816	872	31%	0.1%	0.1%
Urinary Tract Infection	2,447	822	34%	0.5%	0.6%
Acute Kidney Failure Unspecified	2,355	1,068	45%	3.2%	3.5%
Top Seven Diagnosis ER VISITS 2009-2010 Dallas	Number of Patients	Number of Patients with Diabetes	% with Diabetes	Mortality %	Mortality % with Diabetes
Acute URI Unspecified	23,979	392	2%	0%	0%
Otitis Media	18,576	84	0%	0%	0%
Abdominal Pain	14,677	1,516	10%	0%	0%
Unspecified Chest Pain	14,511	3,010	21%	0%	0%
Urinary Tract Infection	14,302	1,254	9%	0%	0%
Headache	13,531	1,228	9%	0%	0%
Other Chest Pain	13,217	2,980	25%	0%	0%

Children/Youth. Between 2000 and 2010, the number of Children’s Medical Center admissions of youth with a primary or secondary diagnosis of diabetes increased by 34%. With the association of diabetes and obesity, there is also cause for concern of the future trajectory as low income preschool obesity within the Dallas Metropolitan Statistical Area was 17.2% in 2009, placing many young children at higher rates of developing diabetes in later years.³²

Cost/Charge. Isolation of a specific “direct cost” is complicated. However, it is understood that the societal burden for this condition is extremely large and has manifestations in healthcare service utilization due to increases complexity and severity of other co-occurring medical conditions. Additionally, there are important societal costs of lower economic productivity of individuals with severe diabetic complications. The magnitude of the issues is only projected to increase as more people begin to develop diabetes at earlier in life.

Patient Safety and Quality and Hospital Acquired Conditions

The DFWHC Foundation’s 77 hospitals had 1,706 adverse hospital events in 2010. These events included air embolism, Legionnaires, Iatrogenic Pneumothorax, delirium, blood incompatibility, glycemic control issues and Clostridium difficile, which are not part of the ten adverse events specified by CMS. A significant portion was made up of Medicare patients (46%) and insured (54%) according to the claims data within the DFWHC Foundation claims data warehouse.

Emergency Department Usage and Readmissions

An analysis of the emergency department encounters demonstrates that many in the population are accessing emergency departments for both urgent and non-urgent conditions. Over the most recent four quarters of data, the conditions for which the most volume of care

³² Children’s Medical Center. Beyond ABC Report, 2010.

was provided in an emergency outpatient setting were: low back pain, hypertension, pain/joint aching, chronic bronchitis, and asthma.

Further assessment demonstrates that, with the exception of asthma, over 68% of the encounters for the top primary health conditions listed above were either non-emergent or emergent/primary care treatable, in that the care could have been provided effectively in a primary care setting. For asthma, approximately 98.1% of all encounters were emergent, however the condition could have been potentially avoidable or preventable if effective ambulatory care could have been received during the illness episode.³³

For emergency department encounters that resulted in a hospital admission, the most common health conditions by volume include stroke, diabetes, congestive heart failure, weak/failing kidneys, chronic bronchitis and heart attack. When reviewing by payer type, diabetes is the top condition for the uninsured and Medicaid and the 5th top condition for those who are insured.

Figure 14: Adult Inpatient Emergency Department Encounters (2010Q3 - 2011Q3)³⁴

Highest Volume	1	2	3	4	5
<i>All</i>	Stroke	Congestive Heart Failure	Weak/Failing Kidneys	Chronic Bronchitis	Diabetes
<i>Insured</i>	Stroke	Weak/Failing Kidneys	Congestive Heart Failure	Heart Attack	Diabetes
<i>Medicaid</i>	Diabetes	Congestive Heart Failure	Weak/Failing Kidneys	Stroke	Chronic Bronchitis
<i>Medicare</i>	Congestive Heart Failure	Stroke	Weak/Failing Kidneys	Chronic Bronchitis	Heart Attack
<i>Uninsured</i>	Diabetes	Stroke	Weak/Failing Kidneys	Congestive Heart Failure	Heart Attack

Specific to children, the high volume ED encounters includes asthma, diabetes, pain/aching joints, and arthritis most frequently. Regardless of payer type, asthma and diabetes are the top conditions for ER and inpatient admissions.

Figure 15: Pediatric Inpatient Emergency Department Encounters (2010Q3 - 2011Q3)³⁵

Highest Volume	1	2	3	4	5
<i>All</i>	Asthma	Diabetes	Pain/Aching of Joints	Arthritis	Congestive Heart Failure/Liver Condition
<i>Insured</i>	Asthma	Diabetes	Pain/Aching of Joints	Arthritis	Liver Condition
<i>Medicaid</i>	Asthma	Diabetes	Arthritis	Congestive Heart Failure	Pain/Aching of Joints
<i>Uninsured</i>	Asthma	Diabetes	Pain/Aching of Joints	Arthritis	Liver Condition/Low Back Pain

³³ DFWHC Foundation, Information and Quality Services Data Warehouse, 2011.

³⁴ Ibid.

³⁵ Ibid.

In North Texas, all-cause readmissions as defined by a subsequent admission within 30 days from the incident encounter of any type has demonstrated a downward trend since 2008.³⁶ Many hospitals are working to continue improvement in this area, specifically for readmission related to congestive heart failure, acute myocardial infarction, and pneumonia.

As evidenced by an assessment of 10 individual high utilizers in the region, there is a strong relationship between readmissions and behavioral health. Each patient has some component of mental health or substance abuse history over the course of their encounter history.

Figure 16: Top Ten High Emergency Department Utilizers: Mental Health and Substance Abuse

DFWHC Foundation, Information and Quality Services (IQSC) Data Warehouse
Mental Health and Substance Abuse Interactions with Readmissions Patterns: Most Frequent 10 Patients (In and Outpatient)
RHP9 Cohort: 2007Q1 - 2011Q3

QUID	Total Cases	Mental Health	Substance Abuse	2007	2008	2009	2010	2011	Hospitals Visited	Average LOS (Days)	Uninsured	Insured	Medicaid	Medicare	Total Charges	Average Total Charges
430172	571	356	111	98	137	109	138	89	6	1.7375	2%	6%	86%	5%	\$1,326,311.	\$2,323.
811367	537	396	17	110	117	109	125	76	22	1.0152	0%	0%	0%	100%	\$931,952.	\$1,735.
1495682	490	267	35	77	125	125	83	80	26	1.3313	6%	15%	79%	0%	\$2,310,619.	\$4,716.
3554434	397	266	34	45	39	115	121	77	4	3.2897	99%	1%	0%	0%	\$577,739.	\$1,455.
3358467	379	297	10	15	38	56	116	154	7	1.4190	4%	39%	0%	57%	\$369,397.	\$975.
3048466	370	297	14	62	143	82	52	31	23	1.9093	11%	4%	24%	61%	\$2,145,038.	\$5,797.
1590501	362	245	94	60	2	118	101	81	4	10.5363	14%	1%	3%	82%	\$289,747.	\$800.
1993887	362	201	7	63	68	124	66	41	24	0.9448	7%	8%	84%	1%	\$1,805,928.	\$4,989.
1308998	361	235	133	37	51	93	122	58	9	1.2975	48%	2%	50%	0%	\$1,804,562.	\$4,999.
1411963	334	312	1	71	106	26	10	121	19	1.5736	45%	5%	50%	0%	\$637,233.	\$1,908.

Cost/Charge

From quarter 3 of 2010 to quarter 3 of 2011, the estimated charges associated with all regional emergency outpatient encounters was \$312,816,490 and for emergency inpatient encounters, the total charges increase to \$2,076,778,420. For emergency inpatient encounters, there was little charge variation across insured, Medicaid, Medicare, and Uninsured payer types.

Palliative Care

Palliative care is an important factor in the care delivery system of RHP 9. Overall, Medicare reimbursements to providers in Dallas County are higher than average and higher than the 50th percentile in the country during a patient’s last two years of life signifying a large volume of palliative care services being provided. Even within the health service area of RHP 9, there is variability of the percentage of deaths occurring within hospitals, ranging from 0.69 percent to 1.17 when compared to the national average.

Oral Health

Tooth decay (dental caries) is the most common chronic childhood disease. In 2003, the proportion of Texas children reported to have teeth in excellent or very good condition was lower than the national average and lower within all age, sex, and racial/ethnic subgroups.

³⁶ DFWHC Foundation, Information and Quality Services Database, 2010.

Figure 17: Oral Health – Condition of Teeth for Texas Children (2003)

	Condition of Teeth: Excellent or very good		Preventive Dental Care: ≥ 1 Visit within Past Year	
	US %	Texas %	US %	Texas %
Age Group				
All children 0–17	64.3	57.6	67.6	61.6
Age (years)				
1–5	75.8	70.7	46.8	48.4
6–11	61.7	50.9	83.4	74.8
12–17	67.4	61.2	79.4	69.7
Socioeconomic status				
0–99% Federal poverty level	45.4	40.7	54.1	56.0
100–199% Federal poverty level	56.5	48.9	61.6	52.6
200–399% Federal poverty level	71.2	66.7	73.0	67.4
≥400% Federal poverty level	78.1	78.3	77.8	73.3
Race/ethnicity				
White	69.3	65.4	70.6	64.4
Black	57.4	53.4	62.6	64.9

Dental problems in adults are equally problematic. According to the U.S. Surgeon³⁷ most adults in the U.S. show signs of periodontal or gingival diseases and severe periodontal disease affects 14 percent of adults (ages 45–54 years). However, a little less than two-thirds of adults report visiting a dentist within the past 12 months, and those with incomes at or above the poverty level are twice as likely to report a dental visit in the past 12 months as those below the poverty level. The American Dental Association cited the major reason for not accessing regular oral health care is the high cost of dental care. And the number of individuals who lack dental insurance is more than 2.5 times the number of those who lack medical insurance.

Effective health policies intended to expand access, improve quality, or contain costs must consider the supply, distribution, preparation, and utilization of the workforce. According to the National Health Service Corps, Texas needs 784 additional dentists to achieve the recommended ratio of one dentist for every 3,000 residents. The overall supply of dentists in Texas has been consistently below the national average of 59-60 dentists per 100,000 for many years.³⁸ In 2006, Texas had 36.0 dentists per 100,000 and it has been declining since.

³⁷ National Institute of Health. National Institute of Dental and Craniofacial Research. “Oral Health in America: A Report of the Surgeon General. 2000.

³⁸ State Department of Health & Human Services, Center for Health Statistics Health Professions Resource Center. Publication No. 25-12581. E-Publication No. E25-12581. March 2007.

Summary of Community Needs

Identification Number	Brief Description of Community Needs Addressed in RHP Plan	Data Source for Identified Need
CN.1	Community Description – Demographics	US Census Data, DFW International Community Alliance Report, Communities Foundation of Texas Report
CN.2	Regional Healthcare Infrastructure and Patient Migration Patterns	DFWHC Foundation, Information Quality and Services Data Warehouse, Parkland Health and Hospital System
CN.3	Healthcare Capacity	Health Professions Resource Center, Center for Health Statistics, US Department of Health and Human Services; Children’s Medical Center Beyond ABC Report; Horizons (2012): The Dallas County Community Health Needs Assessment
CN.4	Primary Care and Pediatrics	Health Professions Resource Center, Center for Health Statistics, US Department of Health and Human Services, Children’s Medical Center Beyond ABC Report
CN.5	Behavioral Health	TriWest/Zia Partners Report, National Alliance on Mental Illness, DFWHC Foundation, Information Quality and Services Data Warehouse
CN.6	Behavioral Health and Primary Care	TriWest/Zia Partners Report, National Alliance on Mental Illness, DFWHC Foundation, Information Quality and Services Data Warehouse, Horizons: The Dallas County Community Health Needs Assessment
CN.7	Behavioral Health and Jail Population	Dallas County Criminal Justice Department, Parkland Health and Hospital System
CN.8	Specialty Care	DFWHC Foundation, Information and Quality Services Data Warehouse retrieved March 2012, Children’s Medical Center Beyond ABC Report, 2011 US Census Data, Thompson Reuters/Claritas Market Expert Extract prepared by Devin Hill, Baylor Health Care System, generated February 2012.
CN.9	Chronic Disease	DFWHC Foundation Information Quality and Services Data Warehouse, Diabetes in Dallas County Report, Children’s Medical Center Beyond ABC Report, Horizons: The Dallas County Community Health Needs Assessment
CN.10	Oral Health	US Department of Health and Human Services Healthy People 2010, Texas Department of State Health Services Oral Health Program, DSHS Primary Care Office
CN.11	Patient Safety and Quality	DFWHC Foundation Information Quality and Services Data Warehouse, Institute of Medicine Report
CN.12	Emergency Department Usage and Readmissions	DFWHC Foundation Information Quality and Services Data Warehouse
CN.13	Palliative Care	Barnato et al., Teno et al., Wennenberg et al.

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