Community Health Needs Assessment

July 1, 2013 - June 30, 2016

Approved by:
Mission and Community Benefits Committee
June 14, 2013

Approved by:
Baylor Health Care System Board of Trustees
June 24, 2013

Approved by:
Baylor Health Care System Operation, Policy and Procedure Board
June 25, 2013
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>ii</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Background</td>
<td>1</td>
</tr>
<tr>
<td>2. METHODOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>Health Status Information</td>
<td>3</td>
</tr>
<tr>
<td>Key Contributors</td>
<td>3</td>
</tr>
<tr>
<td>3. COMMUNITY HEALTH NEEDS IDENTIFIED BY REGIONAL PLANS</td>
<td>4</td>
</tr>
<tr>
<td>Regional Health Partnership 9 Needs Assessment</td>
<td>4</td>
</tr>
<tr>
<td>Dallas County Community Health Needs Assessment</td>
<td>4</td>
</tr>
<tr>
<td>BIR-NW Dallas Service Area Needs from RHP 9 and Dallas County CHNA</td>
<td>5</td>
</tr>
<tr>
<td>4. BIR-NW DALLAS SERVICE AREA</td>
<td>5</td>
</tr>
<tr>
<td>Demographics</td>
<td>7</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>7</td>
</tr>
<tr>
<td>Educational Attainment</td>
<td>8</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>9</td>
</tr>
<tr>
<td>Age</td>
<td>10</td>
</tr>
<tr>
<td>Insurance Trends and Uninsured Status</td>
<td>11</td>
</tr>
<tr>
<td>Community Needs Index</td>
<td>12</td>
</tr>
<tr>
<td>5. PROVIDER INVENTORY</td>
<td>14</td>
</tr>
<tr>
<td>6. DALLAS COUNTY—HEALTH INDICATORS</td>
<td>16</td>
</tr>
<tr>
<td>County Health Rankings and Roadmaps</td>
<td>16</td>
</tr>
<tr>
<td>Health Outcomes—Mortality and Morbidity</td>
<td>16</td>
</tr>
<tr>
<td>Causes of Death</td>
<td>17</td>
</tr>
<tr>
<td>7. HIGH PRIORITY NEEDS</td>
<td>17</td>
</tr>
<tr>
<td>A. Healthcare Access for Low Income/Underserved</td>
<td>17</td>
</tr>
<tr>
<td>B. Multiple Chronic Conditions</td>
<td>20</td>
</tr>
<tr>
<td>C. Behavioral Health</td>
<td>23</td>
</tr>
<tr>
<td>8. MEDIUM PRIORITY NEEDS</td>
<td>24</td>
</tr>
<tr>
<td>A. Preventable Acute Care Admissions</td>
<td>24</td>
</tr>
<tr>
<td>B. Dental Care</td>
<td>29</td>
</tr>
<tr>
<td>C. Emergency and Urgent Care</td>
<td>29</td>
</tr>
<tr>
<td>D. Healthcare Infrastructure</td>
<td>31</td>
</tr>
<tr>
<td>E. Patient Safety and Hospital Acquired Conditions</td>
<td>32</td>
</tr>
<tr>
<td>9. NEXT STEPS</td>
<td>32</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

Background

Baylor Institute for Rehabilitation—Northwest Dallas (Hospital) is a hospital owned and operated through a partnership that is controlled by Baylor University Medical Center (BUMC), an affiliate of Baylor Health Care System (BHCS). BUMC has partnered with Select Medical Corporation to operate the Hospital to bring quality health care services to the Hospital’s community and to further BUMC’s and BHCS’s charitable purpose and mission.

Baylor Institute for Rehabilitation (BIR) – NW Dallas operates 42-beds in Dallas County, Texas. BIR-NW Dallas is dedicated to the care and treatment of persons with brain injury, stroke, spinal cord injury, amputation, neurological disorders, orthopedic conditions and general rehabilitation needs. BIR-NW Dallas offers the comprehensive care, advanced treatment and leading-edge technologies to best address each patient's complex medical, physical, emotional and vocational challenges. BIR-NW Dallas also provides the necessary training and education to support patients’ and their families' transitions to life ahead.

As a specialized rehabilitation hospital, BIR-NW Dallas administration wants to ensure the current service mix and future service development fulfill identified gaps in care and treatment. In addition, BHCS leadership wants to ensure that System resources and expertise are deployed to support the specialized charter of BIR-NW Dallas and optimally meet the health needs of all community residents.

This Community Health Needs Assessment (CHNA) synthesizes a wide range of community health information, including other needs assessments. The goal is to ensure that BIR-NW Dallas’ strategies support a healthier community and complement existing services available to areas residents.

Dallas County Overview

Dallas County, the ninth largest county in the United States, is a growing and thriving area. Between 2000 and 2010, the population increased over 20% to nearly 2.4 million people. Most of Dallas County’s growth occurred in suburban areas with the City of Dallas population increasing less than 1% between 2000 and 2010. Growth can be attributed to a strong economic environment, business expansion, and employment opportunities.

Dallas County has a diverse population that is 39% Latino, 32% Caucasian and 22% African American. County residents are younger than the U.S overall, present a wide range of socioeconomic status and have varied educational attainment. Dallas County has a higher percentage of uninsured residents than Texas or the United States.

County Health Rankings and Roadmaps

The 2013 County Health Rankings and Roadmaps measure the health of each county in the U.S, and compare and rank each Texas county against others in the State. Dallas County’s overall health ranking is 67 out of 232 Texas counties.
Dallas County also received a rank of 67 for Health Outcomes which includes mortality and morbidity indicators.
Dallas County is ranked 158 out of 232 Texas counties for Health Factors. These include health behaviors, clinical care, social & economic factors, physical environment.

**Identified Needs**

This BIR—NW Dallas FY 2013 CHNA brings together information from a variety of sources. It was developed with input from people representing the broad interests of the community and people with special knowledge or expertise in public health.

Two 2012 Community Health Needs Assessments (CHNA) laid the foundation for this needs assessment.
- Regional Health Partnerships (RHP) conducted community needs assessments (CNA) to develop plans for the Texas Medicaid 1115 waiver. RHP 9 includes Dallas County which is 75% of the population of the region. The RHP9 CNA outlines needs and priorities for the region and was a result of collaborative processes with BHCS staff and leadership integrally involved.
- Dallas County Health and Human Services conducted a collaborative CHNA led by a Performance Improvement Workgroup (PIW). Three BHCS representatives served on the PIW and were involved with the process and establishing Dallas County priorities.

The RHP 9 CNA and Dallas County CHNA provide the foundation for BIR-NW Dallas Community Health Needs Assessment (CHNA).

The identified community health needs were reviewed and prioritized with input from BIR-NW Dallas management and BHCS Senior Leadership. In prioritizing the needs of the community, BHCS adopted the methodology established in the collaborated CHNAs used for this assessment. Priority is assigned as follows:
- Needs identified as Top Priorities in both of the collaborated CHNAs are assigned a High Priority for BHCS.
- Needs identified as Top Priorities in one of the collaborated CHNAs are assigned a Medium Priority for BHCS.

The following presents priorities for the BIR-NW Dallas service area:

**High Priority Needs**
- A. Healthcare Access for Low Income/Underserved
- B. Multiple Chronic Conditions
- C. Behavioral Health

**Medium Priority Needs**
- A. Preventable Acute Care Admissions
- B. Dental Care
- C. Emergency and Urgent Care
- D. Healthcare Infrastructure
- E. Patient Safety/Hospital Acquired Conditions
An additional need is included in this CHNA which is a result of the specialized rehabilitation services provided at BIR—NW Dallas. It is a review of the needs surrounding Dallas County residents’ injuries.

1. **High Priority Needs**

   A. **Healthcare Access for Low Income/Underserved**

   Both the RHP 9 CNA and the Dallas County CHNA identified a need for increased clinical treatment capacity for primary and specialty care. Although Dallas County has a higher rate of primary care physicians (PCPs) than found in Texas, the percentage of Dallas County residents reporting a personal physician is lower than the State.

   The Dallas CHNA stated that expanding access requires:
   - Enhanced service networks.
   - Innovative treatment approaches, such as the patient centered medical home model of care which supports access to prevention, treatment and post-acute care.
   - Greater geographic dispersion of clinical care. Physicians are concentrated in the Stemmons Corridor and in northern suburbs. A shortage and maldistribution of primary care physicians results in underserved areas, particularly in the southern communities with lower socioeconomic status.
   - Increased access to health insurance. Nearly 25% of Dallas County residents are uninsured.
   - Improved health literacy to promote individual access.

   B. **Multiple Chronic Conditions**

   The Dallas County CHNA reports that similar to national trends, Dallas County residents are exhibiting increasing diagnoses for chronic conditions. It is common that the pathology for one condition may also affect other body systems, resulting in co-occurrence of multiple chronic conditions (MCC). The presence of MCCs adds a layer of complexity to disease management. RHP 9 CNA expands upon this, citing increasing rates of many chronic diseases, including heart disease, cancer, stroke, asthma and diabetes.

   BIR-NW Dallas treats patients with a wide variety of chronic diseases, but the most notable are stroke, neurological conditions such as Parkinson’s disease, and complications of diabetes. Patients often confront multiple chronic conditions, increasing the complexity of their treatment.

   C. **Behavioral Health**

   Behavioral health, which encompasses both mental health and substance abuse, accounts for substantial volume and costs for the regional healthcare system. Services are often utilized at capacity, resulting in substantial unmet needs in the population.

   The RHP 9 CNA states, “Behavioral health comprises a significant component of the health needs of RHP 9.” The CNA further states that over the past decade, the behavioral health system has significantly expanded access to care. This high level of access has resulted in funding and infrastructure challenges with funding per person served in RHP 9 among the lowest in the nation.
People with co-occurring behavioral health and medical illnesses incur the highest medical treatment costs. In RHP 9, the presence of a co-occurring behavioral health condition is associated with increased severity of medical encounters, a 36% increase in average charges per encounter, and in many cases reduced compliance with prescribed medical care regimens.

2. **Medium Priority Needs**

A. **Preventable Acute Care Admissions**
The importance of effective collaboration is recognized by health planning groups throughout Dallas County and is a priority of the Dallas County CHNA. Among other things, effective collaboration will reduce duplication and increase efficiency, effectively deploy scarce resources, establish outcomes in order measure results and allow development of best practices.

Taken together, community prevention and clinical prevention can reduce morbidity and mortality and improve community health.
- Community prevention supports activities to reduce health risk factors including proper nutrition, maintaining ideal weight and participating in adequate physical activity.
- Clinical prevention focuses on accessing preventive screenings and tests for early identification and treatment of diseases.

Ranked in the bottom third of *County Health Rankings*, Dallas County needs to improve both community and clinical prevention.

**Injury**

Reducing falls, particularly among residents age 65 and older could impact the individual’s health and the health of the Dallas County community.
- Dallas County’s 2010 death rate due to accidental falls averaged 9/100,000.
- That year, deaths of residents age 65 and older due to falls was 57/100,000, more than six times higher than the overall rate.

BIR-NW Dallas strives to bring the best practices of the BHCS to their patients. Baylor Institute for Rehabilitation is an important partner of the North Texas Traumatic Brain Injury Model System. Designed to increase knowledge about the effects of traumatic brain injuries and to improve outcomes and the quality of life for patients and their families, the System is a cooperative effort between the University of Texas Southwestern Medical Center, Baylor University Medical Center and BIR to provide advanced research.

B. **Dental Care**

The RHP 9 CNA identified a need for additional dental care in the region. Texas has approximately 60% of the national ratio of dentists to the population, and RHP 9 reports a similar shortage. Preventive dental visits are below the recommended levels in Texas. This needs assessment identified shortages of dentists and other dental care personnel resulting in limited dental access for minorities, the elderly, children on Medicaid, and other low income residents.
C. Emergency and Urgent Care

The shortage of physicians results in residents seeking primary care and non-emergent treatment in emergency departments (ED). The RHP 9 CNA found EDs are treating high volumes of patients with preventable conditions, or conditions that are suitable to be addressed in a primary care setting. This increases healthcare costs and may also result in poor continuity of care and disease management for the patient.

“All cause readmissions” are defined as a subsequent admission within 30 days from the initial inpatient encounter. The RHP 9 CNA found that North Texas hospitals have demonstrated a downward readmission trend since 2008, and reports that these providers are working to continue improvement in this area. Strategies which include patient centered medical homes, care navigators, home visits, extended patient education and other post-discharge support services have met with positive results.

Appropriate utilization of high quality inpatient rehabilitation services, such as those found at BIR-NW Dallas, supports reduced acute care hospital 30 day readmissions. With 68% of BIR-NW Dallas patients discharged to the home setting in 2011, the treatment plan focuses on the necessary and appropriate care to support discharge to the least restrictive environment.

D. Healthcare Infrastructure

Health Disparities and Resource Deserts

Portions of suburban Dallas County and large geographic areas of southern Dallas County suffer from disproportionate disease rates and substantial resource deserts. These communities suffer from high levels of unemployment, low socioeconomic status, and lack key resources including access to health services, safe environments and healthy foods.

Dallas County CHNA recommends targeting these communities with prevention education and services, health care providers and services to increase overall community health.

Palliative Care

Palliative care, an identified need from the Region 9 Health Plan, provides appropriate support and treatment to patients, often those with terminal illnesses. The overall goal of palliative care is to improve quality of life while ill, providing appropriate treatment and support to the patient and family.

E. Patient Safety and Hospital Acquired Conditions

RHP 9 CNA states that hospitals in the region address patient safety and care quality on a daily basis. Through continuous improvement initiatives regional health care providers are striving to improve patient safety and reduce hospital acquired conditions. An ongoing coordinated effort among providers will improve patient safety and quality throughout the region.
Next Steps

BIR-NW Dallas’ Implementation Plan will be developed with input from community leaders, BIR-NW Dallas’ administration and BHCS leadership. The implementation plan will define strategies to address identified needs from this CHNA over the next three years.

In developing a plan to address all identified community health needs, the Hospital and the System found that aggregating the needs allows for significant, crosscutting initiatives. Therefore, these needs are organized as follows:

A. Healthcare access for low income/underserved
B. Multiple chronic diseases
C. Behavioral Health
D. Preventable acute care admissions
E. Dental Care
F. Emergency and Urgent Care
G. Infrastructure
1. **INTRODUCTION**

**Background**

Baylor Institute for Rehabilitation—Northwest Dallas (Hospital) is a hospital owned and operated through a partnership that is controlled by Baylor University Medical Center (BUMC), an affiliate of Baylor Health Care System (BHCS). BUMC has partnered with Select Medical Corporation to operate the Hospital to bring quality health care services to the Hospital’s community and to further BUMC’s and BHCS’s charitable purpose and mission.

Baylor Institute for Rehabilitation (BIR) – NW Dallas operates 42-beds in Dallas County, Texas. BIR-NW Dallas is dedicated to the care and treatment of persons with brain injury, stroke, spinal cord injury, amputation, neurological disorders, orthopedic conditions and general rehabilitation needs.

- BHCS is a renowned regional and national health care leader, offering exemplary staff, high quality and cost effective care, a high level of patient satisfaction, and innovative services.
- SMC is one of the nation’s largest providers of comprehensive rehabilitation and long term acute care. Through an affiliation with the renowned Kessler Institute for Rehabilitation, SMC provides state-of-the-art rehabilitation services to optimize patient outcomes.

Through this joint venture, BIR-NW Dallas brings a new level of rehabilitation treatment to Dallas County residents.

BIR-NW Dallas patients benefit from the experience and expertise of a team of rehabilitation professionals who share one goal: to help each individual recover the skills, strengths and function to optimize his or her recovery. BIR-NW Dallas offers the comprehensive care, advanced treatment and leading-edge technologies to best address each patient's complex medical, physical, emotional and vocational challenges. BIR-NW Dallas also provides the necessary training and education to support patients’ and their families' transition to life ahead.

As a specialized rehabilitation hospital, BIR-NW Dallas administration wants to ensure the current service mix and future service development fulfill identified gaps in care and treatment. In addition, BHCS leadership wants to ensure that System resources and expertise are deployed to support the specialized charter of BIR-NW Dallas and optimally meet the health needs of all community residents.

This Community Health Needs Assessment (CHNA) synthesizes a wide range of community health information, including other needs assessments. The goal is to ensure that BIR-NW Dallas’ strategies support a healthier community and complement existing services available to areas residents.

2. **METHODOLOGY**

Creating healthy communities begins with understanding the objective and subjective health needs of community residents. Objective information from secondary sources underpins this CHNA. Building on this is collaboration with community residents and partner groups to develop a high level of understanding. This CHNA brings together objective data and collaborative insight to identify community health needs.
Since BIR-NW Dallas is a specialized hospital, the focus is on health needs that are appropriate and realistic given the BIR-NW Dallas community. This CHNA will serve as BIR-NW Dallas' foundation for community health improvement efforts in the service area for the next three years.

**Health Status Information**

The FY2013 BIR-NW Dallas CHNA brings together information from a variety of sources. This report was developed with input from people representing the broad interests of the community and people with special knowledge or expertise in public health.

1. **Secondary Data**
   - Demographic data provide an overview of the residents of BIR-NW Dallas’ service area which is all of Dallas County.
   - Secondary source data identifies health indicators for Dallas County and compares with Texas and U.S. when possible.
   - Community Need Index (CNI) from Dignity Health rates community need by ZIP code on a range of socioeconomic factors that impact health and healthy behaviors.
   - *County Health Rankings and Roadmaps* provides rankings of each county in Texas through collaboration between the Robert Johnson Foundation and the University of Wisconsin Population Health Institute.

2. **Collaborative Regional Health Partnerships for the Medicaid 1115 Waiver**
   - In order to complete the requirements for the Texas Medicaid 1115 Waiver, regional health partnerships (RHP) were established throughout Texas.
     - These RHPs brought together health care executives, government and school officials, leadership of community-based organizations, local residents, and others interested in the health of their communities.
   - The RHPs conducted in-depth Community Needs Assessments (CNA) in 2012 using collaborative approaches. Their goal was to identify key factors and issues to support the selection of programs and initiatives that directly address the unique health challenges of their geographic regions.
   - BHCS representatives and leadership were integrally involved with the development of the Regional Health CNA and Plan for Region 9.
     - Region 9 includes Dallas, Denton and Kaufman counties. Three quarters of the regional population resides in Dallas County.

3. **Dallas County Community Health Needs Assessment**
   - In 2012 Dallas County Health and Human Services led a collaborative Community Health Needs Assessment (CHNA) process. BHCS was an active member of the Public Health Improvement Workgroup that oversaw the needs assessment process, reviewed the pertinent data and defined Dallas County’s health needs and priorities.
**Key Contributors**

**Regional Healthcare Partnership Region 9**

<table>
<thead>
<tr>
<th>Baylor Health Care System</th>
<th>Parkland Health and Hospital System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s Medical Center</td>
<td>Texas Health Resources</td>
</tr>
<tr>
<td>Dallas County Medical Society</td>
<td>Texas Scottish Rite Hospital for Children</td>
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<tr>
<td>Dallas Fort Worth Hospital Council</td>
<td>University of Texas Southwestern Medical Center</td>
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<tr>
<td>HCA North Texas</td>
<td>UNT Health Sciences Center</td>
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<tr>
<td>Lakes Regional MHMR</td>
<td>Weatherford Regional Medical</td>
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<tr>
<td>Methodist Health System</td>
<td>Wise Regional Health System</td>
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<tr>
<td>North Texas Behavioral Authority</td>
<td></td>
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</tbody>
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**Dallas County Community Health Needs Assessment**

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<thead>
<tr>
<th>AIDS Arms</th>
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<tbody>
<tr>
<td>Baylor Health Care System</td>
<td>Los Barrios Unidos Community Clinic</td>
</tr>
<tr>
<td>CDC Regional Minority Health Consultant</td>
<td>Martin Luther King Jr. Family Health Clinic</td>
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<tr>
<td>City of Garland Health Department</td>
<td>Methodist Health System</td>
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<tr>
<td>Community Council of Greater Dallas</td>
<td>Parkland Health and Hospital System</td>
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<tr>
<td>Dallas County Health and Human Service</td>
<td>Resource Center Dallas</td>
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<tr>
<td>Dallas Independent School District</td>
<td>Texas Health Resources</td>
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<tr>
<td>Dallas Women’s Foundation</td>
<td>United Way</td>
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<tr>
<td>Dallas/Ft. Worth Hospital Council</td>
<td>University of Texas at Dallas</td>
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<td>Desoto Independent School District</td>
<td>Urban League of Greater Dallas</td>
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3. **COMMUNITY HEALTH NEEDS IDENTIFIED BY REGIONAL PLANS**

**Regional Health Partnership 9 Needs Assessment**

Analysis of the 2012 RHP 9 CNA identified the following community health needs for that region:

- **Increase capacity for primary and specialty care.** The demand for primary and specialty care services exceeds that of available medical physicians in Region 9, thus limiting healthcare access.
- **Palliative care capacity.** Costs are high in skilled nursing and long term care facilities, hospice and home health sectors. Increasing capacity will increase access to an appropriate level of care, limit inappropriate acute care utilization, and reduce health care costs.
- **Oral health capacity.** Preventive dental visits are below the recommended levels in Texas. Access can be difficult for minorities, the elderly, children on Medicaid, and other low income children. A shortage of dentists compounds the problem. Texas has approximately 60% of the national ratio of dentists to the population.
- **Chronic disease management.** Many individuals in North Texas suffer from chronic diseases that present earlier in life, are becoming more prevalent, and exhibit complications.
- **Emergency department overuse.** Emergency departments are treating high volumes of patients with preventable conditions or conditions that could have been treated in a primary care setting.
- **Behavioral health design and capacity.** Either as a primary or secondary condition, behavioral health accounts for substantial volume and costs for healthcare providers. Services are often utilized at capacity.
- **Inpatient readmissions.** Thirty day readmissions are higher than desired, particularly for patients with severe chronic diseases or behavioral health disorders.

**Dallas County Community Health Needs Assessment**

Dallas County’s Performance Improvement Workgroup identified the following community health needs for the county:

- **Chronic Disease with Multiple Diagnoses**—Dallas County residents are increasingly being diagnosed with more than one chronic disease, including, cancer, diabetes, and cardiovascular disease. Addressing common risk factors through health programs, medical homes, screening, and improved personal fitness can improve the overall health of Dallas County residents.
- **Healthcare Access, particularly Health Insurance Coverage and Physician Shortage**—Dallas County has a large portion of residents who are uninsured. There is a shortage and maldistribution of primary care physicians thereby leaving areas underserved.
- **Health Disparities including Resource Deserts**—Portions of suburban areas and large geographic areas of southern Dallas County often suffer from disproportionate disease rates and substantial resource deserts. These deserts lack key resources such as access to primary and specialty care and availability of healthy foods.
- **Coordinating Prevention Efforts and Maximizing Resources**—Dallas County has an abundance of health programs and improvement plans currently being implemented in silos. Collaboration to increase awareness of countywide efforts, while reducing competition for financial resources, is critical to maximize available public health funds.
• **Mental and Behavioral Health Illness Impact on Health Decisions**—Individuals in Dallas County suffering from mental and behavioral illnesses face decision-making barriers. These barriers impact compliance with preventive care and treatment which may compromise aspects of their physical health.

**BIR-NW Dallas Service Area Needs From RHP 9 Needs Assessment and Dallas County CHNA**

In prioritizing the needs of the community, BHCS adopted the methodology established in the collaborated CHNAs used for this assessment. Priority is assigned as follows:

- Needs identified as Top Priorities in both of the collaborated CHNAs are assigned **High Priority** for BHCS.
- Needs identified as Top Priorities in one of the collaborated CHNAs are assigned **Medium Priority** for BHCS.

The following presents priorities for the BIR-NW Dallas service area:

**High Priority Needs**
- A. Healthcare Access for Low Income/Underserved
- B. Multiple Chronic Conditions
- C. Behavioral Health

**Medium Priority Needs**
- A. Preventable Acute Care Admissions
- B. Dental Care
- C. Emergency and Urgent Care
- D. Healthcare Infrastructure
- E. Patient Safety/Hospital Acquired Conditions

### 4. **BIR-NW Dallas Service Area**

Baylor Health Care System (BHCS) and its affiliated hospitals serve a 12 county area in the Dallas-Ft. Worth metroplex. The healthcare services of BHCS are provided through a network of more than 300 access points. These include 30 owned/operated/ventured/affiliated hospitals, joint ventured ambulatory surgery centers, satellite outpatient locations, senior centers and more than 180 Health Texas Provider Network physician clinics.

Since BIR-NW Dallas is a specialty hospital, patients come from a wide geographic area, resulting in a broad service area. Therefore, Dallas County is the defined service area for BIR-NW Dallas. The BIR-NW Dallas service area is depicted in orange on Map 4.1.
Map 4.1
BIR-NW Dallas Service Area
Demographics

Dallas County, the ninth largest county in the United States, is a growing and thriving area. Between 2000 and 2010, the population increased over 20% to nearly 2.4 million people. Between 2012 and 2017, Dallas County population is projected to increase another 4.2%.

Most of Dallas County’s growth occurred in suburban areas with the City of Dallas population increasing less than 1% between 2000 and 2010. Growth can be attributed to a strong economic environment, business growth, and employment opportunities.

Socioeconomic Status

Dallas County has a wide range of economic status and security.

- Dallas County 2010 per capita household income was $24,200. Figure 4.1 presents the range of per capita income in Dallas County.

- In 2010, 14% of Dallas County residents were living below the federal poverty level (FPL).

- In February 2013, 6.9% Dallas County residents were unemployed.

- This compares to 6.4% in Texas and 8.1% in the U.S. who are unemployed.

Table 4.1

<table>
<thead>
<tr>
<th>Population Overview</th>
<th>Dallas County</th>
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<tr>
<td>Population (2012)</td>
<td>2,453,399</td>
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<tr>
<td>Population Estimate (2017)</td>
<td>2,555,613</td>
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<td>Estimated Change 2012 - 2017</td>
<td>4.2%</td>
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Source: A.C. Nielsen 2012; Truven 2013

Figure 4.1
### Table 4.2

<table>
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<th>Household Income</th>
<th>Dallas</th>
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<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>%</td>
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<tr>
<td>&lt;$15K</td>
<td>107,061</td>
<td>12.0%</td>
<td>13.8%</td>
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<tr>
<td>$15-25K</td>
<td>98,281</td>
<td>11.0%</td>
<td>11.3%</td>
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<td>$25-50K</td>
<td>265,429</td>
<td>29.7%</td>
<td>27.5%</td>
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<td>$50-75K</td>
<td>173,383</td>
<td>19.4%</td>
<td>18.8%</td>
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<td>$75-100K</td>
<td>100,049</td>
<td>11.2%</td>
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<td>Over $100K</td>
<td>148,922</td>
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<td>Total Households</td>
<td>893,125</td>
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<td>Median Household Income</td>
<td>$47,326</td>
<td>$49,392</td>
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<td>Percent Below FPL (Total Population)</td>
<td>20.1%</td>
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<td>15.9%</td>
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<tr>
<td>Unemployment*</td>
<td>6.9%</td>
<td>6.4%</td>
<td>8.1%</td>
</tr>
</tbody>
</table>

*Unemployment Rate as reported February 2013

Source: U.S. Census Bureau, American Community Survey (2011), Bureau of Labor Statistics

### Educational Attainment

Educational level is interrelated with health literacy. The Agency for Healthcare Research and Quality (AHRQ) has defined health literacy as the ability to obtain, process, and understand basic health information and services needed to make appropriate health care prevention and treatment decisions. Low health literacy is associated with:

- Poor management of chronic diseases,
- Poor ability to understand and adhere to medication regimes,
- Increased hospitalizations,
- Poor health outcomes.¹

Education levels vary across Dallas County.

- Almost a quarter (24.5%) of County residents has NOT graduated from high school.
- 27.5% of County residents have Bachelor’s degrees. Caucasians are four times more likely than African-Americans and seven times more likely than Latinos to have a Bachelor’s degree.\(^2\)

### Table 4.4

<table>
<thead>
<tr>
<th>Educational Attainment, Adults Age 25+</th>
<th>Dallas County</th>
<th>Texas</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Less than High School</td>
<td>190,010</td>
<td>12.5%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Some High School</td>
<td>186,707</td>
<td>12.2%</td>
<td>10.0%</td>
</tr>
<tr>
<td>High School Degree</td>
<td>347,994</td>
<td>22.8%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Some College/Assoc. Degree</td>
<td>381,144</td>
<td>25.0%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Bachelor's Degree or Greater</td>
<td>418,430</td>
<td>27.5%</td>
<td>25.5%</td>
</tr>
<tr>
<td>Total Population 25+</td>
<td>1,524,285</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>


### Race/Ethnicity

Dallas County is racially and ethnically diverse.

- Latinos represent the County’s largest population group, 39%.
- White/Caucasians follow with 32% and African-Americans 22%. Asian-Americans and “Other” total 7%.

Table 4.5

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Dallas County</th>
<th>Texas</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Non-Hispanic</td>
<td>773,429</td>
<td>31.5%</td>
<td>44.1%</td>
</tr>
<tr>
<td>Black Non-Hispanic</td>
<td>543,690</td>
<td>22.2%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>964,751</td>
<td>39.3%</td>
<td>38.6%</td>
</tr>
<tr>
<td>Asian &amp; Pacific Is. Non-Hisp.</td>
<td>129,847</td>
<td>5.3%</td>
<td>4.0%</td>
</tr>
<tr>
<td>All Others</td>
<td>41,682</td>
<td>1.7%</td>
<td>1.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,453,399</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Source: A.C. Nielsen 2011; Truven 2012; U.S. Census 2012*

**Age**

Dallas County is a relatively young county.

- In the 2012, children and youth under 18 years of age were 28% of the County population. This compares to 27% of Texas residents and 24% of U.S. residents. Between 2012 and 2017, the number of children and youth under 18 years is projected to increase by 5.4%.
- Seniors, age 65 and older, were 8.5% of the Dallas County population. This compares to 10.5% of the Texas population and 13.3% of the U.S. population. Between 2012 and 2017, the number of senior age 65 and older is projected to increase by 17%.
- Women of child-bearing age are 22% of the 2012 Dallas County population. This group is projected to decrease by 2% between 2012 and 2017.

Table 4.6

<table>
<thead>
<tr>
<th>Population Age</th>
<th>Dallas</th>
<th>Texas</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Under 18</td>
<td>28.2%</td>
<td>27.1%</td>
<td>23.7%</td>
</tr>
<tr>
<td>Population 65+</td>
<td>8.5%</td>
<td>10.5%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Women of Child-Bearing Age (15 – 44 yrs)</td>
<td>21.6%</td>
<td>25.8%</td>
<td>na</td>
</tr>
</tbody>
</table>

*Source: A.C. Nielsen 2012; Truven 2013; U.S. Census 2012*
Table 4.7

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number</th>
<th>% of 2017 Population</th>
<th>% Change 2012 - 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18</td>
<td>730,269</td>
<td>28.6%</td>
<td>5.4%</td>
</tr>
<tr>
<td>65 and over</td>
<td>243,920</td>
<td>9.5%</td>
<td>16.8%</td>
</tr>
<tr>
<td>Women of Child-Bearing Age (15 – 44 yrs)</td>
<td>521,053</td>
<td>20.4%</td>
<td>-1.9%</td>
</tr>
</tbody>
</table>


Insurance Trends and Uninsured Status

Dallas County has a much higher percentage of uninsured residents than Texas or the United States. Figure 4.3 provides a comparison of total uninsured as well as low income (below 200% of FPL) uninsured.

- Nearly a third of non-elderly, non-institutionalized Dallas County residents are uninsured, and nearly 50% of those considered low income are not insured.
- Low socioeconomic status (SES) County residents not only lack awareness of available healthcare services and how to access them but also how to apply for Medicaid and Medicare.³

Fourteen percent of Dallas County adults hospitalized in 2011 were uninsured. The most frequent payer was Medicare (37%), followed by privately insured (31%) and Medicaid (18%). (Figure 4.4)

³ Weidich, 2012.
The 2011 payer mix for Dallas County children under 18 years includes 57% with Medicaid, 35% with private insurance and 9% uninsured.

- Most hospitalized children from families with lower SES are enrolled in either Medicaid or the Children’s Health Insurance Program (CHIP).

Health insurance coverage provides people with the security to access preventive services and clinical care when needed. It has been documented that people without insurance will not be offered the same range of medical services as those who are insured.\(^4\) In addition, ongoing contact with physicians fosters more comprehensive health awareness that informs preventive care and illness management. The uninsured do not think about their health or medical conditions in the same comprehensive way as do the insured. When a medical condition occurs, the uninsured may delay treatment and/or use the emergency department instead of a lower cost, more appropriate primary care setting.

Uninsured people are:
- Less likely to receive needed medical care
- More likely to have more years of potential life lost
- More likely to have poor health status\(^5\)

**Community Need Index**

Dignity Health’s Community Need Index (CNI) provides a numerical indicator that accounts for the underlying socioeconomic and access barriers that affect population health status.

- In developing the CNI, Dignity Health identified five prominent barriers related to income, culture/language, education, insurance, and housing.

Ratings are available at a ZIP code level. The “best” score is 1.0 which is depicted in blue on Map 4.2. This indicates a ZIP code with the lowest socio-economic barriers to health. On the other end of the spectrum, 5.0, identified by areas shaded red, identifies a ZIP code with the greatest socio-economic barriers to health.

- A comparison of CNI scores to hospital utilization shows a strong correlation between high need and high use—communities with high CNI scores can be expected to have higher hospital utilization.
- A causal relationship also exists between CNI scores and preventable hospitalizations for manageable conditions—communities with high CNI scores have more hospitalizations that could have been avoided with improved healthy community structures and appropriate outpatient/primary care.\(^6\)

\(^4\) Kim, McCue & Thompson, 2009  
\(^5\) Becker, 2001  
Dallas County’s overall CNI score is 3.9.

- Central and South Dallas County have the poorest CNI scores, indicating the highest level of need.
- The ZIP codes with blue on the east, northeast and northwest sectors of the County, have the most favorable CNI scores indicating the lowest need.
- BIR-NW Dallas is located in an area of high need.

The areas with the highest CNI scores may appropriately be targeted for interventions to improve health and reduce preventable hospitalizations.
5. **PROVIDER INVENTORY**

Given the regional nature of rehabilitation services, the map below depicts inpatient rehabilitation providers in the Dallas-Ft. Worth metroplex. This includes providers in Dallas County, BIR-NW Dallas’ service area, and providers in Collin, Denton and Tarrant counties.

- BIR-NW Dallas is located near central Dallas.
- Six other rehabilitation hospitals are located in Dallas County.
- Six Dallas County acute care hospitals have inpatient rehabilitation units.
- The complete list of inpatient rehabilitation providers is presented in Table 5.1.

**Figure 5.1**

![Map of Dallas-Ft. Worth metroplex showing rehabilitation providers and acute care hospitals with rehabilitation units.](map_image)
Table 5.1
Rehabilitation Inpatient Providers
Dallas-Ft. Worth Metroplex

<table>
<thead>
<tr>
<th>Collin County</th>
<th>Medical Center of McKinney-Wysong Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denton County</td>
<td>Medical Center of Lewisville</td>
</tr>
<tr>
<td>Dallas County</td>
<td>Baylor Medical Center at Garland</td>
</tr>
<tr>
<td></td>
<td>Medical City Dallas Hospital</td>
</tr>
<tr>
<td></td>
<td>Baylor Medical Center at Irving</td>
</tr>
<tr>
<td></td>
<td>UT Southwestern University Hospital-St. Paul</td>
</tr>
<tr>
<td></td>
<td>Texas Health Presbyterian Hospital Dallas</td>
</tr>
<tr>
<td></td>
<td>UT Southwestern University Hospital-Zale Lipshy</td>
</tr>
<tr>
<td>Tarrant County</td>
<td>Cook Children’s Medical Center</td>
</tr>
</tbody>
</table>

## Acute Care Hospitals with Rehabilitation Units

## Baylor Institutes for Rehabilitation

<table>
<thead>
<tr>
<th>Collin County</th>
<th>Baylor Institute for Rehabilitation at Frisco</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dallas County</td>
<td>Baylor Institute for Rehabilitation at Northwest Dallas</td>
</tr>
<tr>
<td>Tarrant County</td>
<td>Baylor Institute for Rehabilitation at Forth Worth</td>
</tr>
</tbody>
</table>

## Rehabilitation Hospitals

<table>
<thead>
<tr>
<th>Collin County</th>
<th>Twin Creeks Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plano Specialty Hospital</td>
</tr>
<tr>
<td></td>
<td>HealthSouth Plano Rehabilitation Hospital</td>
</tr>
<tr>
<td>Denton County</td>
<td>Accel Rehabilitation Hospital of Plano</td>
</tr>
<tr>
<td></td>
<td>Select Rehabilitation Hospital of Denton</td>
</tr>
<tr>
<td></td>
<td>Continuum Rehabilitation Hospital of North Texas, LP</td>
</tr>
<tr>
<td>Dallas County</td>
<td>Baylor Institute for Rehabilitation (on BUMC campus)</td>
</tr>
<tr>
<td></td>
<td>Methodist Rehabilitation Hospital</td>
</tr>
<tr>
<td></td>
<td>Mesquite Rehabilitation Institute</td>
</tr>
<tr>
<td></td>
<td>Reliant Rehabilitation Hospital North Texas</td>
</tr>
<tr>
<td></td>
<td>Texas Specialty Hospital at Dallas</td>
</tr>
<tr>
<td></td>
<td>Reliant Rehabilitation Hospital Dallas</td>
</tr>
<tr>
<td>Tarrant County</td>
<td>HealthSouth Rehabilitation Hospital of Fort Worth</td>
</tr>
<tr>
<td></td>
<td>Kindred Rehabilitation Hospital Arlington</td>
</tr>
<tr>
<td></td>
<td>HealthSouth City View Rehabilitation Hospital</td>
</tr>
<tr>
<td></td>
<td>Reliant Rehabilitation Hospital Mid-Cities</td>
</tr>
<tr>
<td></td>
<td>HealthSouth Rehabilitation Hospital of Arlington</td>
</tr>
<tr>
<td></td>
<td>Texas Rehabilitation Hospital of Fort Worth</td>
</tr>
</tbody>
</table>
6. **DALLAS COUNTY—HEALTH INDICATORS**

**County Health Rankings and Roadmaps**

The 2013 *County Health Rankings and Roadmaps* measure the overall health of each county in all 50 states on the many factors that influence health. They compare and rank each Texas county against others in the State. *County Health Rankings* will be cited throughout the discussion of health indicators.

The *County Health Rankings* provide overall rankings for two dimensions:
- Health Outcomes, which include mortality and morbidity
- Health Factors, which are contributing factors to health including clinical care, health behaviors, social and economic factors and physical environment

The *County Health Rankings and Roadmaps*, ranks Dallas County 67 out of 232 Texas counties.
- Dallas County was ranked in the top thirds for Health Outcomes, 67 out of 232 Texas counties.
- It was in the bottom third for Health Factors, ranked 158 out of 232 Texas counties.

**Health Outcomes—Mortality and Morbidity**

Health Outcomes evaluate mortality and morbidity indicators. Dallas County ranks below both Texas and the U.S. for mortality.
- Dallas County had more premature deaths than both Texas and the U.S.\(^7\)

While Dallas County’s outcomes were somewhat better than the State on all morbidity indicators, there are significant gaps between Dallas County and the national benchmarks. Outcomes can improve in the following areas:
1. Percent of residents stating they have either fair or poor health
2. Number of poor physical health days
3. Number of poor mental health days
4. Percentage of low birth weight babies

<table>
<thead>
<tr>
<th>Table 6.1: County Health Ranking—Health Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dallas County</strong>, <strong>Texas</strong>, and <strong>U.S.</strong></td>
</tr>
<tr>
<td><strong>Mortality</strong></td>
</tr>
<tr>
<td>Premature Death (rate/100,000)</td>
</tr>
<tr>
<td>Dallas County                                  7,187</td>
</tr>
<tr>
<td>Texas                                          6,928</td>
</tr>
<tr>
<td>National Benchmark                            5,317</td>
</tr>
<tr>
<td><strong>Morbidity</strong></td>
</tr>
<tr>
<td>Poor or Fair Health                            17%</td>
</tr>
<tr>
<td>Poor Physical Health Days                      3.3</td>
</tr>
<tr>
<td>Poor Mental Health Days                        3.2</td>
</tr>
<tr>
<td>Low Birth Weight                               8.3%</td>
</tr>
<tr>
<td><strong>Source:</strong> <em>County Health Rankings and Roadmaps, 2013</em></td>
</tr>
</tbody>
</table>

\(^7\) This indicator identifies the years of potential life lost before age 75. It is age-adjusted to the 2000 population and displayed as a rate per 100,000 for comparison between counties.
Causes of Death

Heart disease and cancer are the two leading causes of death in Dallas County and Texas. In the County, chronic lower respiratory disease, accidents, and Alzheimer’s disease and stroke follow.

Figure 6.1
Leading Causes of Death (rate/100,000)
Dallas County, Texas and U.S.
2009

7. HIGH PRIORITY NEEDS

A. Healthcare Access for Low Income/Underserved

Access to comprehensive, quality health care services is important for the achievement of health equity and for affording a healthy life for everyone. Access to health care impacts:

- Overall physical, social, and mental health status
- Prevention of disease and disability
- Detection and treatment of health conditions
- Quality of life
- Preventable death and life expectancy

Disparities in health care access negatively impact each of these outcomes. Access is governed by a range of systemic barriers across the continuum of prevention and care. These include: location of health facilities, resident geographic location, transportation infrastructure, health literacy and awareness, and ability to pay for services. These barriers can lead to:

- Unmet health needs
• Inability to access preventive services
• Emphasis on emergency treatment instead of prevention and primary care
• Hospitalizations that could have been prevented

**Improved Access to Physicians/Clinical Treatment**

Both the RHP 9 CNA and the Dallas County CHNA identified a need for increased clinical treatment capacity for primary and specialty care.

- RHP 9 CNA states, “The demand for primary and specialty care services exceeds that of available medical physicians in these areas, thus limiting healthcare access.”
- The Dallas CHNA found that expanding access to the continuum of prevention care and treatment will improve health for many Dallas County residents.

The Dallas CHNA stated that expanding access requires:

- Enhanced service networks.
- Innovative treatment approaches, such as the patient centered medical home model of care which supports access to prevention, treatment and post-acute care.
- Greater geographic dispersion of clinical care. Physicians are concentrated in the Stemmons Corridor and in northern suburbs. A shortage and maldistribution of primary care physicians results in underserved areas, particularly in the southern communities with lower socioeconomic status.
- Increased access to health insurance. Nearly 25% of Dallas County residents are uninsured.
- Improved health literacy to promote individual access.

**Primary Care Provider Shortage**

Although Dallas County has a higher rate of primary care physicians (PCPs) than found in Texas, the percentage of Dallas County residents reporting a personal physician is lower than the State.

- Dallas County has 99 PCPs/100,000 population compared to 70 PCPs per 100,000 population in Texas. This is the fourth lowest state rate in the U.S., indicating an overall shortage in Texas.
- Five percent fewer Dallas County residents report a personal physician compared to Texas overall, 63.3% in Dallas County vs. 68.4% in Texas.
- The percentage of Dallas County residents with a personal physician is lower for men than for women, 54% vs. 73%, respectively.
- The *Healthy People 2020* goal is 84% of U.S. residents with a personal physician.

---

Table 7.1

Percent of Population Reporting a Personal Physician  
Dallas County and Texas  
2011

<table>
<thead>
<tr>
<th></th>
<th>Dallas County</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>63.3%</td>
<td>68.4%</td>
</tr>
<tr>
<td>Male</td>
<td>53.9%</td>
<td>61.9%</td>
</tr>
<tr>
<td>Female</td>
<td>72.8%</td>
<td>74.7%</td>
</tr>
</tbody>
</table>

Source: Texas DSHS BRFSS 2011

County Health Rankings—Health Factors/Clinical Care

The County Health Rankings Health Factors-Clinical Care provide additional insight into the Dallas County need for primary care physicians. These indicators examine health care access and clinical prevention use. Specific results are presented in Table 7.2.

- Dallas County has a higher percentage of uninsured residents than found in Texas, and nearly triple that found in the U.S.
- The national shortage of primary care physicians is evidenced in both Dallas County and Texas. While the U.S. benchmark is one physician for every 1,067 residents, the Texas average is one for every 1,766 residents. Dallas County has one PCP for every 1,585 residents.
- Preventable hospital stays identify patients who might have avoided hospitalization with appropriate outpatient treatment.
  - The U.S benchmark is 47/1,000 Medicare enrollees. Dallas County, with 78/1,000, has a smaller number than Texas but a larger number than U.S.

Table 7.2

County Health Rankings  
Health Factor-Clinical Care  
Dallas County, Texas and U.S.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Dallas County</th>
<th>Texas</th>
<th>National Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Factors/Clinical Care</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uninsured</td>
<td>31%</td>
<td>26%</td>
<td>11%</td>
</tr>
<tr>
<td>Primary Care Physicians</td>
<td>1,585:1</td>
<td>1766:1</td>
<td>1067:1</td>
</tr>
<tr>
<td>Dentists</td>
<td>1,526:1</td>
<td>2200:1</td>
<td>1516:1</td>
</tr>
<tr>
<td>Preventable Hospital Stays</td>
<td>59</td>
<td>72</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: County Health Rankings and Roadmaps, 2013

---

10 County Health Rankings defines the indicator as “hospitalization rate for ambulatory care sensitive condition per 1,000 Medicare enrollees.”
B. **Multiple Chronic Conditions**

The Dallas County CHNA reports that similar to national trends, Dallas County residents are exhibiting increasing diagnoses for chronic conditions. It is common that the pathology for one condition may also affect other body systems, resulting in co-occurrence of multiple chronic conditions (MCC). The presence of MCCs adds a layer of complexity to disease management. RHP 9 CNA expands upon this, citing increasing rates of many chronic diseases, including heart disease, cancer, stroke, asthma and diabetes.

BIR-NW Dallas treats patients with a wide variety of chronic diseases, but the most notable are stroke, neurological conditions such as Parkinson’s disease, and complications of diabetes. Patients often confront multiple chronic conditions, increasing the complexity of their treatment.

This section will provide an overview of the gaps/needs associated with these conditions, mentioning some of the targeted services available at BIR—NW Dallas.

**Heart Disease**

Heart disease is the leading cause of death in the United States and Dallas County.

- In 2009, the age-adjusted mortality rate (AAMR) from heart disease was 180/100,000 for the U.S., 189/100,000 for Texas, and 198/100,000 for Dallas County. The *Healthy People 2020* benchmark is 100.8/100,000. In 2010, Dallas County’s AAMR for heart disease declined to 175/100,000 or 12%.
- In Dallas County, African-Americans’ 2009 AAMR due to heart disease was 263.7/100,000. This is significantly higher than the rate for Caucasians (202.7/100,000), Latinos (113.9/100,000), and Other races/ethnicities (131.8/100,000).
- Males had a significantly higher AAMR due to heart disease than females, 239.6/100,000 for men compared to 165.2/100,000 for women.11

According to Texas BRFSS 2007-2010, an estimated 6.5% of adults in Dallas County reported being diagnosed with heart disease.

- There were not any significant differences in prevalence of heart disease among Dallas County racial/ethnic or education groups.
- The difference was found based on socioeconomic status. Adults living in households with income less than $25,000 had the highest prevalence of heart disease in Dallas County, 8.8%. This was significantly higher than adults living in a household with an income of $50,000 or more (3.7%) (Ang, 2012).

**Stroke**

Stroke is the third leading cause of death in the Texas, but it is sixth in Dallas County.

- In 2009, the AAMR for stroke was 40/100,000 in the U.S., 47/100,000 for Texas and 50/100,000 for Dallas County. The *Healthy People 2020* benchmark is 33.8/100,000.
In Dallas County, African-Americans had a significantly higher AAMR due to stroke than Caucasians, Latinos and other. The rates were 70/100,000 for African-Americans, 47.2/100,000 for Caucasians, 35.3/100,000 for Latinos.

- Females had a higher AAMR due to stroke as compared to males in Dallas County but the difference was not statistically significant.

According to Texas BRFSS 2007-2010, an estimated 2.1% of adults in Dallas County reported a stroke diagnosis.

- There were no statistically significant differences in prevalence of stroke among racial/ethnic groups or education groups in Dallas County. However, a decreasing trend was observed with increasing education.

- Adults living in households with incomes less than $25,000 (3.6%) had the highest prevalence of stroke in Dallas County. This was significantly higher than adults living in households with incomes of $50,000 or more (0.7%).

The 2010 BRFSS survey found a smaller percentage of Dallas County residents had been told they had a stroke than Texas residents. A greater percentage of Dallas County residents had been told they had heart attacks and angina than residents statewide. (Figure 7.1)

**Risk Factors**

Many of the leading controllable risk factors for heart disease and stroke are also healthy community indicators. According to the American Heart Association, the risk factors for developing cardiovascular disease include:

- High blood pressure—with the percentage of Dallas residents reporting this risk increasing from 24% in 2005 to 29% in 2009, a 21% increase. (Figure 7.2)
- High cholesterol
- Cigarette smoking
- Physical inactivity
- Poor diet, overweight and obesity
- Diabetes

Over time, these risk factors cause changes in the heart and blood vessels that can lead to heart attacks, heart failure, and strokes.

Figure 7.1

Figure 7.2

---

12 Ang, 2012.
Stroke Rehabilitation

At BIR – NW Dallas patients receive specialized and individualized medical, nursing and therapy services that support the earliest possible return home. The Stroke Rehabilitation Program integrates evidence-based treatment and advanced technologies to help patients:

- Restore function and mobility
- Improve speech and swallowing
- Enhance cognition
- Maintain bowel and bladder integrity
- Manage spasticity
- Brain injury rehabilitation

Diabetes

Diabetes is a risk factor for many chronic conditions including heart disease, stroke and lower limb amputations. Diabetes affects 11.4% of Dallas County residents, a higher percentage than found in Texas (9.6%) and the U.S. (8%). Factors contributing to diabetes prevalence overall and in Dallas County include:

- Obesity
- Lack of physical activity
- Family history
- Environmental resources including such things as the availability of wholesome food, healthcare access and recreational availability

A September 2011 study, “Diabetes in Dallas County Provider Report” outlines the impact of diabetes in Dallas County, including:

- Comorbidity in heart disease, stroke, pneumonia/respiratory failure, and kidney failure. In Dallas County 35% of the top five inpatient diagnoses have diabetes as an underlying condition
- Since 2000, Dallas Children’s Medical Center has witnessed a 34% increase in admissions with primary and secondary diagnoses of juvenile diabetes. In addition, the number of children with Type II diabetes (adult onset diabetes) is increasing with the rise of sedentary lifestyles and obesity.

The highest complications rates are found in the lower-income communities of Dallas County. The following factors foster these disparities:

- Financial factors including income, employment status, health insurance coverage.
- Environmental factors including availability of healthy food and recreational opportunities.
- Health literacy factors including an understanding of the disease process and actions to optimally manage it.

---

14 Diabetes, 2012.
Amputee Rehabilitation

Diabetes is the leading cause of non-traumatic lower limb amputations. The rate of lower limb amputation is eight times higher among people with diagnosed diabetes compared to those without it. However, between 1996 and 2008, the rate of leg and foot amputations among U.S. adults aged 40 and older with diagnosed diabetes declined by 65%.\footnote{Centers for Disease Control and Prevention, “CDC report finds large decline in lower-limb amputations among U.S. adults with diagnosed diabetes,” \url{http://www.cdc.gov/media/releases/2012/p0124_lower_limb.html}. Retrieved April 22, 2013.}

- The age–adjusted rate of non-traumatic lower–limb amputations was 3.9/1,000 people with diagnosed diabetes in 2008 compared to 11.2/1,000 in 1996.
- The 2010 age adjusted rate for Dallas County residents requiring lower extremity amputations as a complication of diabetes was even lower at 21/100,000.

BR—NW Dallas provides inpatient rehabilitation services for patients with single or multi-limb loss of the upper and/or lower extremities. The care team focuses on the medical management of the amputation as well as any other coexisting conditions. The goal is to help patients regain strength and independence in order to maintain a fulfilling life. Inpatient services include:

- Wound care for healing of the amputation
- Pain management
- Intensive physical therapy to build strength, endurance, balance and mobility
- Intensive occupational therapy to help with activities of daily living
- Hemodialysis
- Psychological care for emotional, social and behavioral issues
- Pre-prosthetic training and exercise
- Individualized prosthetic fitting and customization with a certified prosthetist and experienced therapists trained specifically in amputation
- Patient and family education

C. Behavioral Health

Behavioral health, which encompasses both mental health and substance abuse, accounts for substantial volume and costs for the regional healthcare system. Services are often utilized at capacity, resulting in a substantial unmet need in the population.

The RHP 9 CNA states, “Behavioral health comprises a significant component of the health needs of RHP 9.” That document contends that over the past decade, the behavioral health system has significantly expanded access to care resulting in funding and infrastructure challenges. Current RHP 9 funding per person served is among the lowest in the nation.

The Dallas County behavioral health system differs from that of the rest of the state in that the majority of services for Medicaid and indigent patients with behavioral health needs are delivered via the NorthSTAR program instead of a traditional Local Mental Health Authority. In additional to NorthSTAR, there are other significant partners including the Dallas County adult and juvenile criminal justice systems, Parkland Health and Hospital System, and the homeless services continuum. This reportedly results in a complex system which can be difficult system to navigate.\footnote{RHP9 CNA, page 10.}
Dallas County residents reported mental health status that is the same as that reported by Texas residents.

- In Dallas County, 20% reported their mental health was “not good” for five or more days of the last 30.
- Dallas County residents reported 3.1 mentally unhealthy days in the past 30, or 10% of the time.

Table 7.3

<table>
<thead>
<tr>
<th>MENTAL HEALTH STATUS</th>
<th>DALLAS COUNTY</th>
<th>TEXAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Health Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent who said their mental health was not good for 5</td>
<td>20.4%</td>
<td>20.0%</td>
</tr>
<tr>
<td>or more days in the past 30 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Mental Health Days</td>
<td>3.1</td>
<td>3.2</td>
</tr>
<tr>
<td>Average number of mentally unhealthy days reported in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>past 30 days (age-adjusted)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: TDSHS, BRFSS 2009-2010, CHR BRFSS 2004-2010

Behavioral health issues faced by Dallas County organizations include: providing appropriate access and funding for services; reaching underserved Dallas County behavioral health populations; recognizing the critical interplay between individual health, medical treatment and behavioral health and improving outcomes; providing of culturally competent behavioral health treatment.

People with co-occurring behavioral health and medical illnesses incur the highest health care costs. In RHP 9, the presence of a co-occurring behavioral health condition is associated with:

- Increased severity of medical encounters
- A 36% increase in average charges per encounter
- In many cases reduced compliance with medical care regimens

8. MEDIUM PRIORITY NEEDS

A. Preventable Acute Care Admissions

The importance of effective collaboration is recognized by health planning groups throughout Dallas County and is a priority of the Dallas County CHNA. Among other things, effective collaboration will reduce duplication and increase efficiency, effectively deploy scarce resources, establish outcomes in order measure results and allow development of best practices.

Taken together, community prevention and clinical prevention can reduce morbidity and mortality and improve community health.

- Community prevention supports activities to reduce health risk factors including proper nutrition, maintaining ideal weight and participating in adequate physical activity.
Clinical prevention focuses on accessing preventive screenings and tests for early identification and treatment of diseases.

**County Health Rankings—Health Factors/Health Behaviors**

Ranked in the bottom third of *County Health Rankings*, Dallas County needs to improve both community and clinical prevention.

- Dallas County ranked 158 in the state for Health Factors and 149 for Health Behaviors.
- Dallas County did not achieve the national benchmark for any of the health behaviors, but outcomes were higher than Texas for the following indicators:
  - Adult smoking
  - Excessive drinking
  - Motor vehicle crash death rate

A quarter of both Dallas County and Texas residents were physically inactive.

Dallas County had poorer outcomes than Texas in the areas of:

- Adult obesity
- Sexually transmitted infections
- Teen birth rate

| Table 8.1  |
| County Health Rankings |
| Health Factors—Health Behaviors |
| Dallas County, Texas and U.S. |

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Dallas County</th>
<th>Texas</th>
<th>National Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Factors/ Health Behaviors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult Smoking</td>
<td>16%</td>
<td>18%</td>
<td>13%</td>
</tr>
<tr>
<td>Adult Obesity</td>
<td>31%</td>
<td>29%</td>
<td>25%</td>
</tr>
<tr>
<td>Physical Inactivity</td>
<td>25%</td>
<td>25%</td>
<td>21%</td>
</tr>
<tr>
<td>Excessive Drinking</td>
<td>14%</td>
<td>16%</td>
<td>7%</td>
</tr>
<tr>
<td>Motor Vehicle Crash Death Rate</td>
<td>11</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Sexually Transmitted Infections</td>
<td>657</td>
<td>476</td>
<td>92</td>
</tr>
<tr>
<td>Teen Birth Rate</td>
<td>71</td>
<td>60</td>
<td>21</td>
</tr>
</tbody>
</table>

*Source: County Health Rankings and Roadmaps, 2013*
Dallas County ranked 146 for physical environment factors.

### Table 8.2
#### County Health Rankings
Health Factors—Physical Environment
Dallas County, Texas and U.S.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Dallas County</th>
<th>Texas</th>
<th>National Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Fine Particulate Matter</td>
<td>10.7</td>
<td>10.2</td>
<td>8.8</td>
</tr>
<tr>
<td>Drinking Water Safety</td>
<td>2%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Access to Recreational Facilities</td>
<td>7</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Limited Access to Healthy Foods</td>
<td>8%</td>
<td>9%</td>
<td>1%</td>
</tr>
<tr>
<td>Fast Food Restaurant</td>
<td>53%</td>
<td>52%</td>
<td>27%</td>
</tr>
</tbody>
</table>

*Source: County Health Rankings and Roadmaps, 2013*

Clinical prevention includes those screenings and tests for early identification of specific medical conditions.
- Although Dallas County did not achieve the national benchmark for diabetic screening and mammography screening, they have higher percentages of residents receiving these screenings than found in the State.

### Table 8.3
#### County Health Rankings
Health Factors—Clinical Care/Clinical Prevention
Dallas County, Texas and U.S.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Dallas County</th>
<th>Texas</th>
<th>National Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic Screening</td>
<td>84%</td>
<td>82%</td>
<td>90%</td>
</tr>
<tr>
<td>Mammography Screening</td>
<td>65%</td>
<td>61%</td>
<td>73%</td>
</tr>
</tbody>
</table>

*Source: County Health Rankings and Roadmaps, 2013*

**Injury**

Nationally, injuries result in significant morbidity and mortality.
- Unintentional injuries and those caused by acts of violence are among the top 15 killers for Americans of all ages.
- Injuries are the number one cause of death for Americans ages 1 to 44.
- Injuries are a leading cause of disability for all ages, regardless of sex, race/ethnicity, or socioeconomic status.¹⁷

Beyond their immediate health consequences, injuries have a significant impact on the well-being of Americans by contributing to:

- Premature death
- Disability
- Poor mental health
- High medical costs
- Lost productivity

*Healthy People 2020* asserts most events resulting in injury, disability, or death are predictable and preventable. For unintentional injuries, there is a need to better understand the trends, causes, and prevention strategies. Specifically:

- Individual behaviors—choices people make such as alcohol use or risk-taking.
- Physical environment—home and community that affect the rate of injury related to falls, fires and burns, drowning, violence.
- Social environment—individual social relationships, community, societal-level factors.\(^{18}\)

Reducing falls, particularly among residents age 65 and older could impact the individual’s health and the health of the Dallas County community.

- Dallas County’s 2010 death rate due to accidental falls averaged 9/100,000.
- That year, deaths of residents age 65 and older due to falls was 57/100,000, more than six times higher than the overall rate.

The tables below present injury statistics for Dallas County and Texas from 2004 through 2007.

- Dallas County total injuries decreased 13.2% and the select injuries listed decreased 13.4% over this four year period.
  - Unintentional falls was consistently a third of all injuries in Dallas County between 2004 and 2007.
  - Motor vehicle traffic related injuries ranged between 23% and 25% of all injuries during this time.
  - Three quarters of injuries to people 65 years of age and older were from falls.
- In Texas total injuries increased by 7.9% and select injuries increased by 12.2%.
  - Over 57% of unintentional falls were to Texans over 55 years of age.
  - Twenty-seven percent of motor vehicle accidents were to Texans age 15 to 24 year.

**Table 8.4**

Fatal & Non-Fatal Injury Incidence  
Dallas County  
2004 – 2007

<table>
<thead>
<tr>
<th>Injury Cause:</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>Unintentional Falls</td>
<td>2,934</td>
<td>34</td>
<td>2,654</td>
<td>33.4</td>
</tr>
<tr>
<td>Motor Vehicle Traffic</td>
<td>2,100</td>
<td>24.3</td>
<td>1,863</td>
<td>23.4</td>
</tr>
<tr>
<td>Other Transport</td>
<td>458</td>
<td>5.3</td>
<td>648</td>
<td>8.1</td>
</tr>
<tr>
<td>Unintentional Struck By/Against</td>
<td>419</td>
<td>4.8</td>
<td>294</td>
<td>3.7</td>
</tr>
<tr>
<td>Unintentional Natural/Environment</td>
<td>193</td>
<td>2.2</td>
<td>149</td>
<td>1.9</td>
</tr>
<tr>
<td>Selected Injuries Total</td>
<td>6,104</td>
<td>70.7</td>
<td>5,608</td>
<td>70.5</td>
</tr>
<tr>
<td>All Injuries Total</td>
<td>8,640</td>
<td>100</td>
<td>7,953</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Environmental & Injury Epidemiology and Toxicology Unit, Texas Department of State Health Services

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**Table 8.5**

Fatal & Non-Fatal Injury Incidence  
State of Texas  
2004 – 2007

<table>
<thead>
<tr>
<th>Texas</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury Cause:</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Unintentional Falls</td>
<td>33.0</td>
<td>34.6</td>
<td>35.7</td>
<td>37.5</td>
</tr>
<tr>
<td>Motor Vehicle Traffic</td>
<td>29.1</td>
<td>28.3</td>
<td>27.8</td>
<td>26.6</td>
</tr>
<tr>
<td>Other Transport</td>
<td>5.6</td>
<td>7.3</td>
<td>7.0</td>
<td>6.8</td>
</tr>
<tr>
<td>Unintentional Struck By/Against</td>
<td>4.2</td>
<td>4.2</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>Unintentional Natural/Environment</td>
<td>1.6</td>
<td>1.7</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Selected Injuries Total</td>
<td>73.6</td>
<td>76.1</td>
<td>76.5</td>
<td>76.5</td>
</tr>
<tr>
<td>All Injuries Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Environmental & Injury Epidemiology and Toxicology Unit, Texas Department of State Health Services

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**Traumatic Brain Injury**

The CDC reports at least 1.7 million people in the U.S. suffer brain trauma each year, including 144,000 Texans. Most of the injuries occur in motor vehicle crashes, strokes, assaults, falls, gunshot wounds and sports-related incidents. In Texas, about 4,200 brain-trauma patients die, 14,230 survive after being hospitalized. The CDC reports that at least three million U.S residents and 440,000 Texans are living with disabilities because of traumatic brain injuries.\(^{19}\)\(^{20}\)


Baylor Institute for Rehabilitation is an important rehabilitation component of the North Texas Traumatic Brain Injury Model System.

- BIR is one of only 16 facilities nationwide to be designated as a model system of care for patients with traumatic brain injuries by the National Institute on Disability and Rehabilitation Research.
- Designed to increase knowledge about the effects of traumatic brain injuries and to improve outcomes and the quality of life for patients and their families, the North Texas Traumatic Brain Injury Model System is a cooperative effort between the University of Texas Southwestern Medical Center, Baylor University Medical Center and BIR to provide advanced research.
- Patients and their families are given the opportunity to enroll in specific research projects that may improve treatment and outcomes for future TBI survivors.

BIR-NW Dallas strives to bring the best practices of the BHCS to their patients.

B. Dental Care

RHP 9 CNA identified a need for additional dental care in the region. Preventive dental visits are below the recommended levels in Texas. This CNA reports dental access can be difficult for minorities, the elderly, children on Medicaid, and other low income children.

The RHP 9 CNA identifies shortages in the supply of dentists and other dental care providers. This assessment states that effective health policies intended to expand access, improve quality, and/or contain costs must consider the supply, distribution, preparation, and utilization of the dental workforce. Texas has approximately 60% of the national ratio of dentists to the population, and RHP 9 reports a similar shortage.

C. Emergency and Urgent Care

Over 60% of Dallas County emergency department (ED) visits are for conditions that could have been treated in a primary care setting. This is despite the fact that low and no-cost primary care clinics are available in many communities throughout the County. These offer a range of general medical, women’s health, pediatric and dental treatment.

RHP 9 conducted an analysis of ED encounters that demonstrated many people are accessing EDs for primary care treatable and non-urgent conditions.

- Over the most recent four quarters of data, the highest volume ED conditions were: low back pain, hypertension, pain/joint aching, chronic bronchitis, and asthma.
- With the exception of asthma, over 68% of the encounters for these conditions were either non-emergent or emergent/primary care treatable. Thus, 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 had been received prior to or early in the illness episode.  

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21 Dallas Fort Worth Hospital Council Foundation, Information and Quality Services Data Warehouse. March 2011. RHP 9 Community Health Needs Assessment, Page 20
Reasons residents seek primary care and non-emergent treatment in EDs include:

- Shortage of PCPs in the County
- Financial concerns including lack of health insurance
- PCPs limit the number of Medicaid/Uninsured patients they treat
- PCPs have limited or no extended office hours

Seeking primary care treatment in EDs results in increased healthcare costs and higher volumes of preventable and avoidable cases populating emergency department waiting rooms.

**Inpatient Readmissions**

“All cause readmissions” are defined as a subsequent admission within 30 days from the initial inpatient encounter. CMS has begun penalizing hospitals with high Medicare readmission rates for specific diagnoses. These include congestive heart failure, acute myocardial infarction, and pneumonia. It is anticipated that additional diagnoses will be added to the program in 2014.

The RHP 9 CNA found that North Texas hospitals have demonstrated a downward readmission trend since 2008, and report that these providers are working to continue improvement in this area. Strategies which include patient centered medical homes, care navigators, home visits, extended patient education and other post-discharge support services have met with positive results.

The RHP 9 CNA also reported a strong relationship between readmissions and behavioral health disorders. In an anecdotal evaluation of 10 high utilizers in the region, each patient has some component of mental health or substance abuse history over the course of their encounters. This reiterated the need for behavioral health assessment and treatment to support compliance with medical regimens.

Appropriate utilization of high quality inpatient rehabilitation services, such as those found at BIR-NW Dallas, supports reduced acute care hospital 30 day readmissions. With 68% of BIR-NW Dallas patients discharged to the home setting in 2011, the treatment plan focuses on the necessary and appropriate care to support discharge to the least restrictive environment. BIR-NW Dallas provides patients with physical and occupational therapy, case management, education, necessary medical equipment and extensive discharge planning. BIR-NW Dallas’ family-centered care supports post-discharge care transition, which has been shown to reduce readmissions.

**Parkinson’s Disease and ED Usage**

A University of Florida analysis demonstrates that patients with Parkinson's disease are 50% more likely to visit an ED than those who do not have the disease. Often, they are treated because of ancillary issues such as urinary tract infection, pneumonia, and heart failure, according to the National Parkinson Foundation.

BIR-NW Dallas supports the services of the BHCS Neurological Institute, offering inpatient and outpatient rehabilitation to patients with Parkinson's disease, multiple sclerosis, Guillain-Barre Syndrome and other neurological conditions. The integrated program of care helps optimize:

- Strength, coordination, balance and mobility
• Medication management
• Use of assistive devices
• Functional independence

These patient outcomes support appropriate primary care access and treatment and may reduce ED overuse by these patients.

D. **Healthcare Infrastructure**

**Health Disparities including Resource Deserts**

Portions of suburban areas and large geographic areas of southern Dallas County suffer from disproportionate disease rates and substantial resource deserts. These communities suffer from high levels of unemployment, low socioeconomic status, and lack key resources including access to health services, safe environments and healthy foods.

• Dallas County residents living in poverty exhibit poor health status. Employment, education, income, and race are important factors in a person's ability to access healthcare.

• Health disparities are closely linked with social, economic, and environmental disadvantage such as lack of access to quality affordable healthcare, healthy food, safe opportunities for physical activity, and educational and employment opportunities. In Dallas County, disparities can be found in:
  o Communities with limited access to community prevention services as evidenced by high rates of diabetes associated with obesity and poor cardiovascular health associated with smoking, obesity and sedentary lifestyles.
  o Communities with limited healthcare access identified by high percentages of residents without health insurance and limited access to primary care services.
  o Low socioeconomic status communities that have health outcomes below the County average.
  o Communities with food deserts.

These communities are reflected in the CNI score and the CNI map in Figure 4.2.

**Palliative Care Capacity**

RHP 9 Plan advocated increasing palliative care capacity in order to increase access to the most appropriate level of care, reducing the overall cost. Palliative care provides appropriate support and treatment to patients, often those with terminal illnesses. The overall goal of palliative care is to improve patients' quality of life while ill. Palliative care:

• Provides relief from pain and other uncomfortable symptoms.
• Assists patients and families in making difficult medical decisions.
• Coordinates care between clinicians and health professionals and helps patients navigate the often-complex health care system.
• Provides emotional and spiritual support and guidance for the patient and family.
E. **Patient Safety/Hospital Acquired Conditions**

Region 9 CNA states that hospitals in the region address patient safety and care quality on a daily basis. Through continuous improvement initiatives regional health care providers are striving to improve patient safety and reduce hospital acquired conditions. An ongoing coordinated effort among providers will improve patient safety and quality throughout the region.

9. **NEXT STEPS**

BIR-NW Dallas’ Implementation Plan will be developed with input from community leaders, BIR-NW Dallas administration and BHCS leadership. The implementation plan will define strategies to address identified needs identified in this CHNA over the next three years.