
HMA

HEALTH MANAGEMENT ASSOCIATES

*Excerpt of the Tarrant County Long Range
Planning Related to JPS Health Network—
DRAFT*

PREPARED FOR
THE CITIZEN'S BLUE RIBBON
COMMITTEE
BY
HEALTH MANAGEMENT ASSOCIATES

DATE
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*Research and Consulting in the Fields of Health and Human Services Policy, Health Economics
and Finance, Program Evaluation, Data Analysis, and Health System Restructuring*

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3. Voices of the Community: Stakeholder Engagement Process

A partnership with the community is key to understanding the health care needs of the County and to develop plans for Tarrant County's future health care delivery system. This section of the report provides a summary of the stakeholder engagement process conducted by HMA. The process included stakeholder interviews, focus group meetings, and community forums with individuals invested in the JPS Health Network. Information and ideas from stakeholder interviews are woven throughout the chapters of this report. Themes from focus groups and community forums reinforced early findings and suggested additional areas of exploration relevant to planning. These themes are summarized in the Appendices of this report.

Stakeholder Interviews

Working with Tarrant County and the JPS Health Network, HMA developed a list of organizational representatives and other key stakeholders who had particular insight and/or investment in the health care delivery system of Tarrant County.

The list included: Tarrant County's Judge, Commissioners, and selected staff; JPS Network Board Members and selected staff; elected officials; community health centers including community

behavioral health centers; selected hospital systems including behavioral health hospitals; nursing homes; health profession training programs; relevant community organizations, coalitions and associations; business and civic organizations; law enforcement entities; and health foundations. Particular emphasis was placed on individuals representing underserved populations. (Refer to Appendix 1 for Individual Stakeholder List.)

HMA conducted a combination of face-to-face, individual, and small-group interviews as well as telephone conversations to obtain input about the strategic direction of the health care delivery system in Tarrant County. Stakeholder commentary and ideas have been woven throughout the chapters of this report.

Focus Groups

Working with Tarrant County administrative staff and JPS Health Network leadership, HMA identified community health advocates such as members of the JPS Joint Council, JPS Health Network users, and JPS Family Advisory Council, to participate in focus group discussions. HMA developed a focus group guide which included questions for the groups. Two focus groups were held on November 3, 2016 with a total of 20 participants. A diverse group of actively engaged stakeholders participated.

The focus group discussions were transcribed by a court reporter. HMA reviewed the transcripts and identified key themes from each focus group. The themes reinforced HMA’s findings in the stakeholder interviews and, together, led to the further exploration of issues that were raised during these conversations (Refer to Appendix 2 for Focus Group Report).

Community Forums

HMA conducted four Community Forums which were moderated by G. K. Maenius, the Tarrant County Administrator. The Community Forums were promoted as listening sessions and the purpose was to gain input from the general public on health care needs and the future of the healthcare delivery system in Tarrant County. Additionally, the forums functioned to:

- Introduce the “Long Range Planning and Analysis related to the Tarrant County Hospital District” initiative and share early findings;
- Obtain and document community input related to Tarrant County health, healthcare, and related needs,
- Obtain and document community input related to the current and future role of the JPS Health Network in the broader delivery system; and
- Inform the public of a website where they could obtain further information on the initiative, track progress and deliverables, and ask questions.

Four community forums were held on the dates and locations listed below. 158 total participants from the public were in attendance:

Date of Community Forum	Location	Number of participants from the public
-------------------------	----------	--

November 9, 2016	Resource Connection, Fort Worth	15
December 1, 2016	Arlington Sub Courthouse, Arlington	89
December 7, 2016	Lake Worth Activity Center, Lake Worth	13
January 10, 2017	Northeast Courthouse, Hurst	41

A video recording of each forum was posted on the Tarrant County website. HMA summarized themes from the forums by Precinct and for the County as a whole. Similar to the findings of the focus groups meetings, the themes reinforced HMA's findings in the stakeholder interviews and, together, led to the further exploration of issues that were raised during these conversations (Refer to Appendix 3 for Notes by Community Forum).

Overall Themes

Themes from the forums are listed below, in order of frequency of comments and concurrence:

1. Behavioral Health Services Needs

Participants expressed a strong need to expand the capacity of behavioral health services (both inpatient and outpatient). Community members expressed concerns that the JPS facility is inadequate for psychiatric emergencies. Others emphasized the need for early intervention, especially around child, adolescent, and young adult services; while others focused on the need for criminal justice diversion with mental health services.

2. Community Clinic Capacity

There was expressed concern around the capacity of JPS services in the future. To this end, many suggested increasing the number of clinics which would provide greater access to care for patients. Extending service hours at clinics was desirable as well. Community members believed clinics were well-placed (location) but operating at capacity. Others identified areas where no clinics were currently located as a gap that needed to be addressed.

3. Transportation Barriers

The lack of transportation options was a concern due to the challenges posed to individuals seeking care at the downtown JPS location.

4. Focus on the "Needy" Population

Community members believed JPS should focus on "the needy" population, defined as those who are unable to afford care elsewhere and/or unable to compete with the private sector. Some mentioned that the County/JPS should demonstrate fiscal responsibility.

Tarrant County Website

Together with Tarrant County, HMA designed a public-facing website for the County's Long Range Planning process, accessible at <http://www.tarrantcounty.com/en/administration/jps-information/hma.html>. The website allows users to access the following information: JPS' current and future plans; the stakeholder engagement process, including links to video recordings of the community forums; HMA's briefings on the planning process to the Commissioners Court, JPS Board, and committee

meetings; HMA’s qualifications, including the current project work plan and ongoing project status reports; a brief description of the facility planning process; a description of the Blue Ribbon Committee and Committee members from the County Judge’s Office and each precinct; and a list of frequently asked questions (FAQs) and answers about JPS and its long range planning process.

Between October 1, 2016 and December 31, 2016, 275 visitors have viewed the page.

Blue Ribbon Committee

The Commissioners Court established a Citizen’s Blue Ribbon Committee to review current and future needs of the JPS Health Network. Its purpose is to evaluate how JPS can best serve its stakeholders in the future. To this end, the Committee will use recommendations from this report and refer to a comprehensive evaluation of JPS Health Network facilities. The findings will be presented to the Commissioners Court and Tarrant County Hospital District Board of Managers for further action.

The Committee consists of twelve members. Two members are appointed by each of the Court Members and two co-chairs are appointed by the Court as a whole. Meetings will be held in a public place with adequate notice to encourage public attendance. Digital recordings of the meetings will be posted on the County’s website.

Co-Chairs

- Randy Moresi, Former CEO, North Hills Hospital
- Lorraine C. Miller, President, LLM Ventures, LLC

Judge’s Office:

- Stuart Flynn, MD, Dean, UNTHSC & TCU Fort Worth MD School
- Dee J. Kelly Jr., Kelly Hart & Hallman LLP, Partner

Precinct 1

- Elizabeth Treviño, PhD Chief Executive Officer, North Texas Area Community Health Center, Inc.
- Tiesa R. Leggett, Project Coordinator, Blue Zones Project

Precinct 2

- Pastor Michael Evans, PhD., President, Board of Trustees, Mansfield Independent School District
- Howard Patterson Hezmall, M.D., Partner, Blue Moon Strategies, LLC

Precinct 3

- Mark R. Berry, CEO and Chairman, Teage Nall and Perkins, Inc.
- Scott W. Fisher, Senior Pastor, Metroplex Chapel

Precinct 4

- Steven L. Simmons, D.O., Pain and Sports Medicine Specialist, Southwest Sports and Spine
- Sarah Hollenstein, Owner, Norco Trucking, Inc.

JPS Board of Managers Liaisons

- Dr. Roy Lowry, D.O.
- Trent Petty

Tarrant County Commissioners Court Liaisons

- Commissioner Roy Charles Brooks
- Commissioner Andy Nguyen

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5. Community Health Needs Assessment

Introduction

Over the past six years, there have been several community health needs assessments/market analyses of Tarrant County. These include the *2010 JPS Community Needs Assessment* conducted by Premier; the *2013 Tarrant County Community Health Assessment Report* conducted by Tarrant County Public Health Department and the Mobilizing for Action through Planning and Partnerships (MAPP) Steering Committee; the *2013 JPS Community Health Needs Assessment* conducted by BKD CPAs and Advisors; and the *2015 United Way Tarrant County Community Assessment*. These assessments describe a diverse and growing county population with large numbers of low-income and working-class communities that have challenges affording health insurance and difficulties accessing and navigating the healthcare system. There are also some linguistically isolated immigrant and refugee communities.

HMA's community needs assessment (below) describes demographic trends in the County over the next 10 to 20 years and, on this basis, provides estimates related to the need for primary care, specialty care, and hospital beds. In general, Tarrant County is expected to experience substantial growth of almost a million people over the next 20 years. A significant percentage of this growth will be among low-income and minority groups who currently have poor access to healthcare services. Many of these populations are concentrated in the urban core of Fort Worth, to the west of the city, and in and around Arlington. New prevention, chronic disease, and community-based services will be needed to address the needs of a growing number of children, pregnant women, and older adults. To manage costs, these services should be delivered proactively and in community and ambulatory environments, rather than under emergent circumstances within hospitals. These services should address high rates of physical inactivity, smoking, obesity, high blood pressure, diabetes, cardiovascular disease, depression, and alcohol and substance abuse. The services should also mitigate low cancer screening rates among older adults, poor prenatal care among pregnant women, and inadequate rates of immunization among children.

Demographic Trends

Current profile

As of 2015, Tarrant County had a population of 1,889,101 people. Figure 10, below, summarizes the most recent census data for the County in terms of age, race/ethnicity, and educational attainment. Twenty-eight percent of the County's residents speak a language other than English at home.

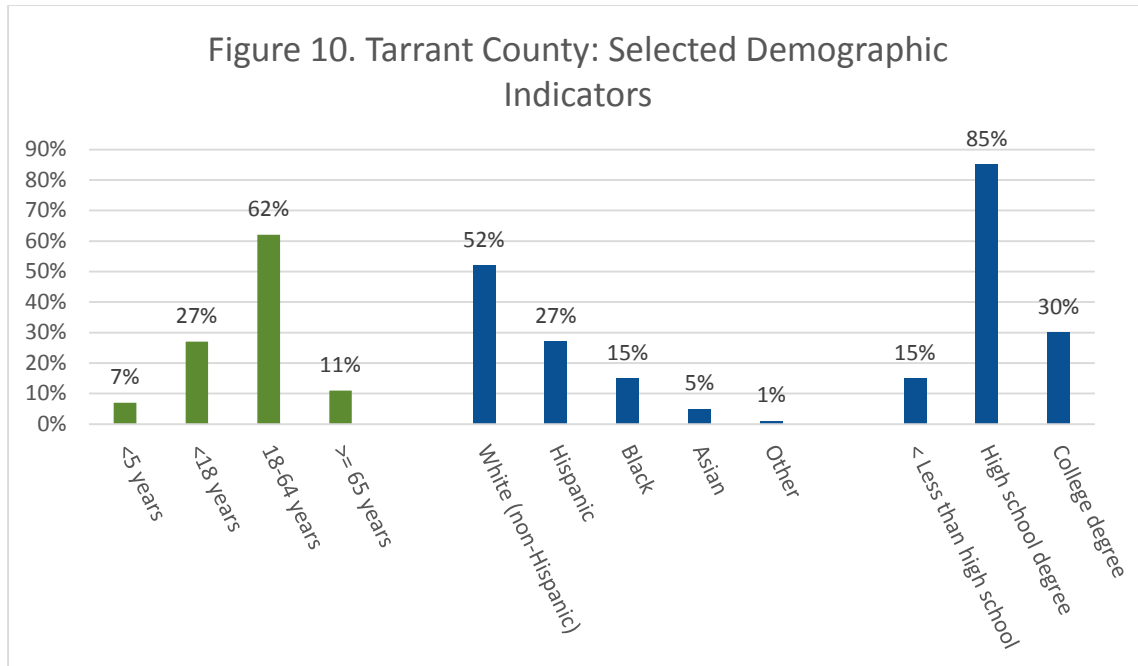
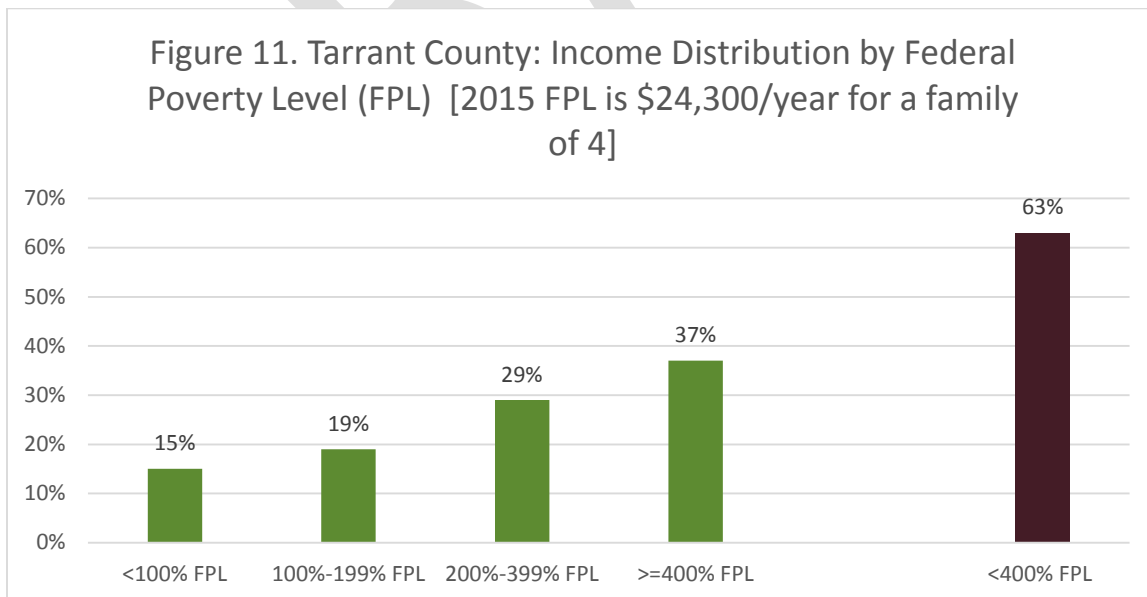
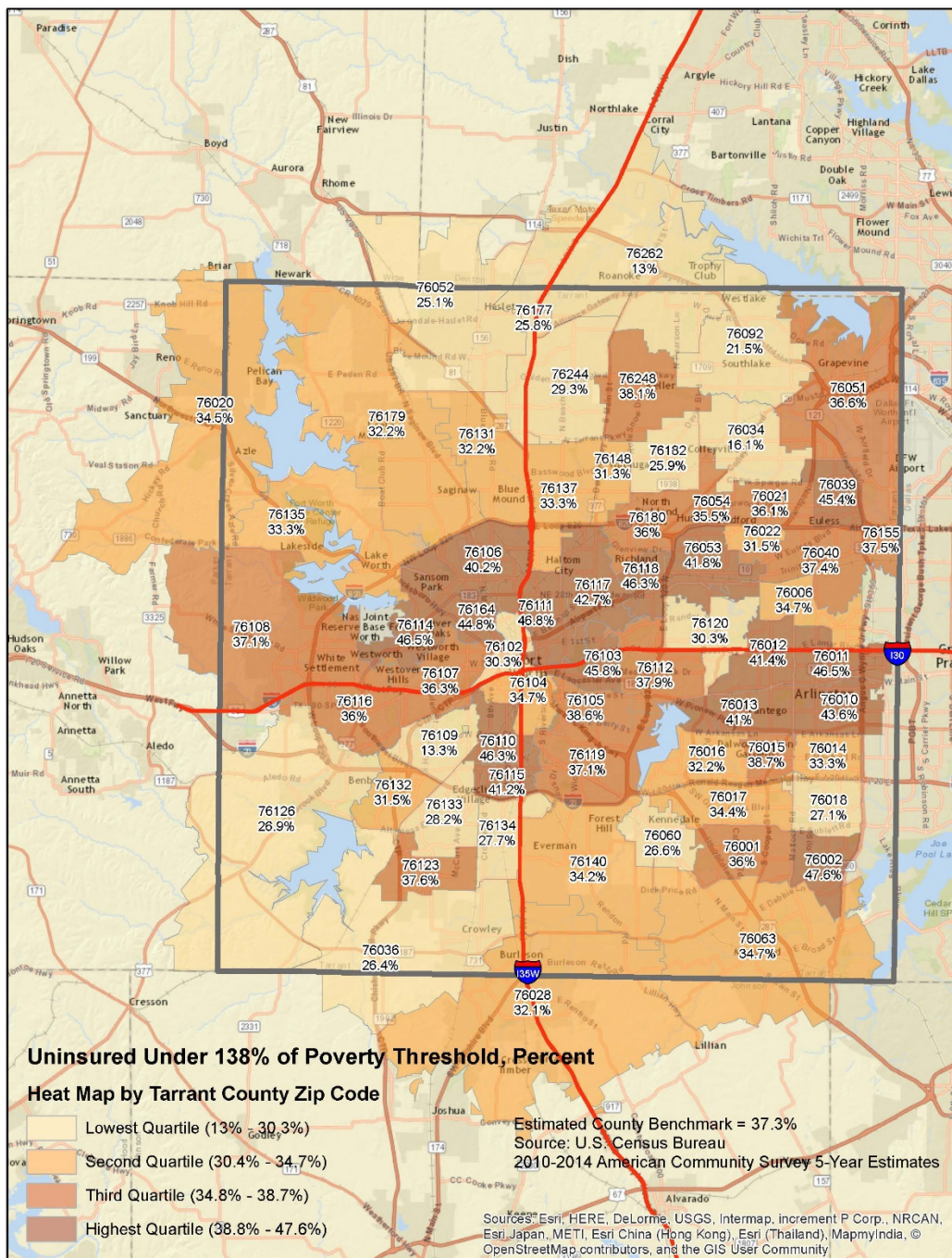


Figure 11 depicts county income distribution by percentage of Federal Poverty Level (FPL) which, in 2015, was \$24,300/year for a family of four. The percent of residents living at less than 200% FPL is 34%, which is slightly less than Texas as a whole (39%). Large numbers of County residents (1,191,930 individuals or 63% of the total) are below 400% FPL which is significant because this is the cutoff for health insurance subsidies through the Health Exchange, operated in Texas by the Federal government.



States that have expanded Medicaid coverage have done so for people who are <138% of FPL (\$33,534 for a family of four). Texas did not expand Medicaid. In Tarrant County, people at <138% FPL are geographically distributed non-evenly, as depicted in Map 1. These very low-income populations are concentrated in Fort Worth’s urban center, in certain adjacent zip codes to the west, and in several zip codes of the Arlington area.

Map 1: Uninsured Under 138% of Federal Poverty Level, Tarrant County, 2010-2014



Future trends: Over the next 20 years, through a combination of immigration, live births, and longer life expectancy, Tarrant County’s population will increase rapidly by about 1 million people, from about two million to three million (an increase of 46%). **Figure 12** illustrates these growth trends by % of FPL.

Figure 12: Population Projections by Percent FPL from 2017 – 2037, Tarrant County Texas (Source: US Census for 2015 population, North Central Texas Council of Governments.)

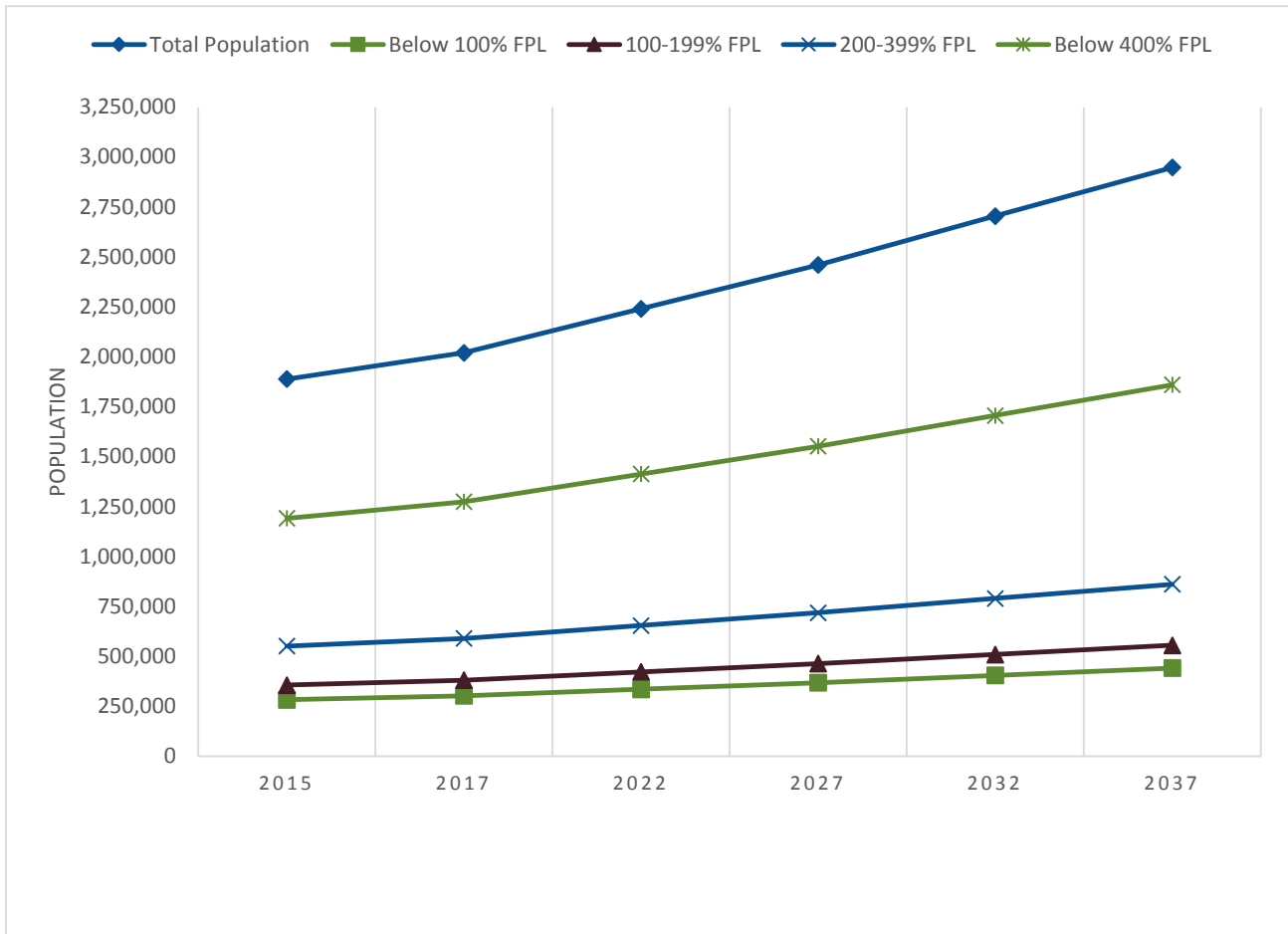
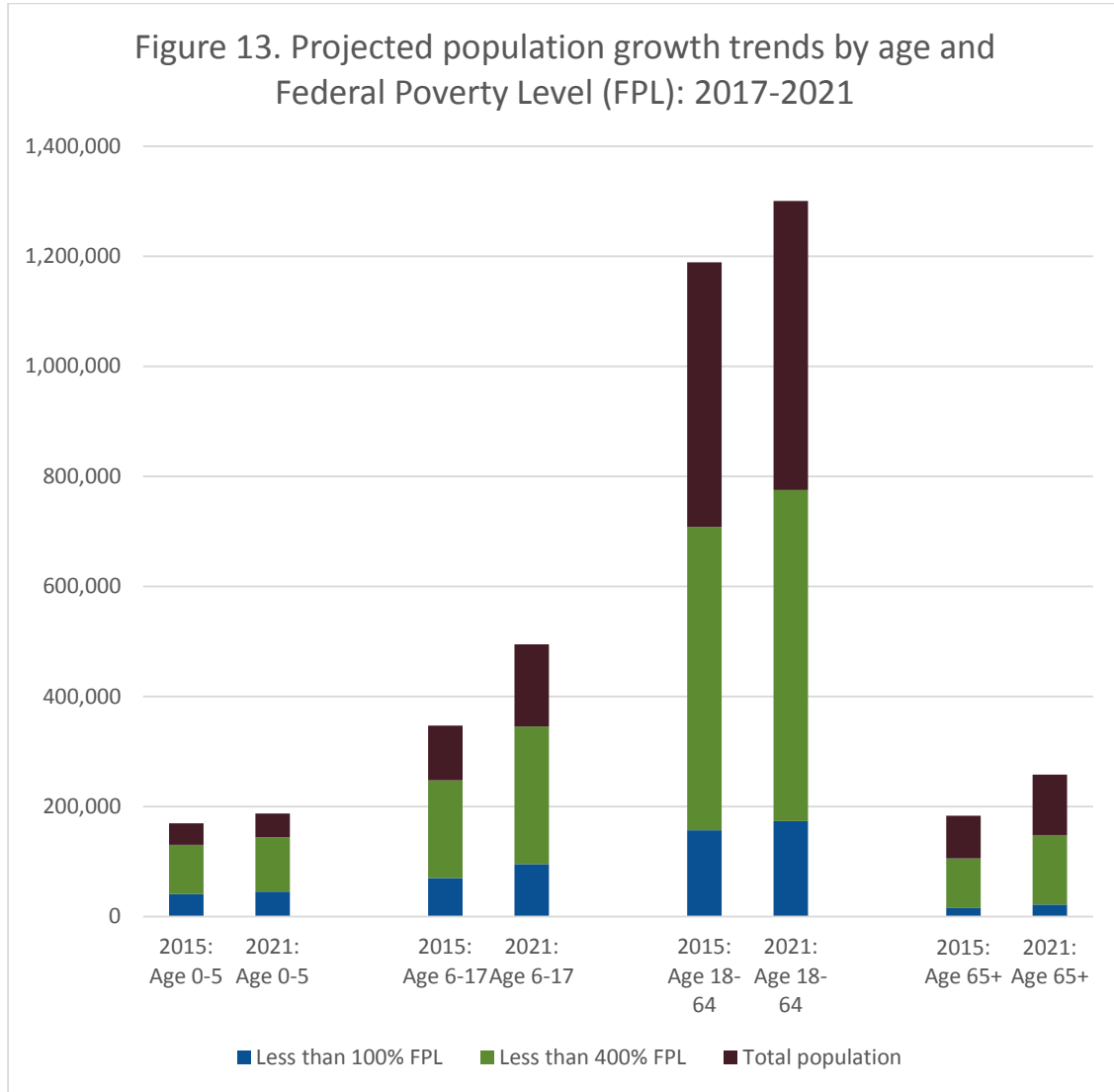
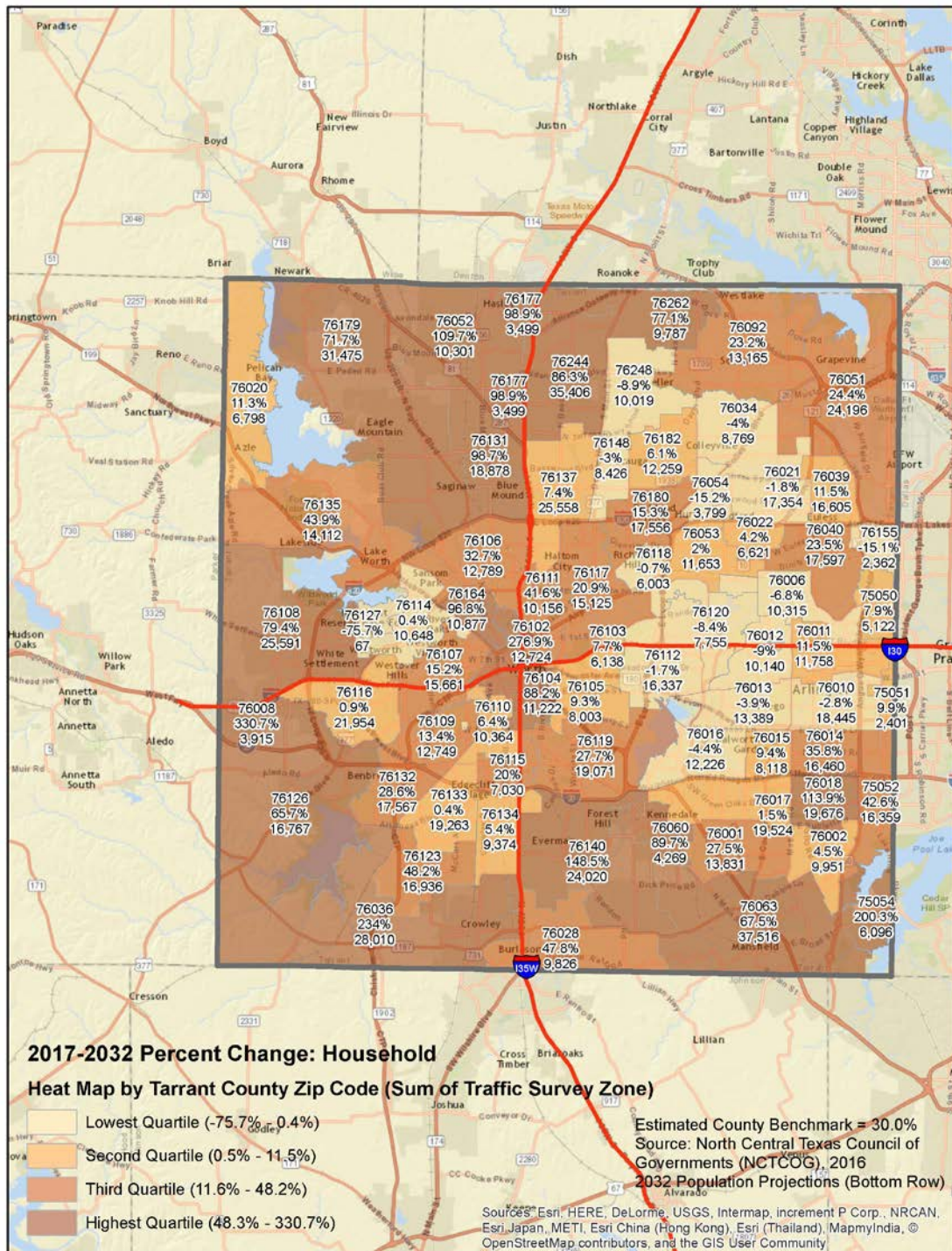


Figure 13 illustrates projected population growth trends from 2017 through 2021 by age and FPL. Because population growth will be significant in the youngest (age 5 and younger) and oldest age groups (>65 years), this has important implications in terms of the need for future maternal and child health services, and for the management of chronic conditions and care at the end-of-life.



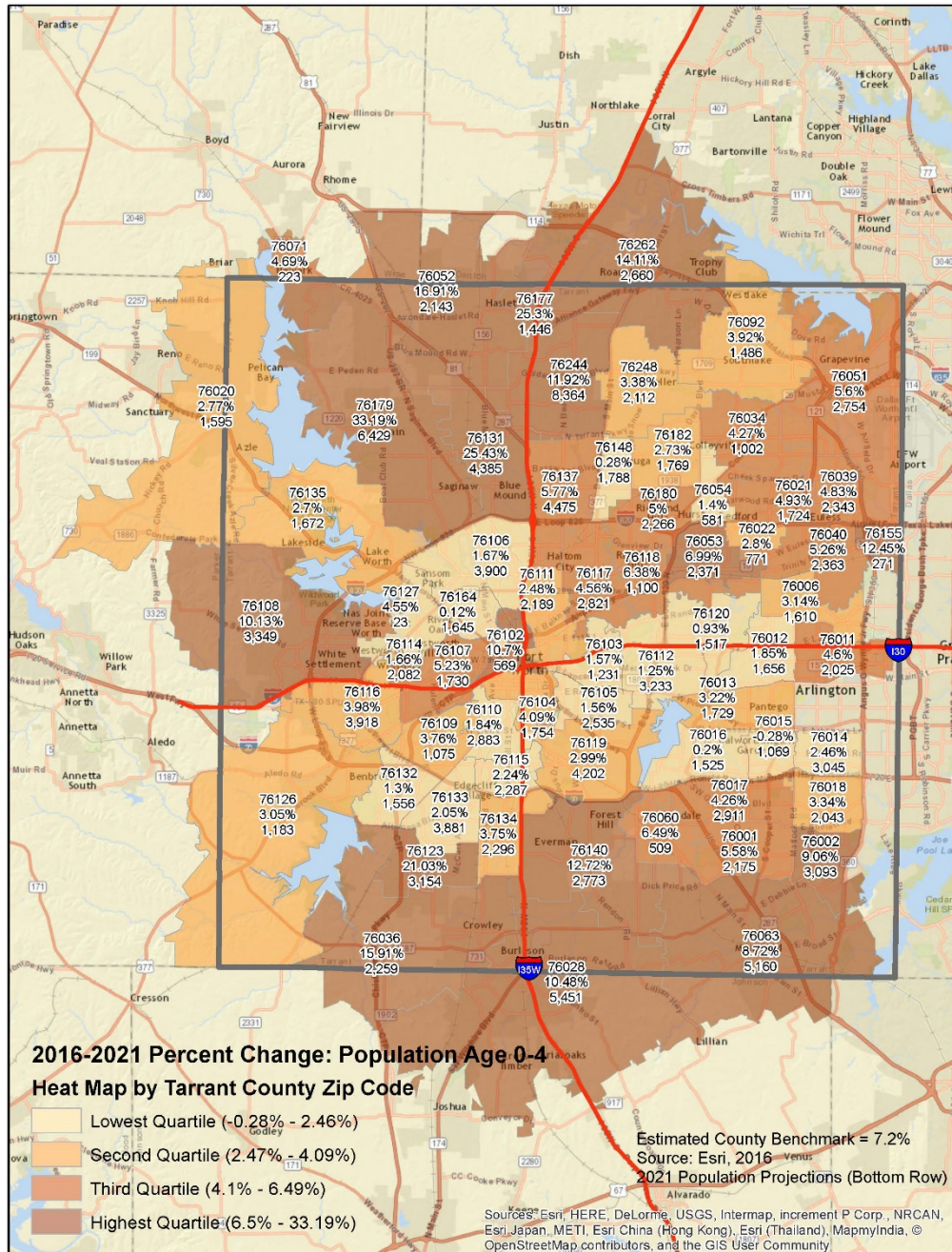
Map 2 indicates the growth in total households over the next 15 years (2017-2032), with highest growth in the periphery of the County.

Map 2: Number of Households - Percent Change from 2017 through 2032, Tarrant County, Texas (by quartile)



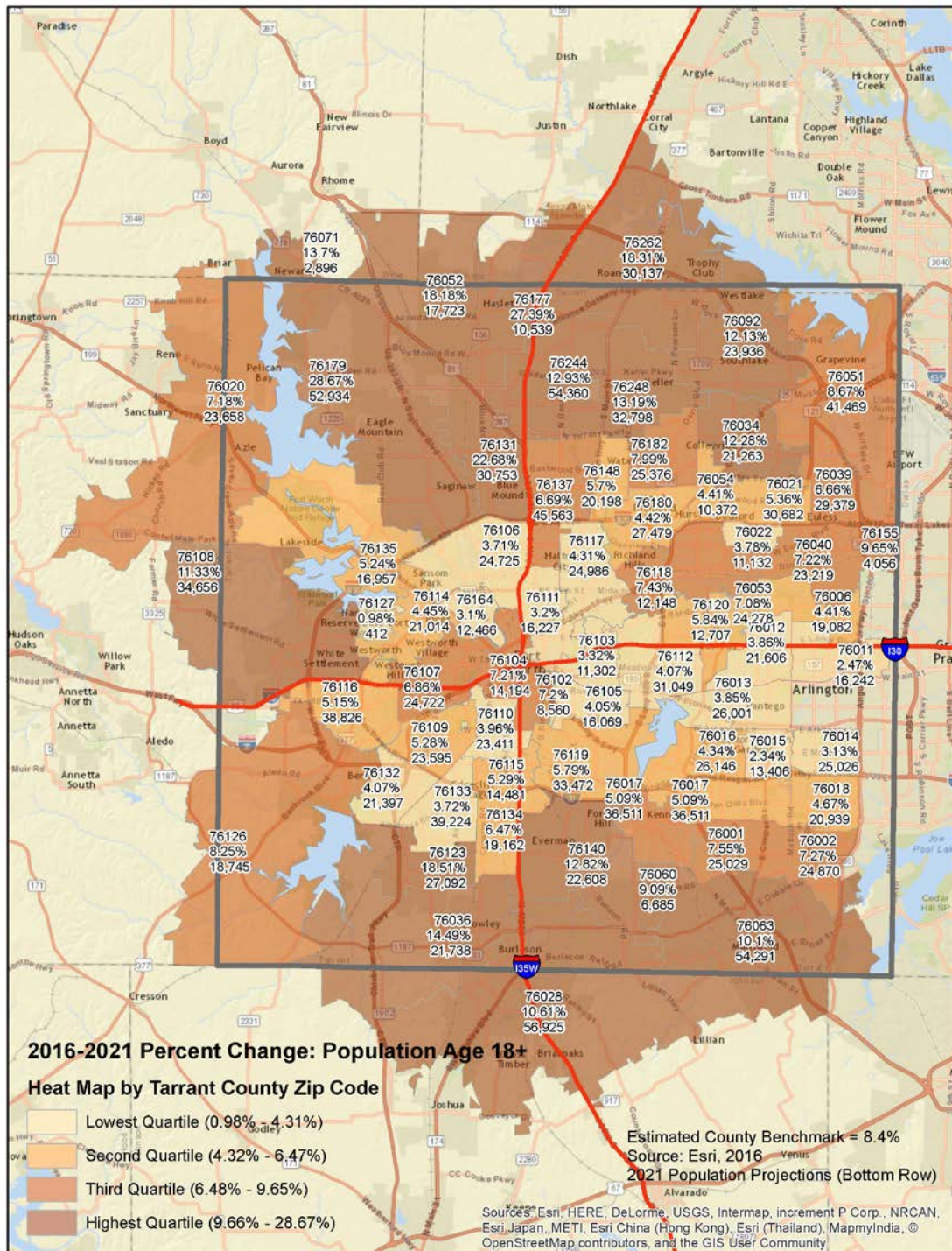
The maps below depict projected population growth by age cohort. Map 3 illustrates that over the next five years the greatest growth in the <5-year-old cohort will be in the north, south, and southeast of the County, with additional zip codes in the west and within Fort Worth.

Map 3: Population Percent Change from 2016 through 2021 for persons 0-4 Years, Tarrant County, Texas



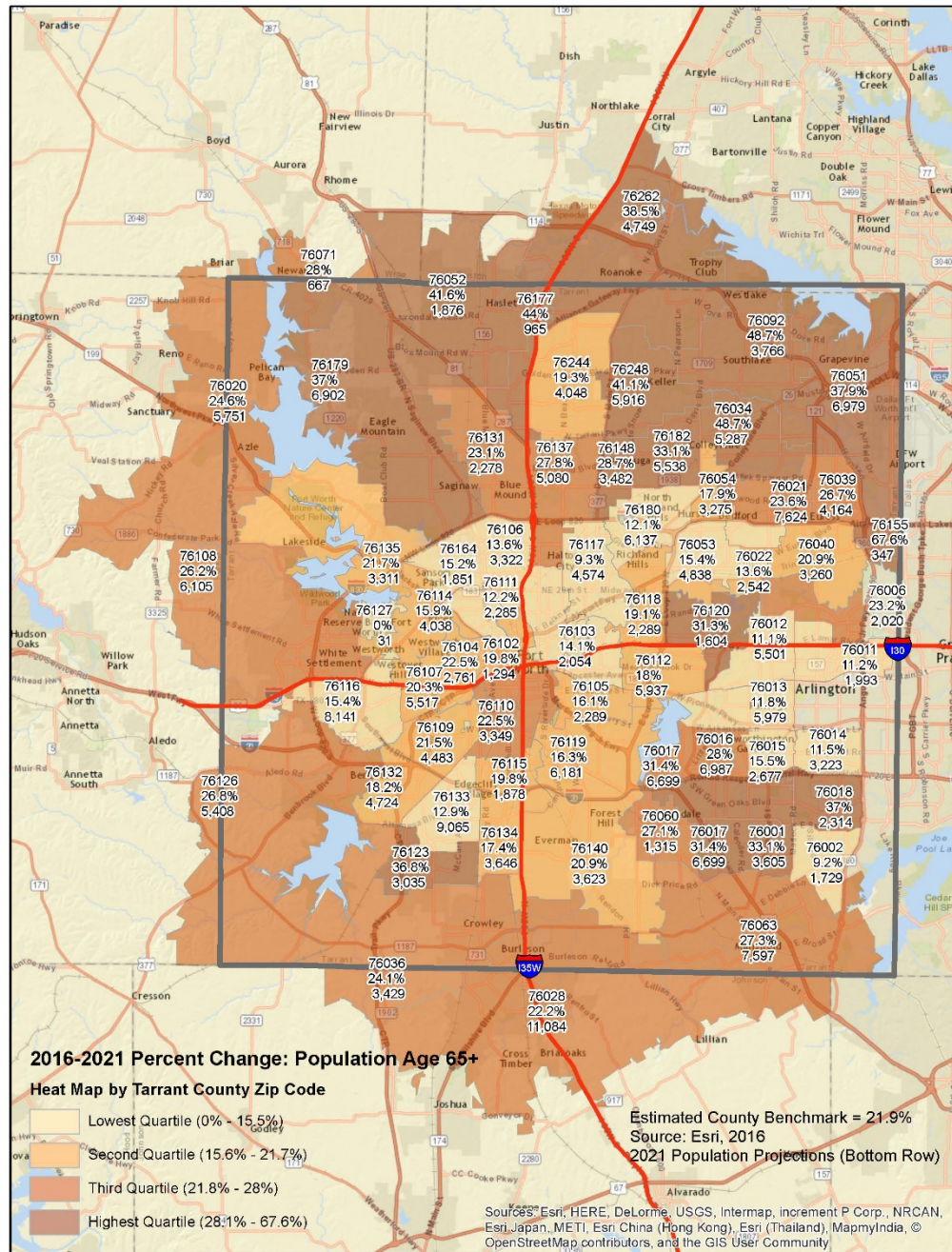
In Map 4, five-year growth in the over 18-year-old cohort will take place in the north, south, and southeast of the County, with additional zip codes in the west.

Map 4: Population Percent Change from 2016 through 2021 for Persons 18+ Years, Tarrant County, Texas



Map 5 illustrates that the over 65-year-old cohort will grow most significantly in the northeast, northwest, and southwest, with additional zip codes in Fort Worth.

Map 5: Population Percent Change from 2016 through 2021 for Persons 65 Years and Over, Tarrant County, Texas



Age-related population growth trends for lower-income residents of the County should be used to inform decisions about where to establish new medical homes, specialty physician services, ambulatory

surgery, and dental care sites. Further detail related to the need for an expanded ambulatory care network are discussed in the Delivery System chapter.

Population Projections related to Eligibility for the JPS Connection Program

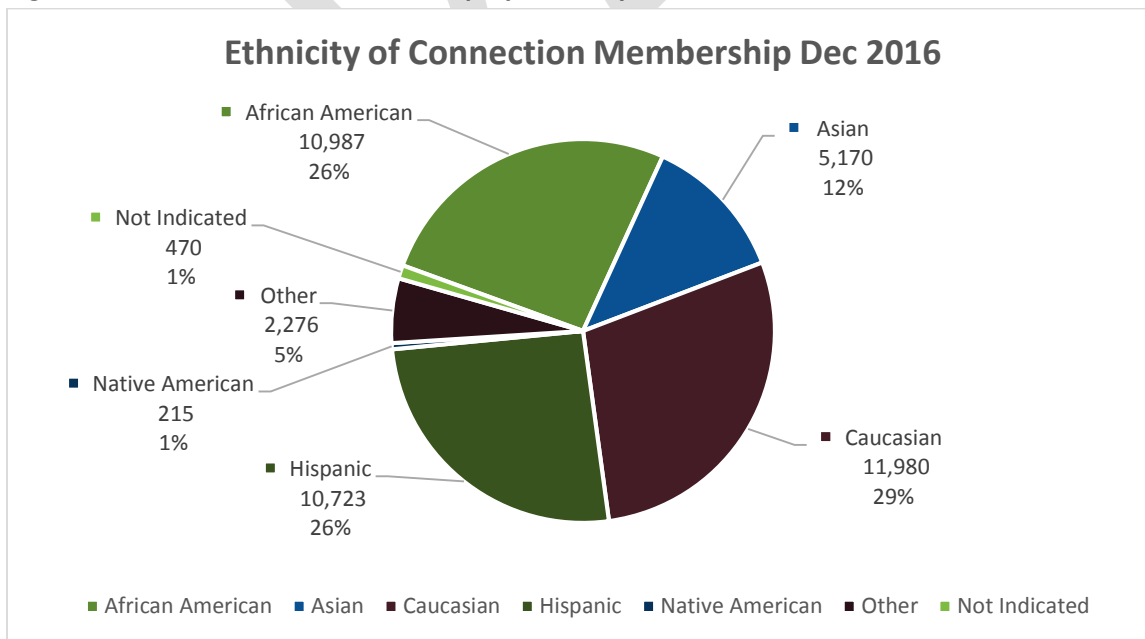
The JPS Connection program provides “affordable access to doctor appointments, specialized care and prescriptions for Tarrant County residents who qualify.” The program serves the adult, non-Medicaid eligible, documented population below 250% of FPL. (Refer to JPS Connection Program Description in Appendix 4.)

As a payor of last resort, the JPS program has the following components:

- ❑ **JPS Connection:** Provides assistance to patients without health insurance.
- ❑ **JPS Connection Homeless Program:** Provides assistance to patients without health insurance who are experiencing homelessness.
- ❑ **JPS Connection Supplemental to Medicare:** Provides assistance to patients with Medicare Part A&B or a Medicare Plan contracted with JPS Health Network.
- ❑ **JPS Connection Supplemental to Insurance:** Provides assistance to patients with a primary insurance plan that is contracted with JPS Health Network.

Below is a breakdown of the ethnicity of JPS Connection membership. The predominate group is white, non-Hispanic (29%), followed by African-American and Hispanic (26% each), and Asian (12%).

Figure 14: JPS Connection Membership by ethnicity, December 2016



Source: JPS Health Network

Based on a projection tool that relies on certain assumptions, the table below illustrates the estimated JPS Connection-eligible population through 2037.

Table 1: Projections for JPS Connection-Eligible Population, Tarrant County, through 2037.

Year	Total population below 250% FPL*	Total population 18+ years, below 250% FPL, non-Medicaid	Age > 65	Undocumented residents under 250% FPL (ineligible for JPS Connection)	JPS Connection Eligible Population: 18+ years, below 250% FPL, non-Medicaid
2015 Population	801,827	466,068	64,551	113,346	398,060
2027 projected population	1,044,170	606,931	137,308	147,604	518,369
2037 projected population	1,251,364	727,364	201,470	176,892	621,228

* FPL – Federal Poverty Level.

Source: Population of Texas and Counties in Texas by Age, Sex, and Race/Ethnicity from 2010 to 2050. University of Houston 2014. (using 0.5 immigration scenario.).

Undocumented populations

Undocumented populations are not eligible for Medicaid or the JPS Connection program. As of 2017, there are an estimated 141,419 undocumented individuals residing in Tarrant County (about 7% of the County's total population). Approximately 80% of undocumented Texas residents were born in Mexico.^{xxxv} The percent distribution of undocumented residents has remained stable in recent years despite concerns that the undocumented population has been growing. According to recent data from the Migration Policy Institute, more than half of the state's undocumented residents have lived in Texas for more than 10 years, and 41% are homeowners. Although 62% of undocumented residents in Texas are engaged in some form of employment, 72% do not have any form of health insurance.^{xxxvi}

Undocumented populations receive emergency medical care (including for women going through active labor) from JPS and other Medicare-participating acute care hospitals in Tarrant County. This care is mandated in provisions of the Emergency Medical Treatment and Labor Act (EMTALA). This federal law requires that individuals who require urgent care receive the necessary examination, treatment, and—if necessary – transfer to another facility regardless of an individual's ability to pay.^{xxxvii}

Some undocumented populations receive emergency medical care from JPS and other Medicare-participating acute care hospitals in Tarrant County. The Emergency Medical Treatment and Labor Act (EMTALA) requires that individuals who go to the Emergency Department (ED) for urgent medical care must receive treatment regardless of their ability to pay. Depending on the individual's health care needs, treatment may include examination or transfer to another facility.^{xxxviii} Undocumented adults are primarily cared for at the North Texas Community Health Center, and/or free, faith-based clinics throughout the County. Undocumented children may receive services at JPS through Title V - Maternal Child Health Program.

Legal refugees

According to the Texas Refugee Health Program, Tarrant County accepts the third largest proportion of refugee arrivals of all Texas counties. In CY 2014, Tarrant County resettled 15% of all sanctioned Texas refugee arrivals -- about 2,068 individuals in that year. The greatest proportion were from Iraq (24%), Cuba (24%), Burma (18%), Afghanistan (10%), and Somalia (6%). The Texas Refugee Health Screening Program provides local health departments with resources to provide immunizations to and carry out health assessments for new refugee arrivals. The Tarrant County Health Department participates in this program, which screens for communicable diseases, including tuberculosis (25% test positive), HIV (0.5% test positive), hepatitis B (2% test positive), sexually-transmitted illnesses (0.8% test positive for syphilis), and intestinal parasites (the majority are not tested but presumptively treated). The program also provides general physical assessments to identify, educate, and refer for the evaluation and treatment of additional health problems. Upon arrival in the United States, all refugees are eligible for Medicaid.^{xxxix}

Health Status of Tarrant County

Tarrant County has a high rate of adult obesity, age-adjusted diabetes prevalence, and diabetes mortality rate. These are all above the national severe benchmark (defined as the top 25th percentile nationally).

Table 2: Health Indicators Related to Diabetes and Obesity

Health Indicators Related to Diabetes and Obesity	Tarrant County	Texas	Top 25 th percentile nationally
Age-Adjusted Diabetes Prevalence ¹	<u>10%</u>	11%	9%
Age-Adjusted Diabetes Mortality Rate ²	<u>26%</u>	21%	25%
Adult Obesity Prevalence ¹	<u>33%</u>	32%	30%
Percent of diabetic Medicare enrollees not receiving a hemoglobin A1c (HbA1c) test ³	15%	16%	20%
Percent of adults who currently smoke cigarettes ¹	15%	15%	20%
Percent of adults (18 years and older) with no physical activity in the past month ⁴	24%	24%	27%

¹ Behavioral Risk Factor Surveillance Survey (BRFSS), 2014

² Centers for Disease Control and Prevention (CDC) WONDER, 2014

³ Dartmouth Atlas of Health Care, 2013

⁴ CDC Diabetes Interactive Atlas, 2013; Statewide data from County Health Rankings, 2016

Table 3: Health Indicators Related to Cardiovascular Disease

Health Indicators Related to Cardiovascular Disease	Tarrant County	Texas	Top 25 th percentile nationally
Age-Adjusted Mortality from Diseases of the Heart (per 100,000 population)¹	145.0	169.9	203.2
Age-adjusted cerebrovascular disease mortality (per 100,000)¹	42.9	41.6	46.3
Proportion of Adults reporting diagnosis of high blood pressure²	31%	31%	31%
Percent of adults who have not had their blood cholesterol checked within the last 5 years²	19%	25%	26%

¹ CDC WONDER, 2014² BRFSS, 2013**Table 4: Health Indicators Related to Cancer**

Health Indicators Related to Cancer	Tarrant County	Texas	Top 25 th percentile nationally
Age-adjusted colorectal cancer mortality (per 100,000 population)²	13	14	15
Age-adjusted breast cancer mortality (per 100,000 population)³	10	11	24
Cancer Screening -- Percent of women 18 and older with No Pap test in past 3 years¹	24%	23%	20%
Cancer Screening -- Percent of women 40 and older with No Mammogram in past 2 years¹	24%	23%	26%
Cancer Screening -- Percent of adult 50 and older with No Fecal Occult Blood Test within the past 2 years¹	66%	54%	85%

¹ BRFSS, 2014² CDC WONDER, 2014³ CDC WONDER, 2012-2014

Table 5: Health Indicators Related to Perinatal and Prenatal Health

Health Indicators Related to Perinatal and Prenatal Health	Tarrant County	Texas	Top 25th percentile nationally
Low Birth Weight Rate, 5 year average ¹	8%	8%	9%
Infant Mortality Rate, 5 year average ¹	7%	6%	8%
Births to Teenage Mothers (15-19) (Percent of all births) ¹	7%	10%	10%
Late entry into prenatal care (entry after first trimester) (Percent of all births) ¹	39%	36%	21%
Cigarette use during pregnancy (Percent of all pregnancies) ¹	5%	4%	18%
Percent of births that are preterm (<37 weeks gestational age) ¹	11%	12%	13%

¹Texas Health Data Center for Health Statistics, 2013

Map 6: Infant Mortality Heat Map, Tarrant County, 2013

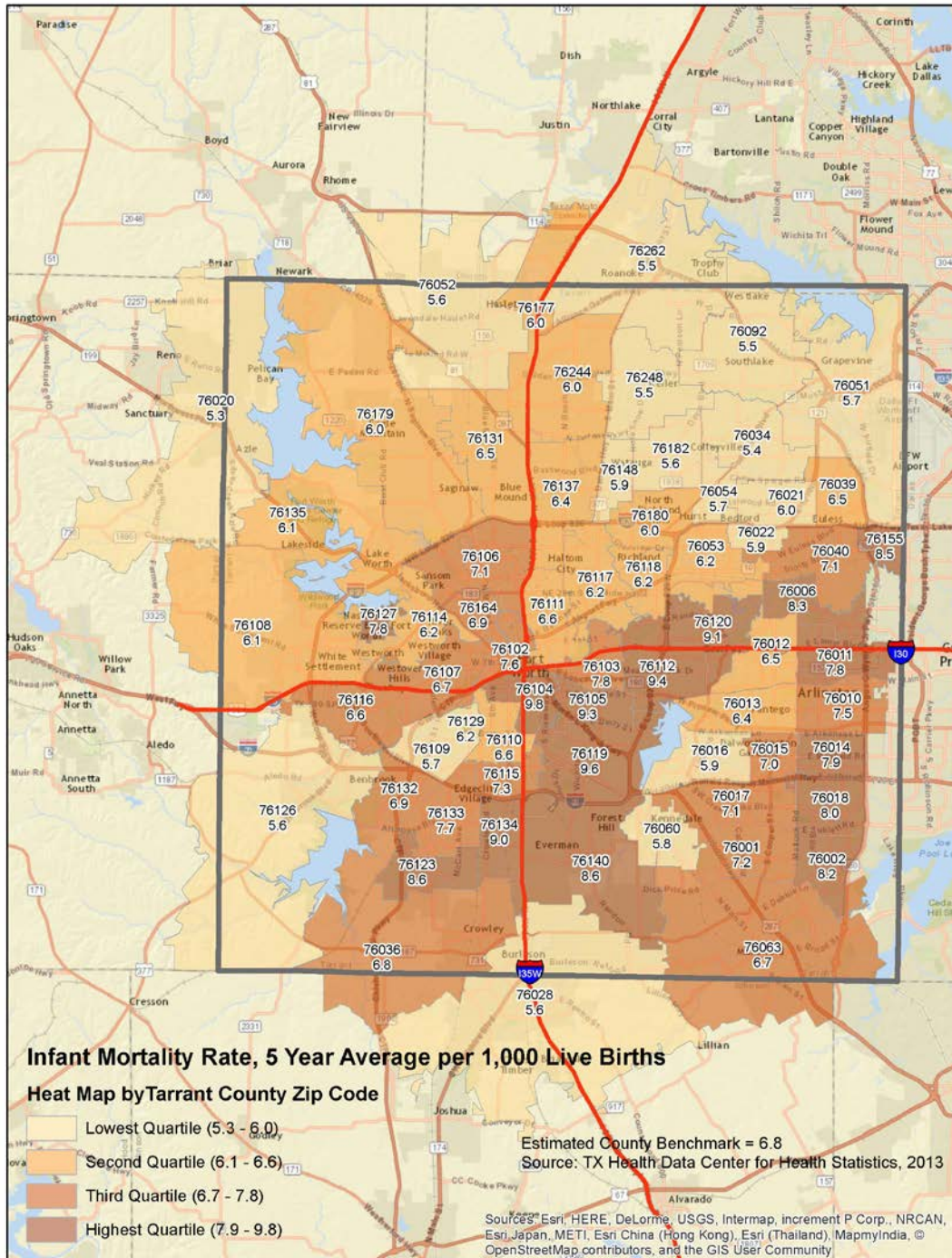


Table 6: Health Indicators Related to Child Health

Health Indicators Related to Child Health	Tarrant County	Texas	Top 25 th percentile nationally
Percent of children (19-35 months) not receiving recommended immunizations 4-3-1-3-3-1-4 ^{1,2}	<u>38%</u>	38%	35%
Percent of Children not tested for elevated blood lead levels by 72 months of age ¹	84%	82%	89%
Percent of children (10-17 years) who are obese ¹	<u>18%</u>	19%	18%

¹CDC NIS, 2014; Texas Health Data Center for Health Statistics, 2011; Child Health Data, 2012

²4 doses of diphtheria-tetanus-pertussis (DTP), 3 doses of polio, 1 dose of measles-mumps-rubella (MMR), 3 doses of Hepatitis B, 3 doses of Haemophilus Influenza, type B (Hib), 1 dose of Varicella vaccine, and 4 doses of Pneumococcal conjugate vaccine (PCV). This recommendation is referred to in shorthand as "4:3:1:3:3:1:4".

Compared with an extreme national benchmark, there is a high percentage of children not receiving recommended immunizations and children (10-17) who are obese.

Table 7: Health Indicators Related to Behavioral Health

Health Indicators Related to Behavioral Health	Tarrant County	Texas	Top 25 th percentile nationally
Percent of adults with at least one major depressive episode in the past year ¹	13%	16%	7%
Suicide Rate ²	10	12	15
Binge alcohol use (Percent among population 12 and over) ³	8%	7%	26%
Age-adjusted drug poisoning (i.e. overdose) mortality rate per 100,000 population ⁴	9.0	9.5	14.8
	Dallas-Fort Worth-Arlington MSA		
Substance use (persons 12 and older, use of any illicit drug in past year) ⁵	13%	12%	NA

¹BRFSS, 2012

²Texas Department of State Health Services, 2009-2013

³SAMHSA National Survey on Drug Use and Health, 2014

⁴CDC WONDER, 2012-2014

⁵SAMHSA NSDUH Report: Metro Brief, 2005 - 2010

Table 8: Other Health Indicators

Other Health Indicators	Tarrant County	Texas	National Benchmark
Age-Adjusted Death Rate (per 100,000)¹	692.4	745.3	764.8
HIV Infection Prevalence²	<u>0.2%</u>	0.3%	0.2%
Percent Elderly (65 and older)³	9.8%	10.9%	15.2%
Three Year Average Influenza and Pneumonia Death Rate (per 100,000)¹	11.8	12.3	18.6
Adult Current Asthma Prevalence⁴	7.6%	7.4%	9.0%
Age-adjusted Unintentional Injury Death Rate¹	28.5	37.3	40.0
Percent of population linguistically isolated (percent of people 5 years and over who speak a language other than English at home)³	<u>26.9%</u>	34.9%	10.3%
Percent of adults (18+ years old) that could not see a doctor in the past year due to cost⁵	<u>16.2%</u>	17.6%	13.4%
Percentage of adults 65 years and older who have not had a flu shot in the past year⁶	<u>38.9%</u>	40.6%	32.6%
Chlamydia (sexually transmitted infection) rate (per 100,000)⁷	<u>444.9</u>	487.3	389.5
Oral Health (Percent without dental visit in last year)⁶	<u>40.1%</u>	41.2%	30.4%

¹ CDC WONDER, 2014

² CDC, 2013

³ US Census American Community Survey, 2014

⁴ BRFSS, 2010

⁵ BRFSS, 2014

⁶ BRFSS, 2012

⁷ TX DSHS, 2015

For other health indicators, we see that the percent of the population linguistically isolated (26.9%) is more than double the severe national benchmark. Refer to the Appendix 13 for Maps: Linguistic Isolation. The percent of adults that could not see a doctor in the past year due to cost (16.2%) is above the severe benchmark.

Chlamydia infection rate (444.9 per 100,000) is significantly higher than the severe benchmark and may be an indicator of rates of other sexually transmitted infections. The percent of adults without a dental visit in the last year (40.1%) is particularly high, exceeding the national benchmark by almost a third. Refer to Appendix 14 for Maps: Oral Health Care Access.

In summary, adult obesity, diabetes, high blood pressure, and cancer are key health concerns, among several, for the County. Infant mortality in particular zip codes and late entry into prenatal care are of significant concern, as is the high rate of sexually transmitted infection. Childhood immunization rates and obesity are also in need of attention. In terms of behavioral health, major depressive episodes are almost twice as high as the national average, and while substance use (for the MSA) is lower than the national average, it has a significant impact on the community. Based on self-report, access to

affordable primary care, and dental care for low-income persons appears to be difficult. Linguistic isolation of a large proportion of the population and significant transportation barriers make it all the more challenging to navigate and access the health care system.

Access to Primary Care

There are several barriers to accessing care in Tarrant County. The number of residents for each 1 FTE Primary Care Physician is just below the national benchmark (1,440 vs. 1,494), but superior to Texas overall.

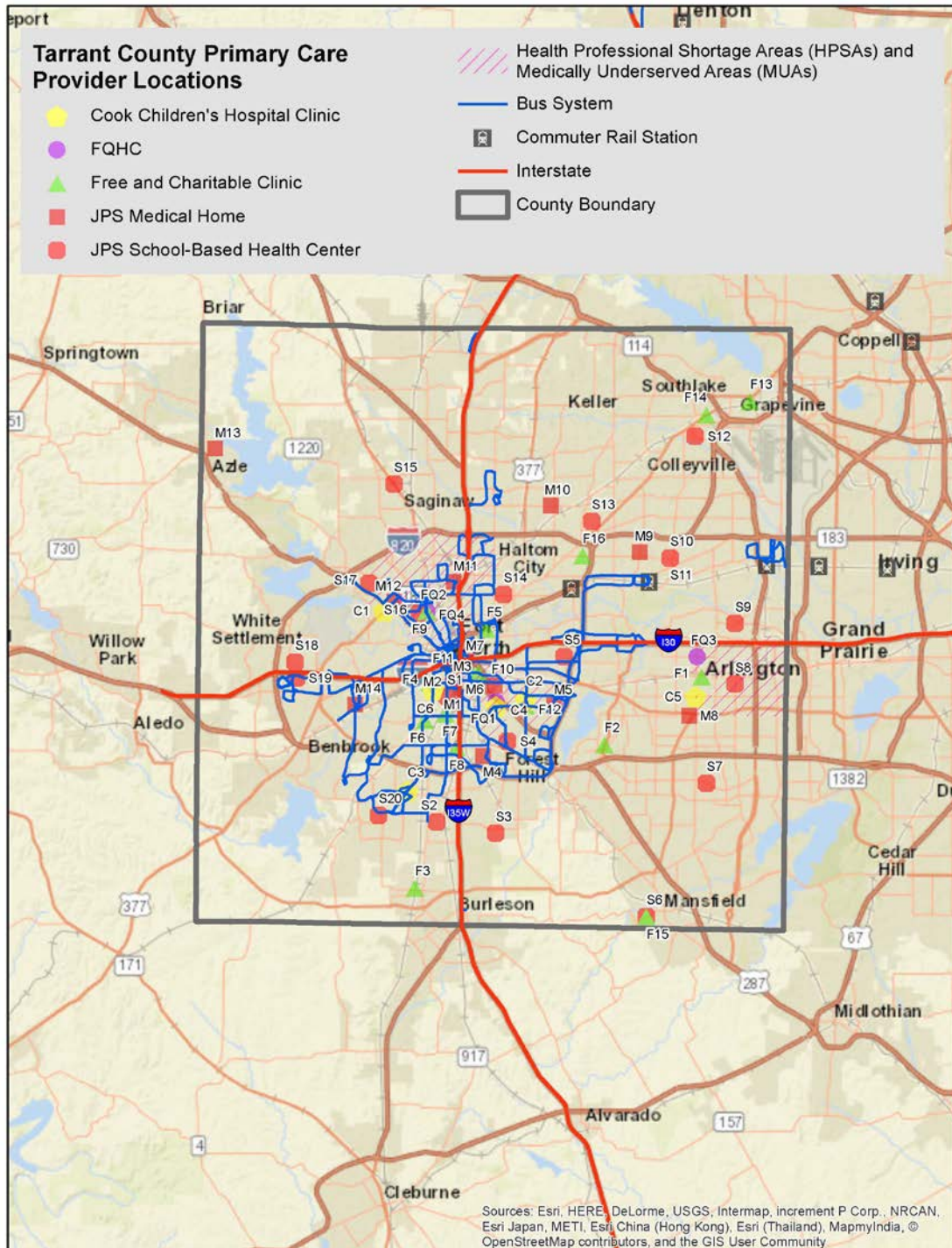
The main primary care organizations in Tarrant County's "safety net" include:

- ❑ JPS Health Network's 14 Medical Homes and 21 School-Based Health Centers;
- ❑ North Texas Area Community Health Center's three locations (Federally Qualified Health Center) with a fourth in the planning stages (this Federally Qualified Health Center has 8 FTE providers, and a primary care visit volume for 2016 estimated at 35,000);
- ❑ Twelve (12) Free and Charitable Clinics, predominantly sponsored by faith-based organizations.
- ❑ Cook Children's Hospital has multiple pediatric clinics in the County, six of which are well-child clinics with reduced fees for low-income families and accept Medicaid and most other insurance.

These providers are located throughout the County and are depicted on Map 7. This map also identifies the location of federally designated health professional shortage areas, medically underserved areas, and medically underserved populations which are predominately in Fort Worth and Arlington.

The map also includes transportation lines, depicting public bus and commuter rail stations that exist in the County. Bus routes are predominately in the Fort Worth metropolitan area, with a route going through the north part of the county, very limited bus lines in the east; rail lines are in Fort Worth serving limited areas in the east and northeast parts of the County.

Map 7: Tarrant County Safety Net Primary Care Provider Locations by Type with HPSA, MUA Designated Geographies, and Public Transportation Lines, November 2016.



JPS Health Network is the single largest provider of primary care to the low-income population. In 2010, Premier conducted a comprehensive market analysis for JPS including a primary care clinic capacity analysis of JPS primary care centers which identified over or under-utilization of primary care providers. The utilization performance was calculated by assessing the patient visit variance between the health centers and a national MGMA^{xi} median benchmark for the same number of full time equivalent primary care providers. In short, overutilization means a shortfall in the ability to meet community demand for services.

For the JPS community health centers, there was overutilization in nearly all geographic service areas with the greatest in south Arlington (3,874 visits or 33.6%) and north Arlington (11,227 visits or 31.2%). For all regions, there was an overutilization, with a total of 44,262 visits or approximately an 18% variance. The same analysis was conducted for the school-based health centers with similar findings. Overutilization was greatest in Hurst/Eules/Bedford (3,600 visits or 41.4%) and Grapevine/CV (862 visits or 29.7%.) While there were some school-based health centers with a negative variance, with the Northwest being the highest (-1,353 or -23.9%), there is an overall over utilization of 5,019 or 10.2%.^{xii}

Premier identified the greatest needs for access and the areas with the least market share for JPS. They described these indicators together as a barometer for areas of greatest need. The five areas of greatest need include (in descending order of need): HEB, North West, Grapevine/CV, North Central, and West.^{xiii}

JPS considers a number of parameters when determining new primary care clinic locations, including but not limited to:

- Community Need Index (accounts for five socio-economic indicators that can serve as barriers to health/healthcare: income, culture/language, education, health insurance, housing.)
- Percent of individuals under 200% Federal Poverty Level
- Number of individuals enrolled in JPS connections
- Location of JPS and other safety net clinics
- Indicators of how JPS and other safety net clinics are meeting demand
- Transportation/drive times to JPS and other safety net clinics
- Real estate opportunities

HMA recognizes that JPS has partially addressed this need though the Southeast Tarrant Regional Medical Home opened on September 20, 2014 and a now funded Northeast Tarrant Regional Medical Home.

While the study by Premier was conducted in 2010, HMA reviewed a current indicator of access—the third next available appointment for new patients. As of September 2016, the JPS medical homes had a third next available appointment for new patients ranging between 7-114 days, with an average of 72 days. The JPS school-based clinics had a third next available appointment for new patients ranging between 2-8 days, with an average of 5 days. HMA confirms the directional findings of the Premier report and provides recommendations in the Delivery System chapter.

While HMA was unable to obtain the third next available appointment for the North Texas Area Community Health Centers (NTACHC), organization leaders indicate that demand is greater than the current supply and they are working to establish a new (fourth) health center site.

While some of the free and charitable clinics operate by appointment, most have walk-in type of arrangement. Mission Arlington, for example, has a clinic with seven exam rooms and a workforce of mostly volunteers with a limited number of paid staff. Given how the clinic operates, the practice manager often does not know how many providers will be working in a given day and so the line of patients forms very early in the morning before the clinic opens. The reality is that many patients in line will not be seen that day.

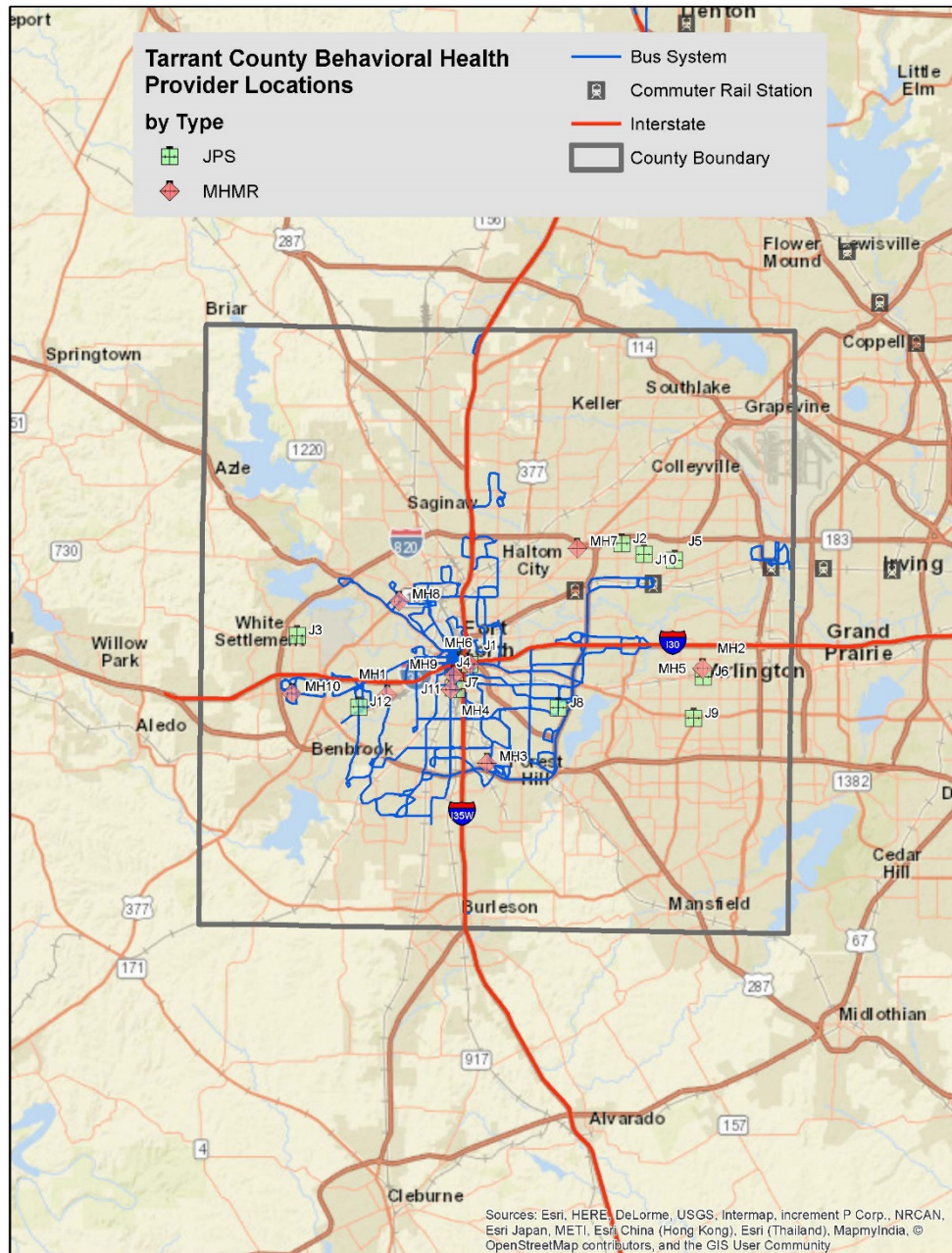
Access to Outpatient Behavioral Health Services

There are few organizations providing outpatient behavioral health services to low-income, uninsured in the County, the key organizations include:

- JPS Health Network's 12 behavioral health outpatient clinics.
- MHMR's 10 behavioral health outpatient clinics.

These providers are located primarily in the greater Fort Worth area with some sites east in the Arlington area and one west in White Settlement. The map below indicates locations of JPS and MHMR outpatient behavioral health services in Tarrant County.

Map 8: Outpatient Behavioral Health Services in Tarrant County Serving Low-Income Populations, with Public Transportation Lines, November 2016.



JPS has a robust offering of adult behavioral health services including intake/assessment, five locations in the community for follow-up for adult individual therapy, one adult walk-in location if a patient needs to be seen in-between appointments, adult psychiatric day rehabilitation program, adult intensive outpatient program, and adult partial hospitalization program. Telepsychiatry has increased access to the partial hospitalization program, allowing admissions when a psychiatrist is not necessarily on-site.

Child and adolescent outpatient psychiatry services are limited to five community locations; indicated with an asterisk in the list above. These include: Northeast, Stop Six, and Viola Pitts where new patient and follow-up visits are provided. Follow-up visits are provided at Arlington and the School-Based behavioral health clinic. All the child and adolescent sites have very limited availability – four operate one-half day per week, and the site in Arlington operates one full day per week.

JPS Network wait times for behavioral health clinic appointments

Table 9: Next Available Appointment by Type of Behavioral Health Appointment at JPS Health Network (Adult)

Type of Behavioral Health Appointment	Time
Intake (LMSW, LCSW, LPC)	2-3 days (If needed, same day; provider has limited availability to see patient post-intake.)
New Patient Adult	2-3 weeks
Adult Follow Up	2-3 months
Adult Walk-In Clinic	12 appointments daily*
Psychiatric Day Rehabilitation Program	Next Day
Adult Partial Hospitalization Program (PHP)	Next Day
Adult Intensive Outpatient Program (IOP)	1-2 days
Adult Individual Therapy	2-4 Days**
Vocational Specialist	1 week between request and appointment

* Utilized for established patients and JPS Connected patients who are discharging from a community facility and returning for care

**Location specific – Space limitations in certain locations limit the amount of therapy offered. Therefore, those locations have less therapy available and this can create an additional. Patients are offered first available appointments at alternate location but sometimes, transportation is a barrier.

Table 10: Next Available Appointment by Type of Behavioral Health Appointment at JPS Health Network (Child and Adolescent)

Type of Behavioral Health Appointment	Time
Child and Adolescent New Patient	4+ months
Child and Adolescent Follow Up	2 months
Child and Adolescent Therapy	4-5 Days**

**Location specific- Child and Adolescent therapy is primarily done in one location.

Source: Wayne Young, JPS Health Network. November 2016

Other safety net providers wait times for behavioral health clinic appointments

MHMR Tarrant provides mental health and related services to adults, adolescents, and children. Located in over 100 sites across Tarrant County and surrounding counties in North Texas, MHMR is an independent local unit of government, funded primarily by the state and county. They provide services related to mental health, addiction and substance abuse, intellectual and developmental delays, early childhood delays, veterans, transportation, supported employment, and homelessness.

Sixty-five percent (65%) of the patients serviced by MHMR are uninsured. MHMR hosts a 24-hour crisis line where telephone screening/triage is conducted and medications are refilled. Individuals can be seen the same day at the Intake Center on Hulen Street, but may not be able to see a provider for treatment the same day; however, every day there is a walk-in clinic where individuals can see a provider. MHMR believes more behavioral health services are needed to better reduce psychiatric emergency department utilization.

The North Texas Area Community Health Centers (NTACHC) has very limited behavioral health services provided by a Licensed Clinical Social Worker.

Access to Ambulatory Specialty Services

JPS Network wait times for specialty care clinic appointments

JPS' Department of Medicine operates over 40 specialty care clinics in locations in Fort Worth and Arlington. A list of all specialties with third next available new patient appointments as of December 2016, is located in Appendix 15.

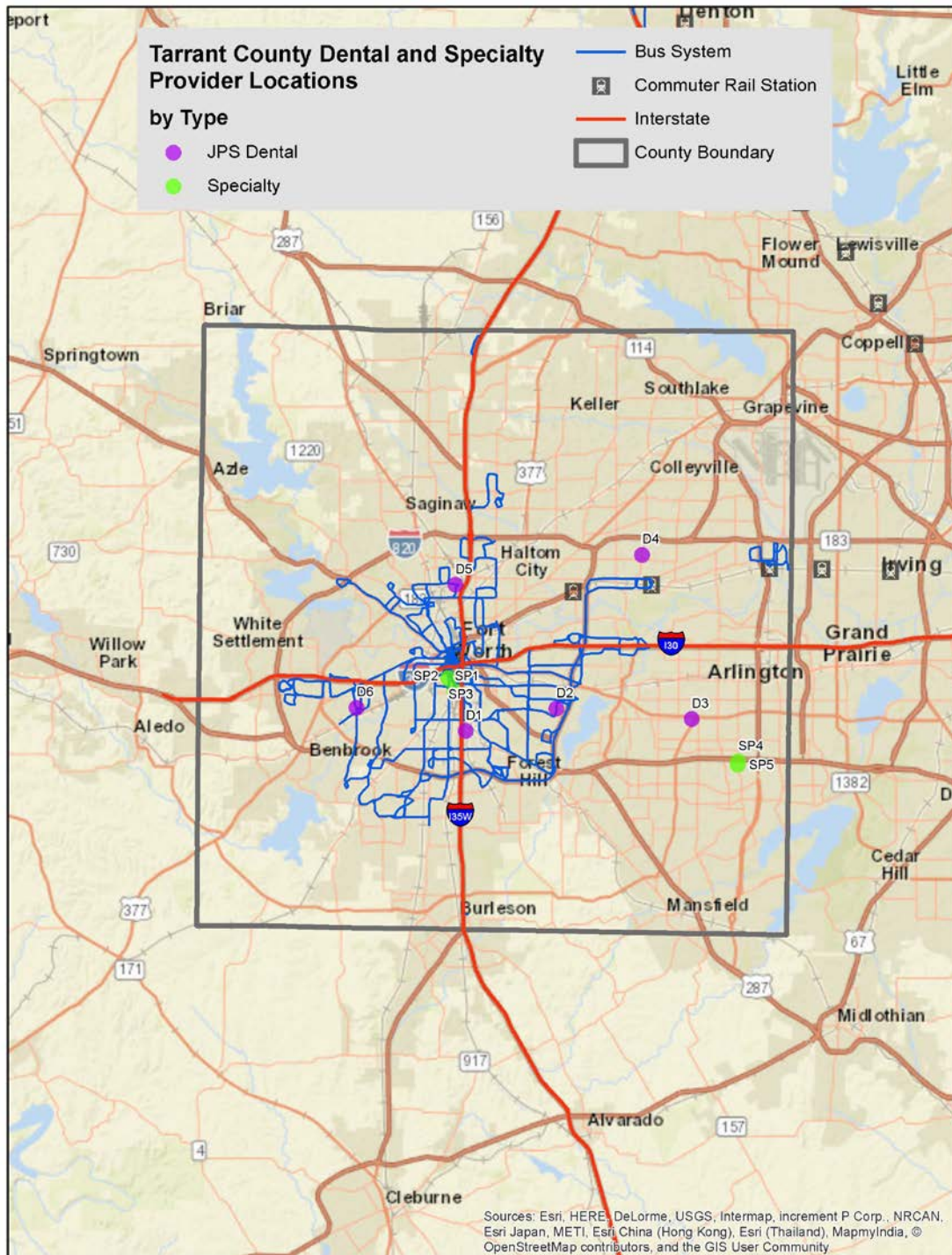
These appointments are for new patients with non-urgent problems; it is reported that those with urgent needs are scheduled more quickly. Third next available appointments ranged from 1 month or less (hypertension, wound care, vascular surgery, and one optometry clinic) to 12 month long waits for dermatology, gastroenterology, neurology, ophthalmology, and renal.

JPS does not provide pediatric specialty services because JPS and Tarrant County developed a collaborative relationship with Cook Children's Health Care System for provision of pediatric specialty and trauma care services.

We note that the availability of specialty care physicians to Medicaid and uninsured adult populations is limited by public system staffing resources, non-participation of private sector physicians in Medicaid, and limited ability to provide uncompensated care. These challenges are a significant issue for the North Texas Community Health Centers' ability to gain referral access to specialty physician ambulatory care or elective inpatient care for their undocumented, uninsured, or Medicaid patients especially in locations outside of Fort Worth. For Tarrant County residents not eligible for JPS Connection, the requirement for a sliding fee payment may cause some persons to delay or defer non-emergency care.

For locations of specialty clinics, refer to Map 9 below. There are three specialty centers in Fort Worth, and two in Arlington – Arlington Surgical Center and Bardin Road Specialty Clinic.

Map 9: JPS Specialty Care Locations and Dental Services



Other safety net providers wait times for specialty care clinic appointments

NTACHC and the free and charitable clinics do not offer much in the way of specialty services. NTACHC offers OB/GYN services and some of the larger free clinics offer limited specialty. For uninsured, and particularly for the undocumented, they rely on Project Access of Tarrant County which has limited capacity, and so they attempt to identify volunteers or hospitals willing to accept specialty referral on a case by case basis which is difficult and time consuming.

Project Access of Tarrant County provides surgical and/or other specialty procedures for the uninsured and working poor in Tarrant County using a network of volunteer providers and collaborative partnerships. While this effort is laudable, the project only has capacity for about 350 patients per year.

Access to Dental Services

As indicated in the Health Status section of this report, the percent of adults without a dental visit in the last year (40.1%) in Tarrant County was called out as particularly high, exceeding the national benchmark by almost a third.

JPS Network wait times for dental clinic appointments

JPS has 6 dental clinics which are identified in the map above, Map 9: JPS Specialty and Dental Clinic Locations. Four of the clinics are in Fort Worth, one is in Arlington, and one in Bedford.

For JPS' 6 dental clinics -- Diamond Hill Jarvis Dental, Northeast Dental, Southeast Dental, Stop Six Dental, Viola M. Pitts Dental, and Worth Heights Dental – there were a total of 1,631 visits in September 2016. At that time, the third next available patient appointment for a new patient was 16 calendar days; the third next available appointment for a follow-up visit was 31 calendar days.

Other safety net providers wait times for dental clinic appointments

Catholic Charities in Fort Worth has a dental clinic with 5 exam rooms, 2 FTE dentists and hygienists on staff yielding a total of approximately 3000 visits per year. This clinic is a private pay only and charges 40-50% of usual and customary rates. A significant number of patients request re-work of prior dental care done elsewhere. There is about a 4-6 week wait for services for new patients, and approximately a 2 week wait for existing patients. Urgent problems for existing patients are taken same or next day.

The NTACHC does not provide dental services; they provide information and referral to dental services.

A limited number of the Free and Charitable clinics provide dental services.

Hospital Bed Access – Medical and Behavioral

The table below identifies the total hospital beds, segmented by type of bed – routine, acute, rehabilitation and psychiatric.

Table 11: Hospital Beds as Reported on Hospital Medicare Cost Reports Ending in 2015

Tarrant County Hospital Bed Summary *															
Hospital	Acute LTC Beds	Alcohol/ Drug Dependency	General Med/Surg Adult, incl. Intermed.	General Med/Surg Pediatric	Intensive Care (Med/Surg, Cardiac, Other)	Neonatal (Intensive care plus other)	OB	Other special care	Pediatric Intensive Care	Physical Rehab	Psych	Skilled nursing	Total	Number of Acute Care Beds **	% of County Acute Care Beds
Total Tarrant County	133	28	1,794	206	785	345	493	428	33	470	550	15	5,280	4,084	100.0%
Baylor All Saints Medical Center at Fort Worth	-	-	126	-	31	63	96	42	-	15	-	-	373	358	8.8%
Baylor Institute for Rehabilitation at Fort Worth	-	-	-	-	-	-	-	-	-	42	-	-	42	-	0.0%
Baylor Orthopedic and Spine Hospital at Arlington	-	-	24	-	-	-	-	-	-	-	-	-	24	24	0.6%
Baylor Regional Medical Center at Grapevine	-	-	40	-	20	22	52	110	-	-	-	-	244	244	6.0%

Baylor Surgical Hospital at Fort Worth	-	-	26	-	4	-	-	-	-	-	-	-	30	30	0.7%
Cook Children's Medical Center	-	-	-	194	10	80	-	19	33	16	11	-	363	336	8.2%
Cook Children's Northeast Hospital	-	-	-	3	-	-	-	-	-	-	-	-	3	3	0.1%
Ethicus Hospital - Grapevine	24	-	-	-	-	-	-	-	-	-	-	-	24	-	0.0%
HEALTHSO UTH City View Rehabilitation Hospital	-	-	-	-	-	-	-	-	-	62	-	-	62	-	0.0%
HEALTHSO UTH Rehabilitation Hospital - Mid-Cities	-	-	-	-	-	-	-	-	-	60	-	-	60	-	0.0%
HEALTHSO UTH Rehabilitation Hospital of Arlington	-	-	-	-	-	-	-	-	-	85	-	-	85	-	0.0%
HEALTHSO UTH Rehabilitation Hospital	-	-	-	-	-	-	-	-	-	60	-	-	60	-	0.0%

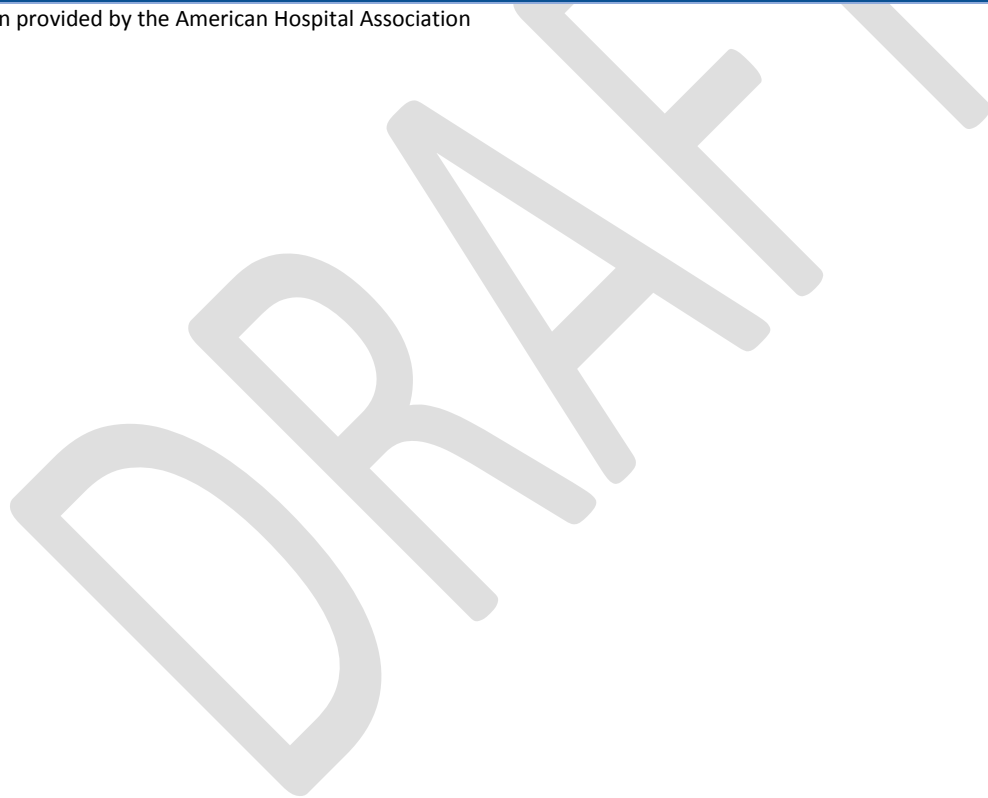
Hospital of Fort Worth																
JPS Health Network	-	-	188	4	36	35	29	114	-	-	132	15	553	406	9.9%	
Kindred Hospital Tarrant County-Arlington	49	-	-	-	-	-	-	6	-	-	-	-	55	6	0.1%	
Kindred Hospital-Fort Worth	-	-	48	-	6	-	-	-	-	-	-	-	54	54	1.3%	
Kindred Hospital-Mansfield	50	-	-	-	5	-	-	-	-	-	-	-	55	5	0.1%	
Kindred Rehabilitation Hospital Arlington	-	-	-	-	-	-	-	-	-	24	-	-	24	-	0.0%	
Medical City Alliance	-	-	19	-	8	8	20	-	-	-	-	-	55	55	1.3%	
Medical City Arlington (formerly Med Ctr Arlington)	-	-	153	-	30	28	54	-	-	-	-	-	265	265	6.5%	
Medical City Fort Worth (formerly Plaza)	-	-	172	-	130	-	-	-	-	-	-	-	302	302	7.4%	
Medical City North Hills	-	-	56	-	88	-	-	-	-	-	20	-	164	144	3.5%	

(formerly North Hills)																
Mesa Springs	-	-	-	-	-	-	-	-	-	-	72	-	72	-	0.0%	
Methodist Mansfield Medical Center	-	-	144	-	16	-	7	-	-	-	-	-	167	167	4.1%	
Methodist Southlake Hospital								18					18	18	0.4%	
Millwood Hospital	-	12	-	-	-	-	-	-	-	-	110	-	122	-	0.0%	
Oceans Behavioral Hospital Fort Worth	-	-	-	-	-	-	-	-	-	-	48	-	48	-	0.0%	
Sundance Hospital	-	16	-	-	-	-	-	-	-	-	100	-	116	-	0.0%	
Texas Health (THR) Arlington Memorial Hospital	-	-	159	-	39	15	36	6	-	-	35	-	290	255	6.2%	
THR Harris Methodist Hospital Alliance	-	-	34	-	14	8	18	-	-	-	-	-	74	74	1.8%	
THR Harris Methodist Hospital Azle	-	-	25	-	6	-	-	-	-	-	-	-	31	31	0.8%	
THR Harris Methodist	-	-	263	-	249	62	65	-	-	-	-	-	639	639	15.6%	

Hospital Fort Worth																
THR Harris Methodist Hospital Hurst-Euless-Bedford	-	-	87	-	37	16	39	23	-	-	-	-	202	202	4.9%	
THR Harris Methodist Hospital Southlake	-	-	18	-	-	-	-	-	-	-	-	-	18	18	0.4%	
THR Harris Methodist Hospital Southwest Fort Worth	-	-	89	-	18	8	48	36	-	-	-	-	199	199	4.9%	
THR Heart & Vascular Hospital Arlington	-	-	24	-	8	-	-	-	-	-	-	-	32	32	0.8%	
THR Huguley Hospital Fort Worth South	-	-	61	5	26	-	29	54	-	-	22	-	197	175	4.3%	
THR Specialty Hospital	10	-	-	-	-	-	-	-	-	-	-	-	10	-	0.0%	
Texas Rehabilitation Hospital of Arlington	-	-	-	-	-	-	-	-	-	40	-	-	40	-	0.0%	
Texas Rehabilitation Hospital	-	-	-	-	-	-	-	-	-	66	-	-	66	-	0.0%	

Hospital of Fort Worth															
USMD Hospital at Arlington	-	-	30	-	4	-	-	-	-	-	-	-	34	34	0.8%
USMD Hospital at Fort Worth	-	-	8	-	-	-	-	-	-	-	-	-	8	8	0.2%
* Data was compiled from the American Hospital Association database in early February 2017, reflecting bed counts and hospital names as of that date.															
** For purposes of the calculation, acute beds exclude long-term care, alcohol/drug dependency, physical rehab, psychiatric and skilled nursing.															

Source: Based upon information provided by the American Hospital Association



While the total number of acute medical beds at JPS is 405, about 10.5% of all acute medical beds in the County, JPS has 95 psychiatric beds, which is 59% of psychiatric beds in the County. The table below, “JPS Beds in Service,” further drills down the number of in-service beds at JPS, focusing on those beds currently in service.

Table 12: JPS Beds in Service, April 2016

Unit	Hospital Beds - Routine
Tower 11 – Respiratory/Pulmonary	19
Tower 8 – General Medical Unit	22
Tower 7 - Oncology	23
Tower 6 – Ortho/Neuro	20
Tower 5 – Surgical Unit	24
2 South – Antepartum/Gym/Gyn Oncology	39
2 North – Mother/Baby	25
T-2 – Cardiac Medical Unit	20
T3A – Med/Psych	15
E-3 East – Progressive Care	48
Pavilion 3 - ICU	36
Pavilion 4 – Cardiac Progressive Care Unit	36
Pavilion 5 – Surgical/Trauma Progressive Care Unit	36
Tower 9 – Medical/Surgical	16
NICU	35
IPA	8
Trinity Springs (PSY)	132
TOTAL	553
OB Triage	11
LD	15
Nursery (babies stay in room with moms)	
PACU	18
Clinical Decision Unit – CDU (formerly OBS)	34
ER	55

Source: JPS Health Network.

HMA and the Facilities Planning and Analysis consultant will review bed capacity criteria in the Blue Cottage analysis contained in the Strategic Facilities Utilization Plan and the Proposed Construction Project Plan.

Key Hospital Services: Emergency, Trauma, and Behavioral Health

Emergency Services

The Table below, Total Emergency Room Activity-Tarrant County Hospitals, indicates that JPS is the second largest provider of Adult Emergency Department acute care hospital admissions, and ranks first for total Non-Emergency Out-Patient Admissions for all ages.

Table 13: Total Emergency Room Activity—Tarrant County Hospitals, October 2015–September 2016

Metric	JPS Number	JPS % of TC	JPS Rank
Total ER Inpatient Admits, 18+ y/o	17,235	13.3%	2
Total ER Inpatient Admits, <18 y/o	707	9.9%	2
Total ER Inpatient Admits, All ages	17,942	13.1%	2
Total ER Outpatient Visits, 18+ y/o	110,119	17.2%	2
Total ER Outpatient Visits, <18 y/o	5,240	2.6%	10
Total ER Outpatient Visits, All ages	115,359	13.6%	2
Total Non-ER O/P Visits, 18+ y/o	90,777	23.8%	1
Total Non-ER O/P Visits, <18 y/o	3,404	5.6%	5
Total Non-ER O/P Visits, All ages	94,181	21.3%	1

Source: Based upon information from the Dallas Fort Worth Hospital Council

The next table, Emergency Services by Residence County, demonstrates that JPS serves a regional role with 12.7% of inpatient charges, 9.1% of inpatient discharges, and 8.2% of outpatient visits originating from non-Tarrant County areas.

Table 14: Emergency Services by Residence of County (by Descending Order of Inpatient Charges)

JPS Emergency Services (incl. Trauma) by Patient's County: Activity for the 12 Months Ending 9/30/2016						
% of Total - Tarrant	87.3%	90.7%	88.6%	90.2%	92.2%	
% of Total - Next 5	6.9%	5.6%	6.1%	5.9%	4.8%	
% of Total - All Other	5.8%	3.7%	5.3%	3.9%	3.1%	
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%	
County	Summary of Inpatient Charges	Summary of Outpatient Charges	Summary of Inpatient Days	Summary of Inpatient Discharges	Summary of Outpatient Visits	
TARRANT	\$ 639,684,151	\$ 399,462,429	75,782	13,795	93,385	
JOHNSON	\$ 16,217,751	\$ 8,627,005	1,575	256	1,569	
DALLAS	\$ 12,072,723	\$ 8,037,587	1,369	245	1,739	
PARKER	\$ 9,751,510	\$ 4,343,291	1,018	176	867	
WISE	\$ 7,082,655	\$ 1,909,811	685	131	334	
HOOD	\$ 5,788,367	\$ 1,825,087	562	89	309	

Source: Based on information provided by JPS Health Network

Trauma Center

JPS Health Network’s Level 1 Trauma Center draws inpatient and outpatient trauma cases from throughout Tarrant County and from adjacent counties. The highest numbers outside the county are drawn from zip codes from the west -- Parker County, and the lowest numbers from the east -- Dallas County, home to Parkland’s Level 1 Trauma Center.

The Table below, Trauma Services by Resident County, indicates that JPS serves a regional trauma role with 42.3% of inpatient charges, 38.5% of inpatient discharges, and 30.2% of outpatient visits originating from non-Tarrant County geographies.

Table 15: Trauma Services by Resident County, 2015-2016

JPS Trauma Services (Codes 68100001-68100003) by Patient's County: Activity for the 12 Months Ending 9/30/2016						
% of Total - Tarrant	57.7%	69.8%	58.0%	61.6%	69.7%	
% of Total - Next 5	22.6%	15.4%	22.4%	22.2%	16.3%	
% of Total - All Other	19.7%	14.7%	19.6%	16.3%	13.9%	
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
County	Sum of Inpatient Charges	Sum of Outpatient Charges	Summary of Inpatient Days	Sum of Inpatient Discharges	Sum of Outpatient Visits	
TARRANT	\$ 70,098,852	\$ 22,385,037	5,686	871	1,100	
JOHNSON	\$ 8,991,343	\$ 1,790,342	679	72	79	
WISE	\$ 5,408,540	\$ 776,899	500	94	50	
PARKER	\$ 5,358,217	\$ 642,242	425	53	41	
DALLAS	\$ 4,263,911	\$ 1,345,144	307	59	65	
HOOD	\$ 3,439,269	\$ 392,052	287	36	23	

Source: Based on information provided by JPS Health Network

Behavioral Health

The Table “Behavioral Health ED Activity-Tarrant County Hospitals” below, indicates that JPS is the highest ranked provider of Behavioral Health Emergency and Non-Emergency Department Outpatient Visits for Adults in Tarrant County.

Table 16: Behavioral Health ER Activity—Tarrant County Hospitals, October 2015-September 2016

Metric	JPS Number	JPS % of TC	JPS Rank
Total ER Inpatient Admits, 18+ y/o	1,228	23.2%	1
Total ER Inpatient Admits, <18 y/o	369	35.6%	1
Total ER Inpatient Admits, All ages	1,597	25.3%	1
Total ER Outpatient Visits, 18+ y/o	10,536	59.1%	1
Total ER Outpatient Visits, <18 y/o	1,008	28.1%	2
Total ER Outpatient Visits, All ages	11,544	53.9%	1
Total Non-ER O/P Visits, 18+ y/o	2,382	48.9%	1
Total Non-ER O/P Visits, <18 y/o	99	30.6%	2
Total Non-ER O/P Visits, All ages	2,481	47.7%	1

Source: Based on information provided by the Dallas Fort Worth Hospital Council.

The Table below, Behavioral Health by Residence County, demonstrates that JPS serves a regional role with 11.3% of inpatient discharges and 7.4% of outpatient visits originating from non-Tarrant County geographies.

Table 17: Behavioral Health by Residence County (By Descending Order of Inpatient Charges)

JPS Behavioral Health Services by Patient's County: Activity for the 12 Months Ending 9/30/2016					
% of Total - Tarrant	88.1%	89.9%	89.2%	88.7%	92.6%
% of Total - Next 5	7.4%	6.7%	6.6%	7.2%	5.2%
% of Total - All Other	4.5%	3.3%	4.2%	4.1%	2.2%
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%
County	Sum of Inpatient Charges	Sum of Outpatient Charges	Summary of Inpatient Days	Sum of Inpatient Discharges	Sum of Outpatient Visits
TARRANT	\$ 58,476,538	\$ 48,382,017	33,460	3,401	42,614
DALLAS	\$ 1,819,924	\$ 1,222,997	1,027	97	818
PARKER	\$ 1,285,845	\$ 744,831	594	69	457
JOHNSON	\$ 1,040,725	\$ 1,133,922	486	68	750
DENTON	\$ 407,784	\$ 359,253	193	25	219
HOOD	\$ 352,395	\$ 166,341	160	19	142

Source: Based on information provided by JPS Health Network

Patients coming from outside Tarrant County to Trinity Springs are predominately from zip codes in Dallas County to the east, Johnson County to the south and Parker County to the west, with some patients from Denton County in the north and Hood County in the southwest.

Readmission Rates for Ambulatory Care Sensitive Conditions Including Behavioral Health

The data in the table below, Readmissions in Tarrant County (In Descending Order of Readmission Rate, accounts for all readmissions, including behavioral health admissions. Readmission rates have increasingly been used as a quality benchmark; this data can provide insight into the accountability of

the care patients receive after being discharged from an acute facility, with post-discharge care potentially having a significant impact.

Table 18: Readmissions in Tarrant County (By Descending Order of Readmission Rate)

Readmissions in Tarrant County - In Descending Order of Readmission Rate			
Row Labels	Sum of Numerator	Sum of Denominator	Average of Readmit Rate
Plaza Medical Center of Fort Worth	1,677	8,886	15.9%
Texas Health Heart & Vascular Hospital Arlington	193	1,168	14.9%
North Hills Hospital	1,090	6,220	14.3%
Texas Health Springwood Hospital	324	1,939	13.7%
JPS Health Network	2,870	23,434	9.7%
Cook Childrens Health Care System	1,351	10,518	9.7%
Texas Health Harris Methodist Hospital Azle	205	1,387	9.6%
Texas Health Arlington Memorial Hospital	1,849	14,480	9.3%
All Tarrant County Hospitals	21,764	181,866	8.6%
Texas Health Harris Methodist Hospital Fort Worth	4,825	36,294	7.9%
Texas Health Huguley Hospital Fort Worth South	1,228	10,626	7.3%
Texas Health Harris Methodist HEB	1,546	13,729	7.1%
Medical Center of Arlington	1,667	18,106	6.7%
Texas Health Harris Methodist Hospital Alliance	538	6,621	6.3%
Methodist Mansfield Medical Center	989	10,007	5.8%
Texas Health Harris Methodist Southwest	1,342	16,743	5.2%
PARKWAY SURGICAL AND CARDIOVASCULAR HOSPITAL	46	740	4.6%
Texas Health Harris Methodist Hospital Southlake	24	968	1.3%

Source:

Based on information from the Dallas Fort Worth Hospital Council.

JPS' readmission rate of 9.7% is only slightly higher than the overall Tarrant County Hospitals rate of 8.6%. This is lower than expected given that JPS serves some of the sickest and most indigent patients. JPS' high case mix of Medicaid and Uninsured compared with the hospitals overall is described in the next section: Hospital Charity Care.

Hospital Charity Care

As depicted in the Table, below, The Tarrant County Hospital District [JPS Health Network] has the highest total Medicaid and uninsured unreimbursed costs in the County (\$172,035,280) which is nearly three times higher than the next highest individual hospital, Texas Health Harris Methodist Fort Worth Hospital at \$60,667,065); followed by Baylor All Saints Medical Center (\$39,013,178).

The combined Total Medicaid + Uninsured Unreimbursed Costs for all Tarrant County based Texas Health Resources hospital is \$156,431,738 second only to JPS.

Table 19: Tarrant County Hospitals Medicaid and Uninsured Unreimbursed Costs, FY 2015^{xliii}

Hospital Name	Medicaid Shortfall – Payments Less Cost	Uninsured Payments Less Cost	Total Medicaid + Uninsured Unreimbursed Costs	Percent of Total Medicaid + Unreimbursed Costs
Baylor All Saints Medical Center	(\$28,430,085)	(\$10,583,092)	(\$39,013,178)	8.90
Baylor Regional Medical Center at Grapevine	(\$2,744,580)	(\$6,035,515)	(\$8,780,094)	2.00
Columbia Medical Center of Arlington	(\$6,688,745)	(\$4,942,065)	(\$11,630,810)	2.65
Columbia North Hills Hospital	(\$2,072,133)	(\$7,020,548)	(\$9,062,681)	2.07
Columbia Plaza Medical Center of Fort Worth	(\$4,601,180)	(\$3,564,896)	(\$8,166,076)	1.86
Cook Children’s Medical Center	(\$22,898,101)	(\$2,020,692)	(\$24,918,793)	5.68
Methodist Mansfield Medical Center	(\$2,634,604)	(\$5,689,211)	(\$8,323,815)	1.90
Tarrant County Hospital District [JPS]	(\$43,621,034)	(\$128,414,245)	(\$172,035,280)	39.25
Texas Health Arlington Memorial Hospital	(\$11,311,476)	(\$12,849,041)	(\$24,160,518)	5.51
Texas Health Harris Methodist Azle	(\$1,730,716)	(\$3,539,713)	(\$5,270,429)	1.20
Texas Health Harris Methodist Fort Worth	(\$29,746,810)	(\$30,920,254)	(\$60,667,065)	13.84
Texas Health Harris Methodist Hospital Alliance	(\$469,088)	(\$2,647,115)	(\$3,116,203)	.71
Texas Health Harris Methodist Hurst-Euless-Bedford	(\$11,235,22)	(\$19,260,722)	(\$30,495,944)	6.96
Texas Health Harris Methodist Southwest Fort Worth	(\$9,738,241)	(\$7,590,551)	(\$17,328,792)	3.95
Texas Health Huguley Hospital Fort Worth South	(\$5,725,363)	(\$9,657,445)	(\$15,382,807)	3.51
TOTAL	(\$183,647,378)	(\$254,735,105)	(\$438,352,485)	100

Source: Based on information from the American Hospital Association.

As depicted in the Table, below, The Tarrant County Hospital District [JPS Health Network] has the highest total Medicaid and uninsured discharges in the County (34,594). This is more than six times higher than the next highest individual hospital, Columbia Medical Center of Arlington (5,522); followed by Texas Health Harris Methodist Fort Worth (4,566).

Table 20: Tarrant County Hospitals Medicaid and Uninsured Unreimbursed Inpatient Admissions, October 2015-September 2016

Hospital Name	Number of Inpatient Discharges - Medicaid	Number of Inpatient Discharges - Uninsured	Number of Inpatient Discharges – Medicaid and Uninsured	Percent of Total Inpatient Discharges – Medicaid and Uninsured
Baylor All Saints Medical Center	3,159	7	3,166	5.00
Baylor Regional Medical Center at Grapevine	167	8	175	.28
Columbia Medical Center of Arlington	5,461	61	5,522	8.71
Columbia North Hills Hospital	169	38	207	.33
Columbia Plaza Medical Center of Fort Worth	415	89	594	.94
Cook Children’s Medical Center	3,743	4	3,747	5.91
Methodist Mansfield Medical Center	726	1	727	1.15
Tarrant County Hospital District [JPS]	34,203	391	34,594	54.59
Texas Health Arlington Memorial Hospital	2,612	49	2,661	4.20
Texas Health Harris Methodist Azle	62	33	95	.15
Texas Health Harris Methodist Fort Worth	4,204	362	4,566	7.20
Texas Health Harris Methodist Hospital Alliance	786	23	809	1.28
Texas Health Harris Methodist Hurst-Euless-Bedford	2,099	44	2,143	3.38
Texas Health Harris Methodist Southwest Fort Worth	2,789	9	2,798	4.42
Texas Health Huguley Hospital Fort Worth South	1,494	74	1,568	2.47
TOTAL	62,089	1,193	63,372	100

Source: Based on information from the Dallas Fort Worth Hospital Council.

For information on charity care policies for each of the Tarrant County hospitals, refer to Appendix 16, Tarrant County Non-Profit Hospitals, Charity Care Policies.

Implications of Population Increase, Health Status and Current Service Capacity on Service Capacity for the Future

Population Growth. In twenty years from now, we expect an overall population percent change in Tarrant County of 46%, from 2,020,278 (2017) to 2,948,206 (in 2037). The JPS Connection-eligible population percent change is expected to be approximately the same, from 425,701 (2017) to 621,228 (in 2037). The growth of the population has enormous implications for the public health, health care and social service systems.

Health Status. Our assessment of health status in the county points to adult obesity, diabetes, high blood pressure and cancer as key health concerns among several. Infant Mortality in particular zip codes and late entry into prenatal care are of significant concern, as is the high rate of sexually transmitted infection. Childhood immunization rates and obesity are also in need of attention. Behavioral health -- with self-reported depressive episodes as the indicator -- is a significant concern.

Social Determinants of Health. Based on self-report via the Behavioral Risk Factor Survey, access to affordable primary care and dental care for low income persons in Tarrant County appears to be difficult. Linguistic isolation of a large proportion of the population and very limited public transportation in the county makes it all the more challenging to navigate and access the health care system.

Preventing and improving management of the most prevalent and controllable conditions must be emphasized, for example, diabetes and hypertension. This should include partnerships with public health and community-based organizations.

Healthcare Workforce. Population growth and the aging of the population will have significant implications for the JPS workforce. HMA estimated primary and specialty care workforce in tables below which uses North Central Texas Council of Governments (NCTCOG) for projections.

Primary Care Workforce. The table below indicates the total number of Primary Care Provider Full Time Equivalent (FTE) workforce in Tarrant County that is estimated to be needed to serve the low-income (<250%FPL) population now and over the next 20 years. These calculations exclude the undocumented.

Table 21: Total Primary Care Provider Workforce Required to Meet Primary Care Needs of the Low-Income (<250% FPL) Population* in Tarrant County in the Next 20 Years

	2017 (current)	2022 (5yr)	2027 (10yr)	2032 (15yr)	2037 (20yr)
Number of Current and Estimated Primary Care FTEs Needed Based on Population Projections	378	423	469	521	573
PCPs Needed for Pts < 65 Years	319	349	377	408	437
PCPs Needed for Pts > 65 Years	59	75	92	113	136

*Projection excludes individuals who are undocumented immigrants.

Table 22: SPARE

There are significant unmet primary care needs in the county as evidenced by heavy utilization of JPS primary care providers, wait times for new patient appointments, and low acuity ER utilization. Expanding primary care capacity for low-income adults, including the undocumented, will help to reduce the burden on JPS and other Tarrant County hospitals emergency services which is significant as evidenced by Table 19: Tarrant County Hospitals Medicaid and Uninsured Unreimbursed Costs, FY 2015, earlier in this Section, on total uncompensated care. This “emergency” access is serving as a highly expensive workaround to primary care. The tools provided in this document can assist JPS in examining the recruitment and financial implications of increased primary care market share.

Specialty Care Workforce. Specialty care needs and workforce requirements are expected to increase in the coming decades as well.

Table 23: SPARE

Table 24: SPARE

This analysis has been done for multiple specialties and is presented in subsequent chapters. The tools provided in this document can be used to examine the implications of increasing the percentage of need met.

Hospital Bed Needs. Finally, with the population growth and the aging of the population, the need for medical hospital beds is also expected to increase. Table 25 below indicates that there are currently 1.9 acute care hospital beds (total for all hospitals) per 1,000 population in Tarrant County. With very high efficiency, some communities in the U.S., have 1.3 hospital beds per 1,000 population, but a target of 1.55 might be more reasonable for Tarrant County and is used in the calculations below. With the projected population increase described earlier in this chapter, the increased preliminary estimates for hospital bed need for the <250% FPL adult population across the county is presented below. These estimates are subject to review by facilities planning consultant.

Table 25: Acute Medical Hospital Bed Needs Over Next 20 Years, Tarrant County, TX

	2017 (Current)	2022 (5yr)	2027 (10yr)	2032 (15yr)	2037 (20yr)
Target number of beds/1,000 population	1.9	1.81	1.72	1.64	1.55
Total new beds needed given population growth at target number of beds/1000 population	n/a	206	381	569	727
New beds needed in Tarrant County for population <250% FPL	n/a	145	290	451	612
New beds needed in Tarrant County for JPS Connection population	n/a	72	144	224	304

Assumptions for Table Above	
Total Tarrant County Acute Care Beds	4,084
Bed rate decline maximum per 5-year period	5%

Behavioral Health Services. As the number of individuals with Severe and Persistent Mental Illness (SMI) grows with the population increase, a concomitant expansion of ambulatory behavioral health and substance abuse care services, as well as acute psychiatric hospital capacity will likely be required. We estimate the need for acute psychiatric beds to increase to approximately 517 by 2037 using an adjusted benchmark of approximately 70 beds per 100,000 population, with JPS meeting about 50% of the expected need. The bed need and associated integrated Behavioral Health System recommended for Tarrant County is discussed in the Delivery System Chapter.

So too, trauma cases are likely to increase proportional to the population resulting in a need for additional capacity.

Correctional Health-Justice Involved Healthcare. According to JPS, the average daily inmate census for the four facilities in Tarrant County in 2016 is approximately 3190. In the same year, there were an average of 6 inmates hospitalized at JPS at any one time, and an average of 35 inmates in the infirmary each day^{xliv}. The number of inmates will likely grow proportionally to the population, as will the homeless population, requiring an expansion in the workforce dedicated to the healthcare and social service needs of these populations.

Refugee Population. Tarrant County receives the third largest refugee population per year of counties in Texas. While the future of this in-migration is not known, refugees, even though they are eligible for Medicaid upon arrival in the United States, require approaches and services that are unique in many ways.

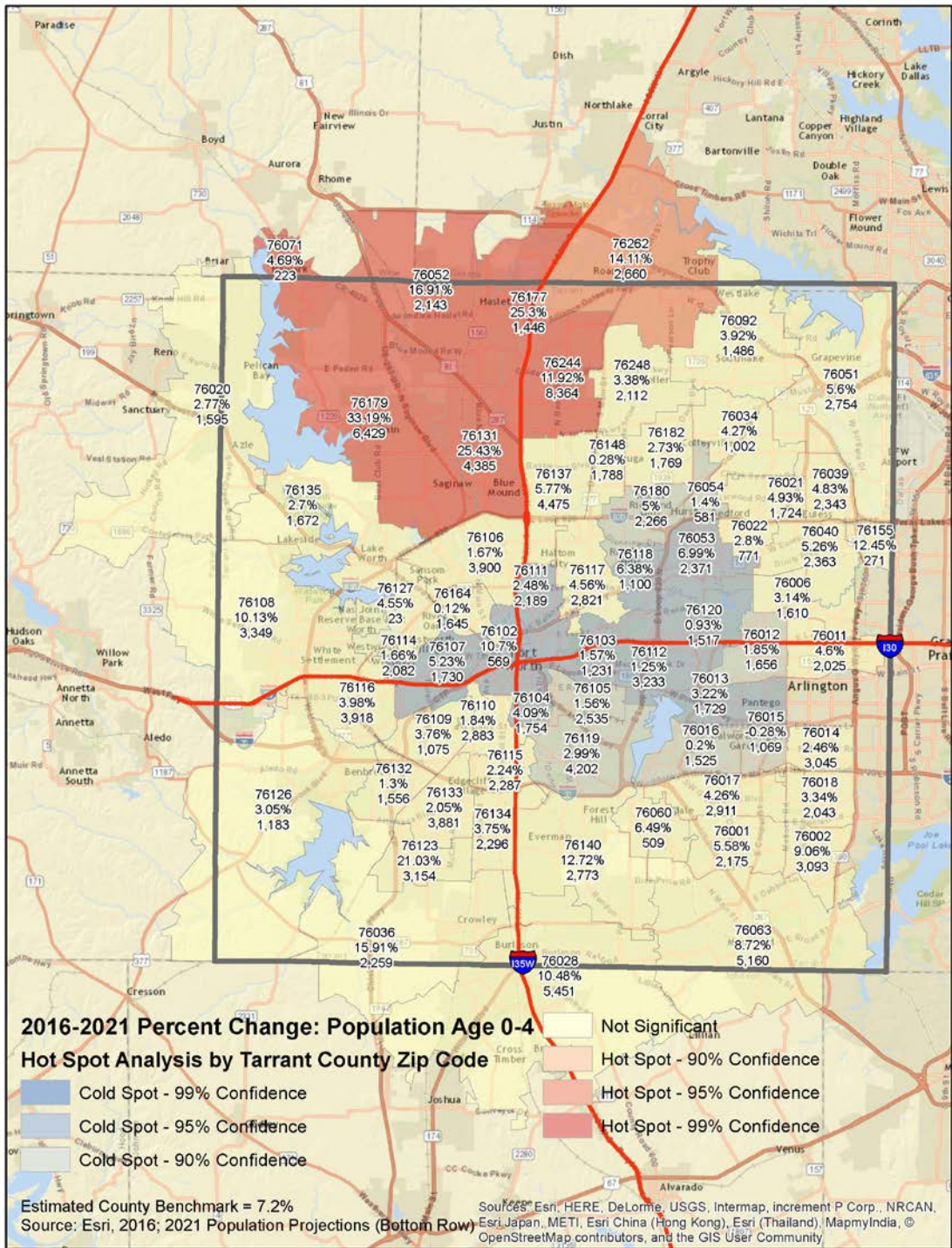
Undocumented Population. The undocumented adult population in Tarrant County, currently estimated at 7%, is not eligible for government subsidized care. Due to the limited availability of primary and specialty care for the undocumented population, they are significant users of emergency department services.

Engaging Diverse Populations. The public health and healthcare entities in Tarrant County need to help create pipelines from increasingly diverse, local communities into health professions training programs, and use creative approaches to engaging these communities, such as community health workers and/or navigators from target neighborhoods.

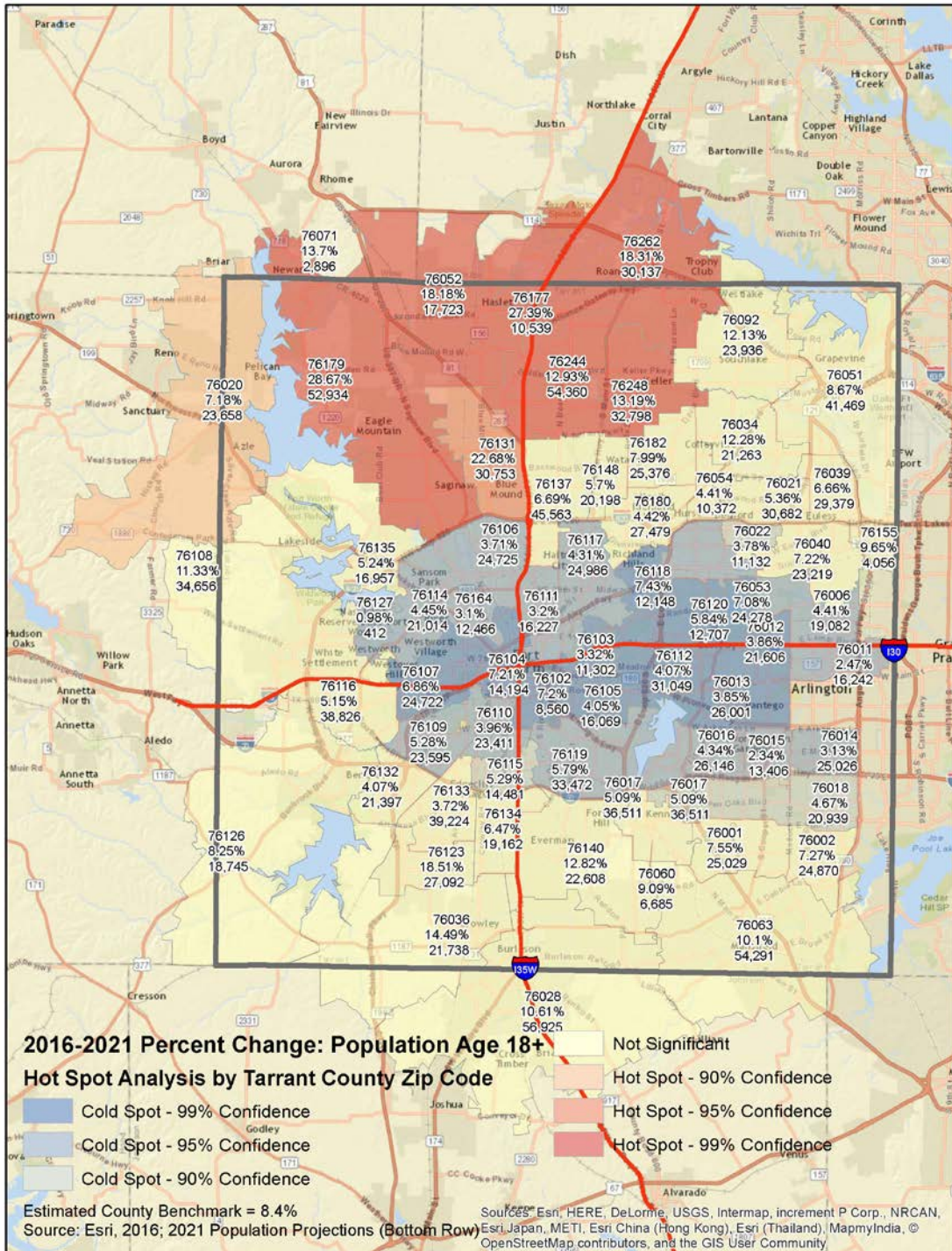
Aging Population. Segments of the population are growing at different rates, with the most critical being the 65 and older population. In 2021, less than five years from now, we expect the over 65 population to be over a quarter million (257,766) in Tarrant County, an estimated 40.5% increase from 183,445 projected this year. The need for home and community-based long-term services and supports (HCBS) is expected to grow for several decades as the baby boom generation ages. Many seniors and others with disabilities will need assistance with daily activities to remain in their homes and communities. People with functional limitations or cognitive impairments may need assistance with activities of daily living such as bathing, dressing, and using the toilet, or instrumental activities of daily living such as shopping, managing money and medications, etc.

Transportation. With rapid population growth in a geography with limited public bus and rail transportation that limits health care access, it is in the county's best interest to consider creative ways to bring healthcare to the people -- contract with existing healthcare entities in communities with limited access, forge site partnerships with Tarrant County Public Health or other entities, consider telemedicine, mobile health care, etc. At the same time, continuing efforts to expand public transportation, and/or build on existing private transportation options.

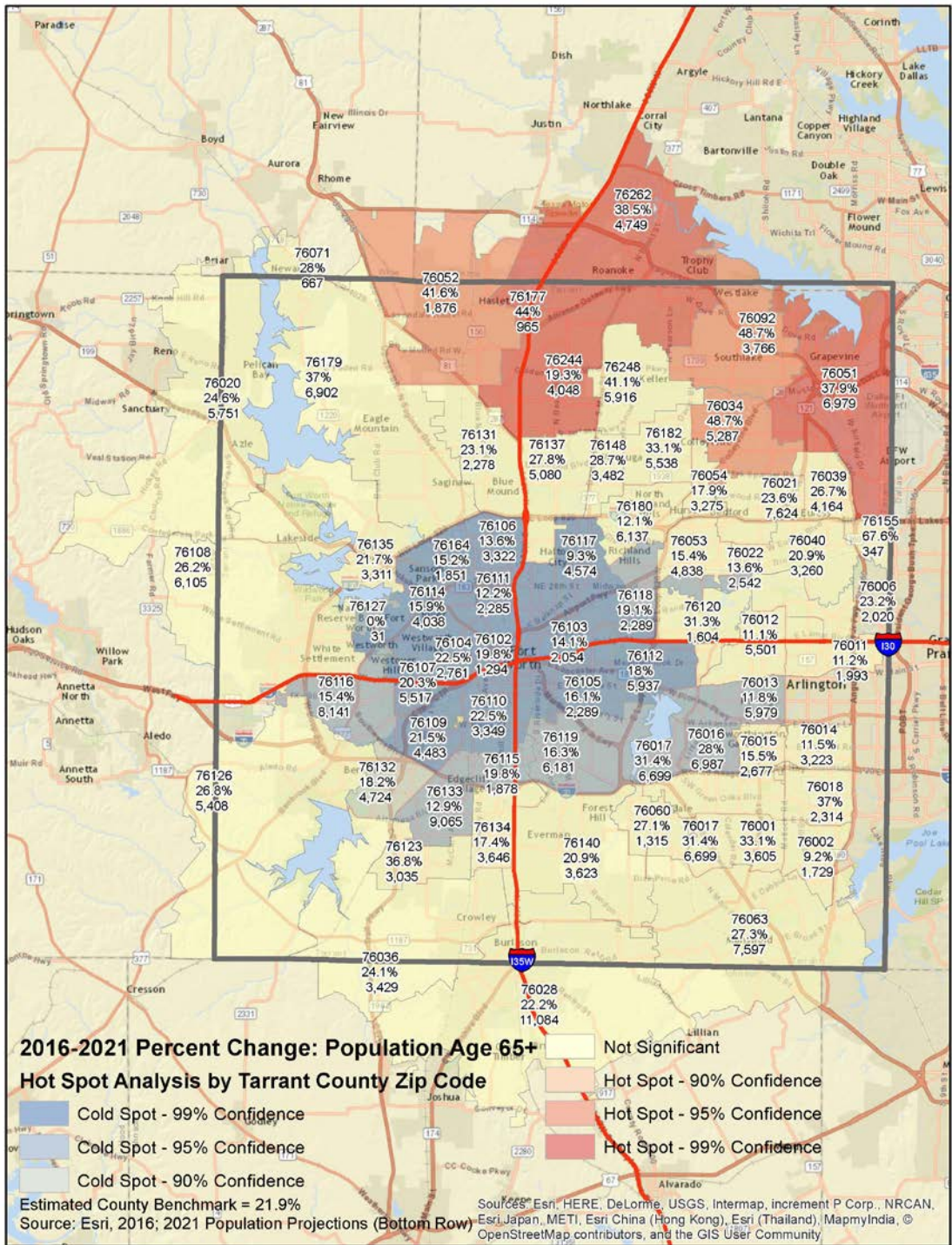
Appendix 7: Hot Spot Map, 0 – 4 Population Change



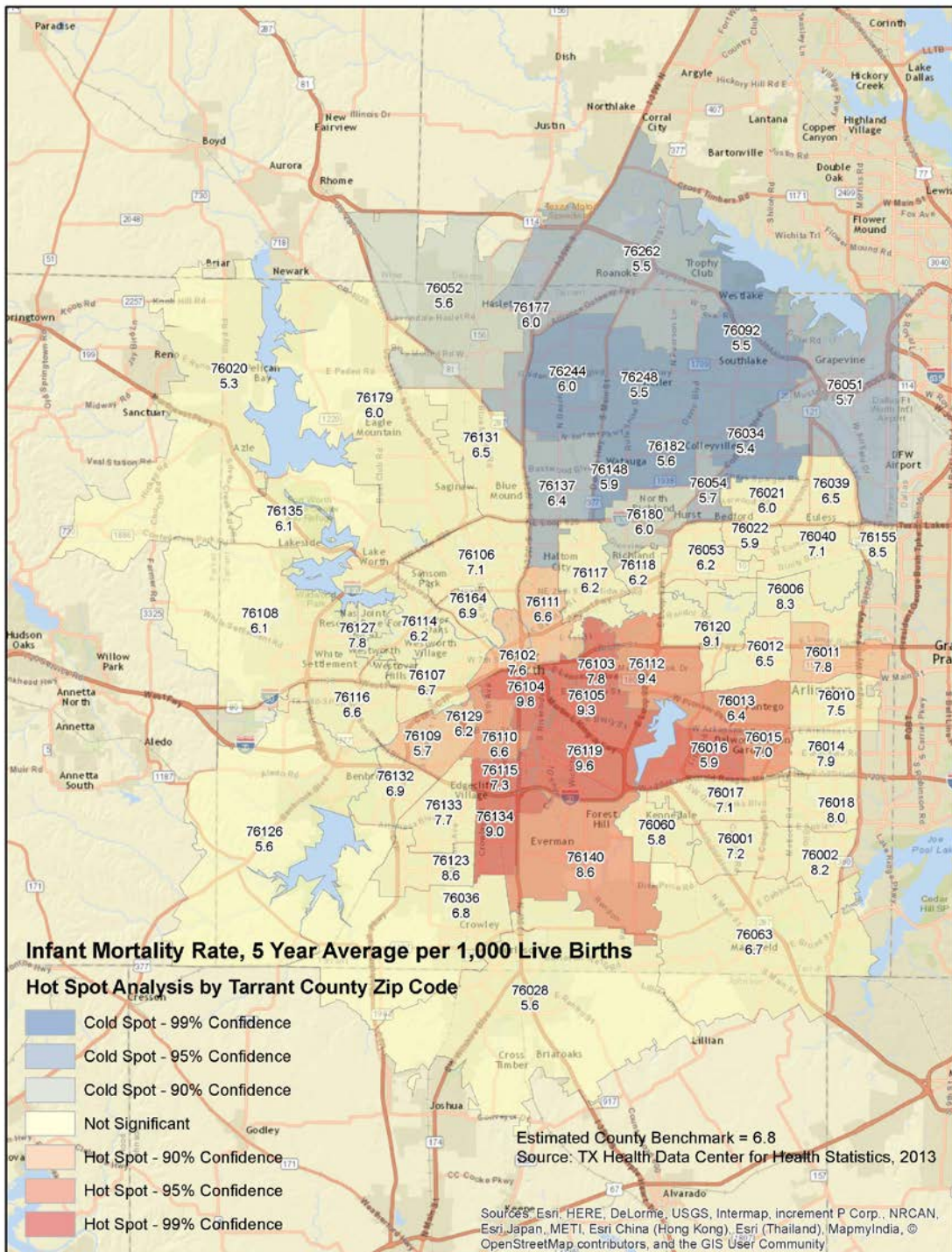
Appendix 8: Hot Spot Map, 18+ Population Change



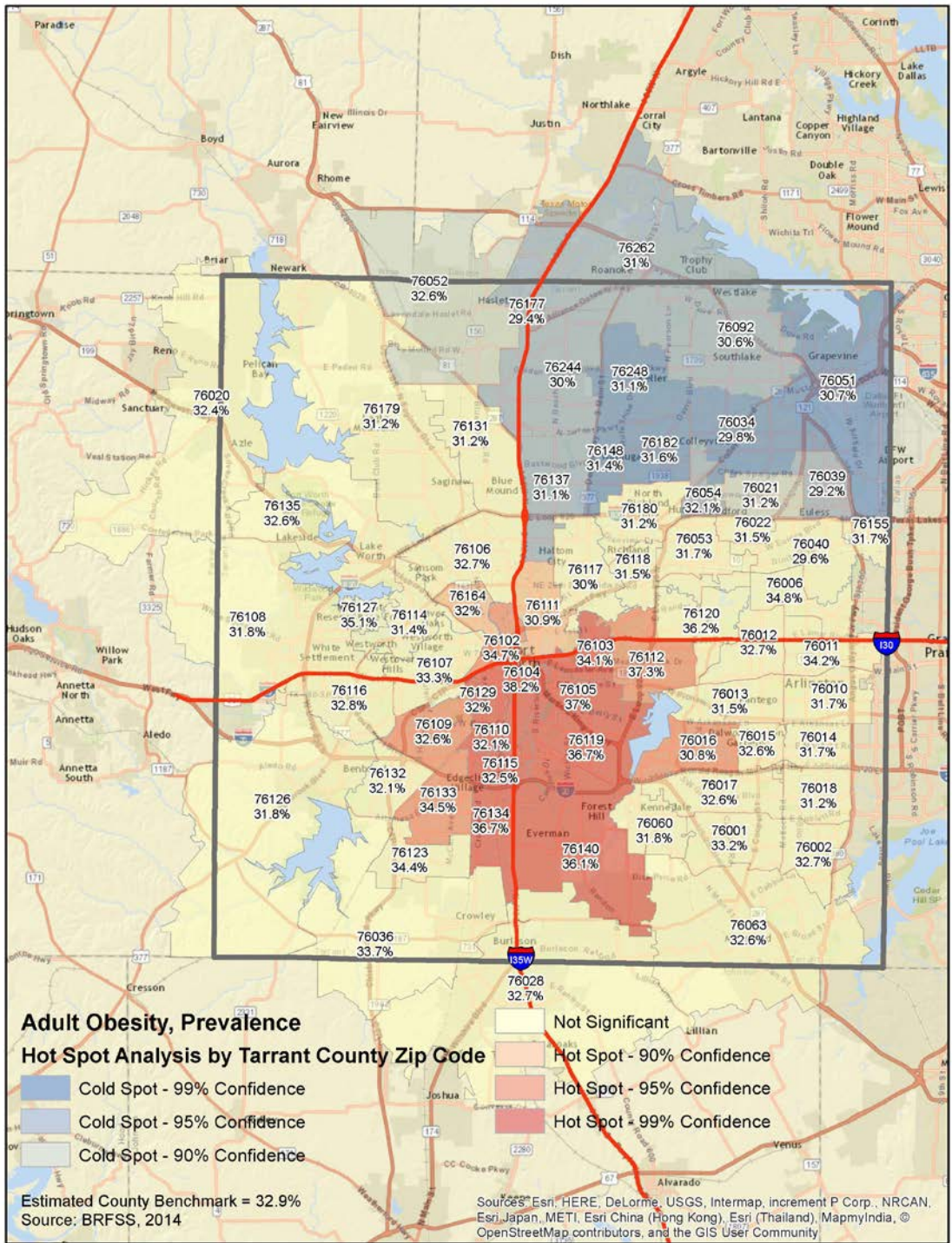
Appendix 9: Hot Spot Map, 65+ Population Change

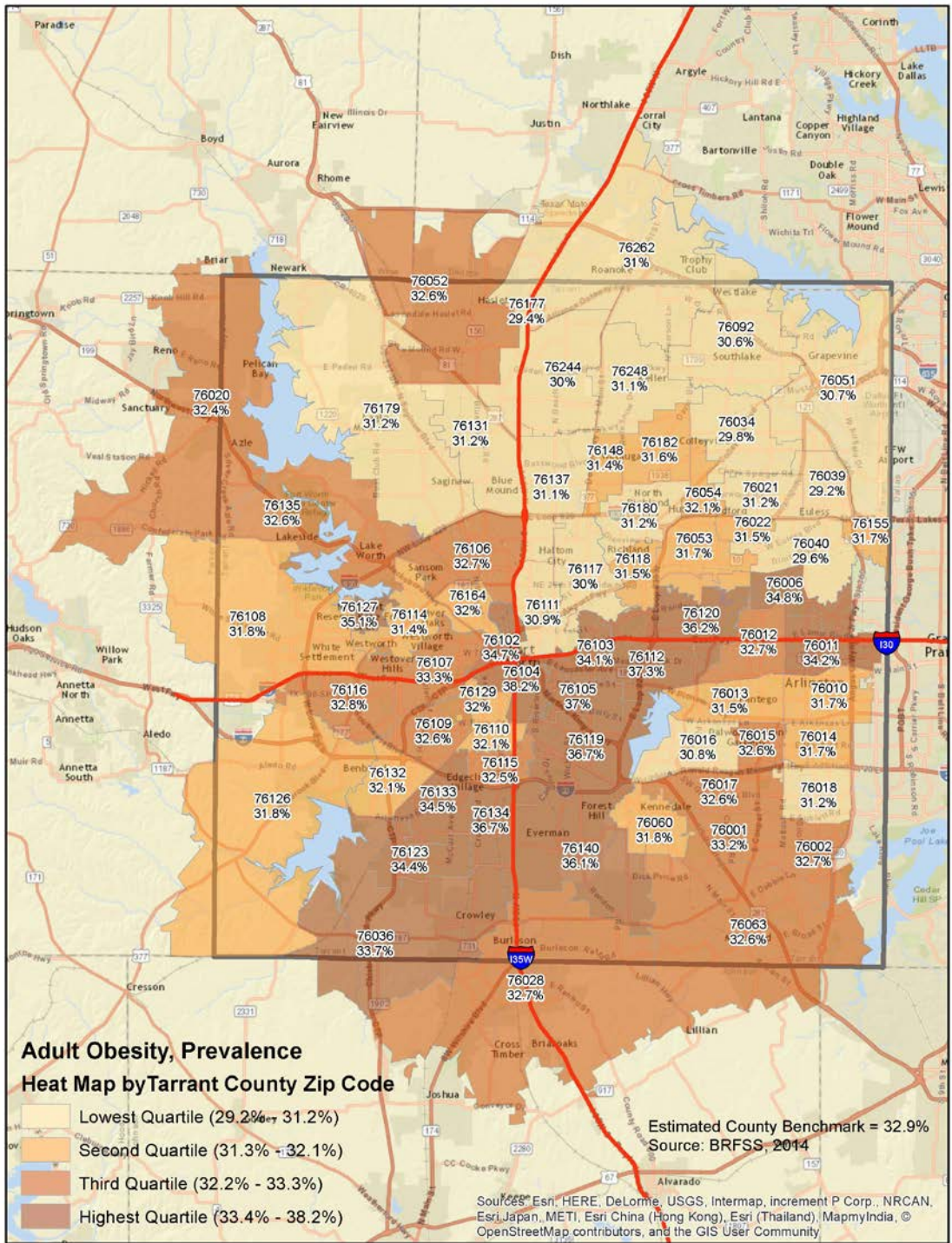


Appendix 10: Hot Spot Map for Infant Mortality

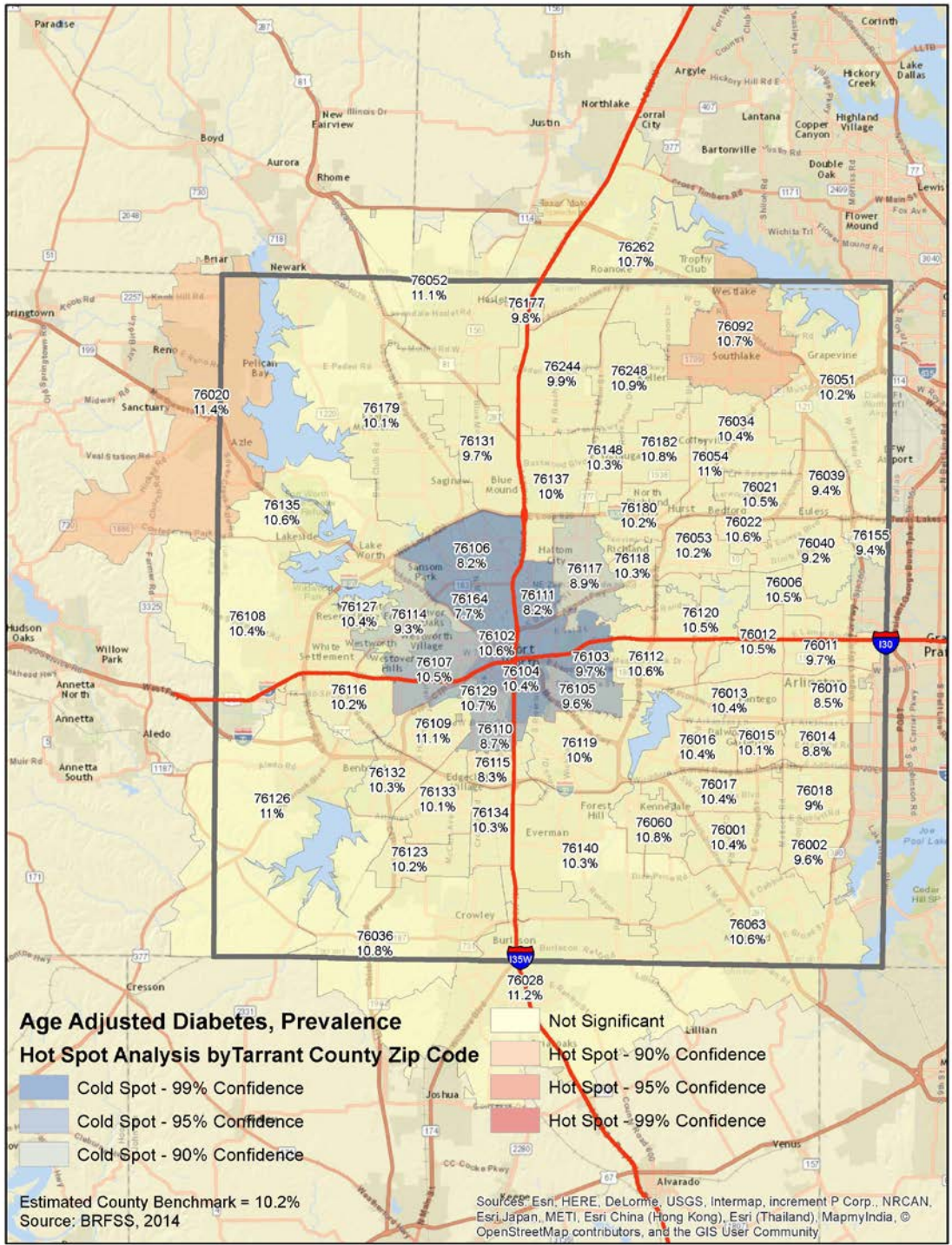


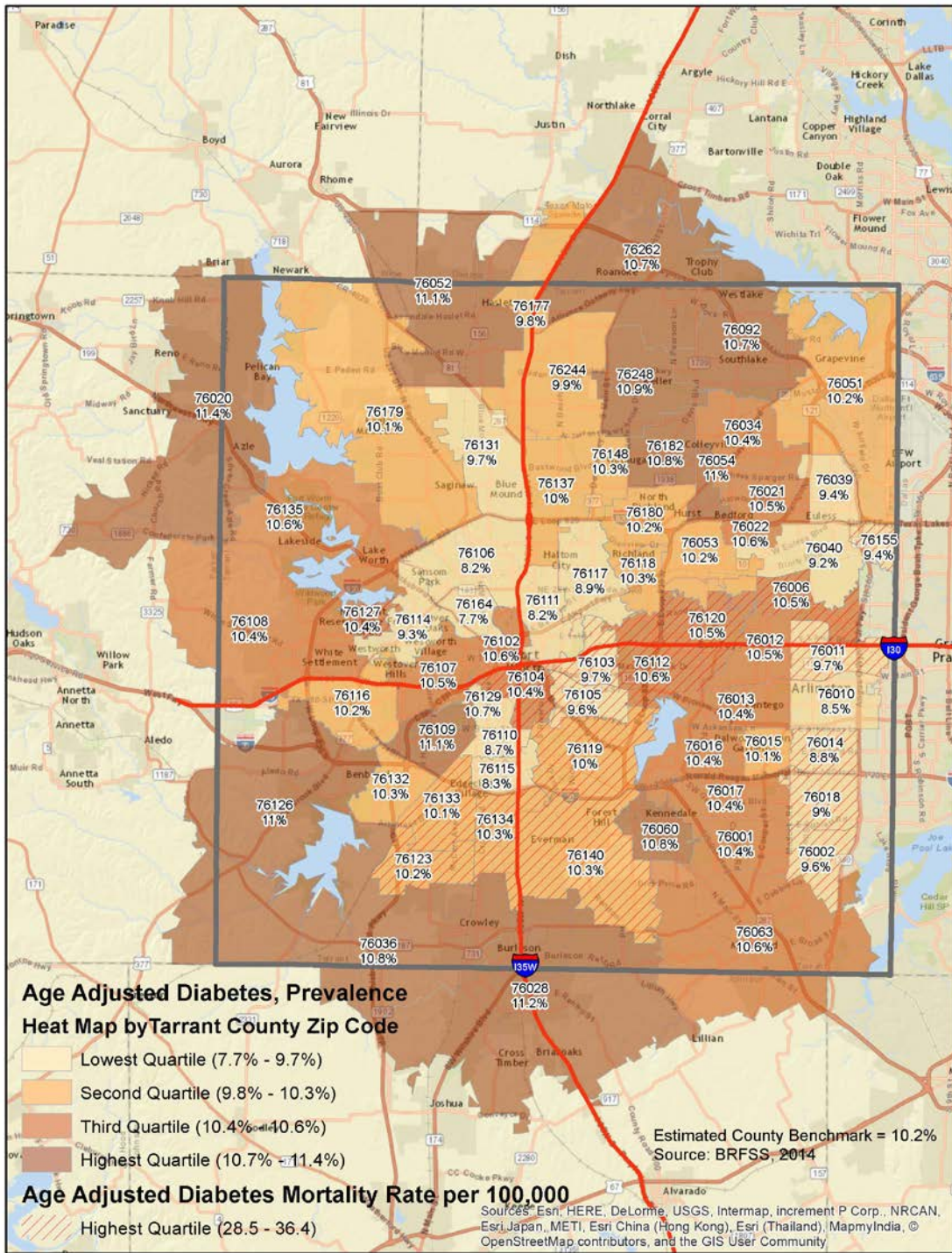
Appendix 11: Heat Map and Hot Spot Map for Adult Obesity



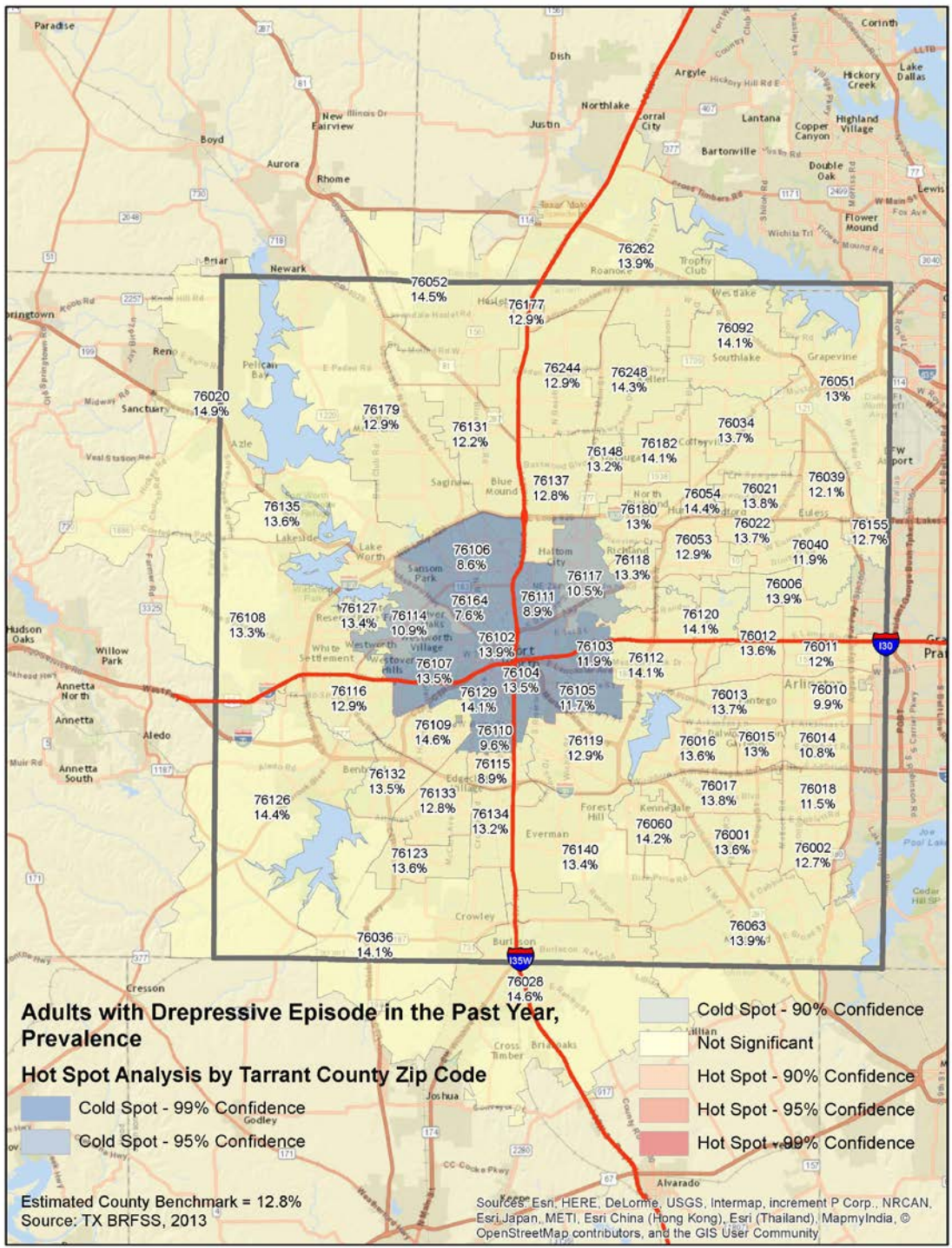


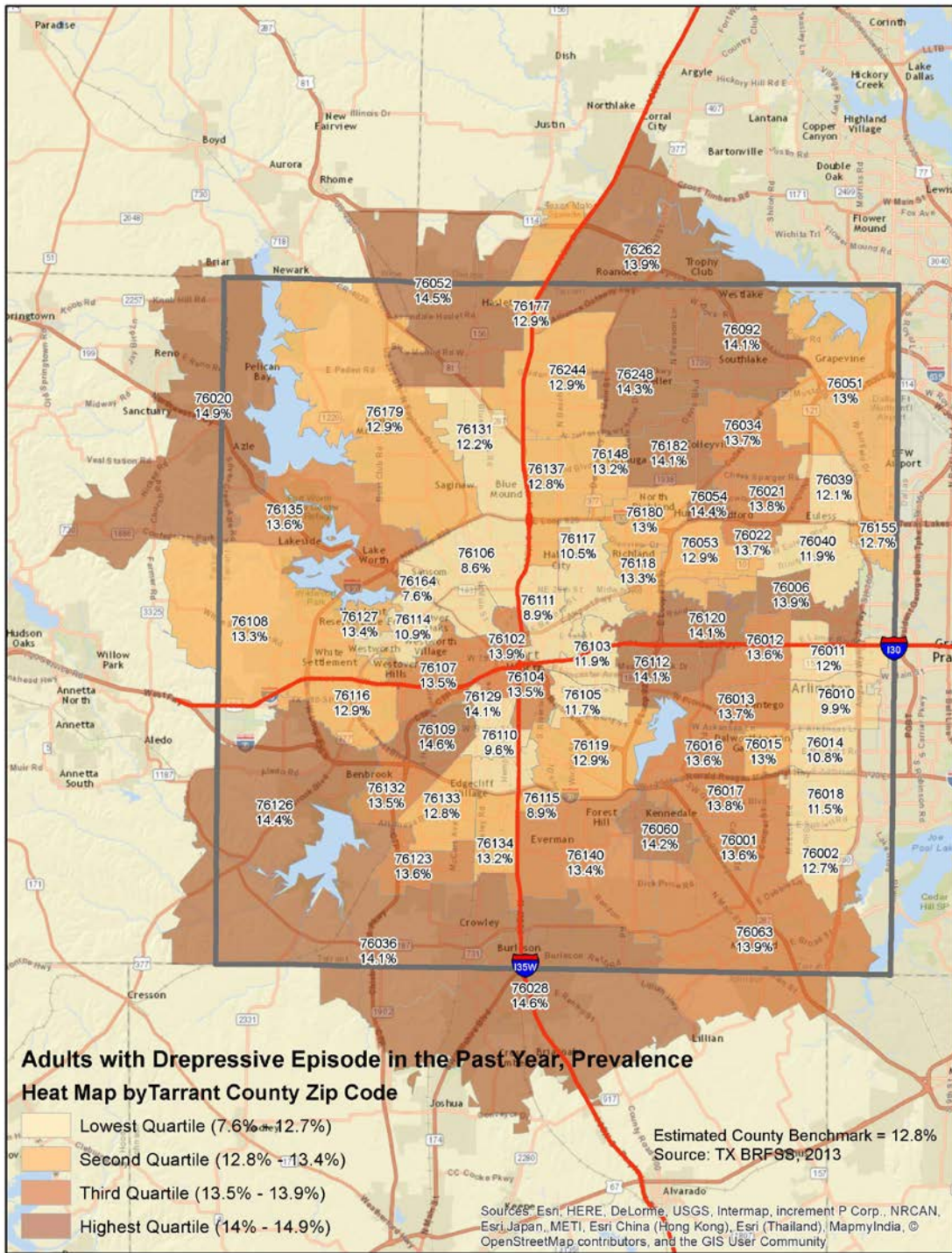
Appendix 12: Heat Map and Hot Spot Map for Age-Adjusted Diabetes



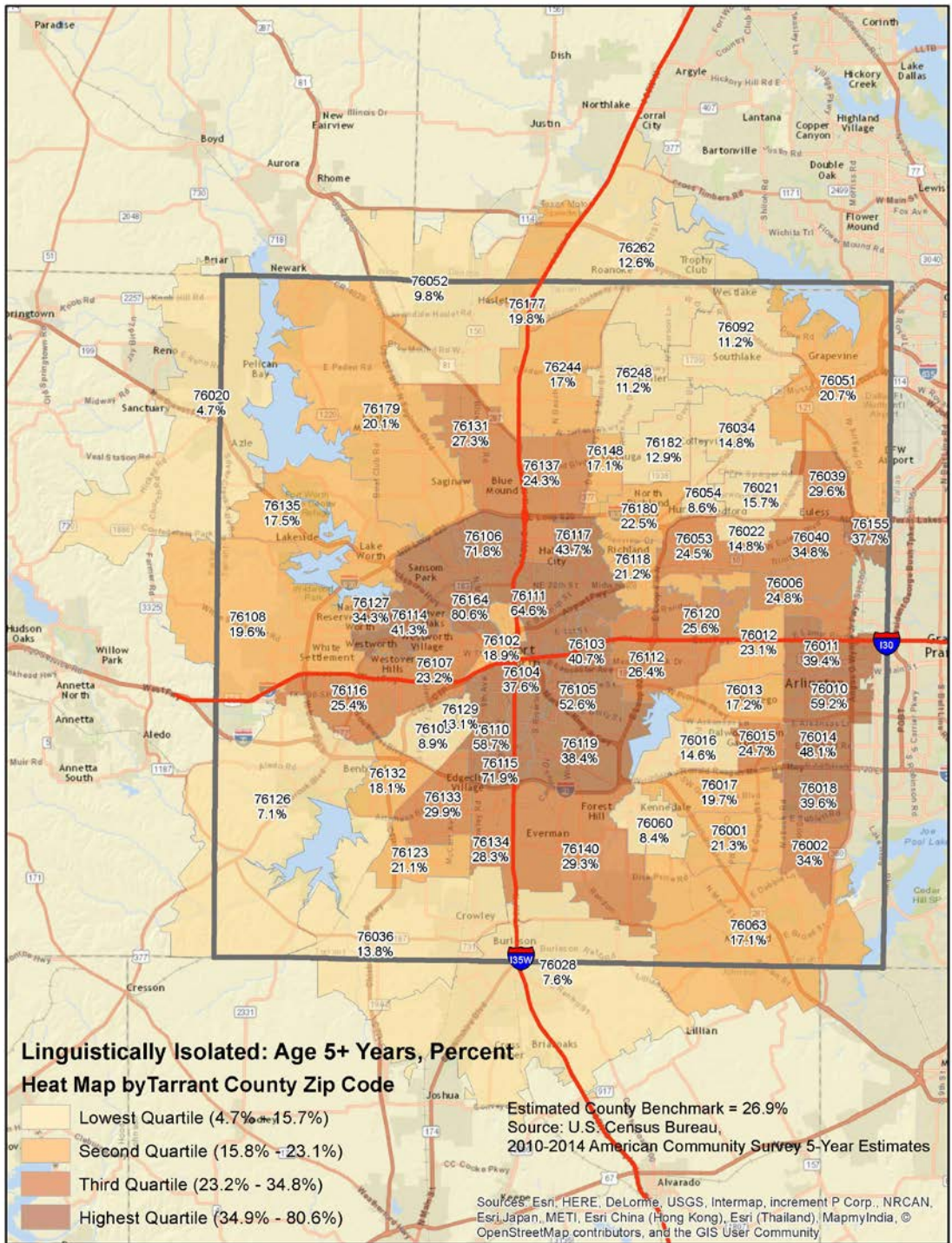


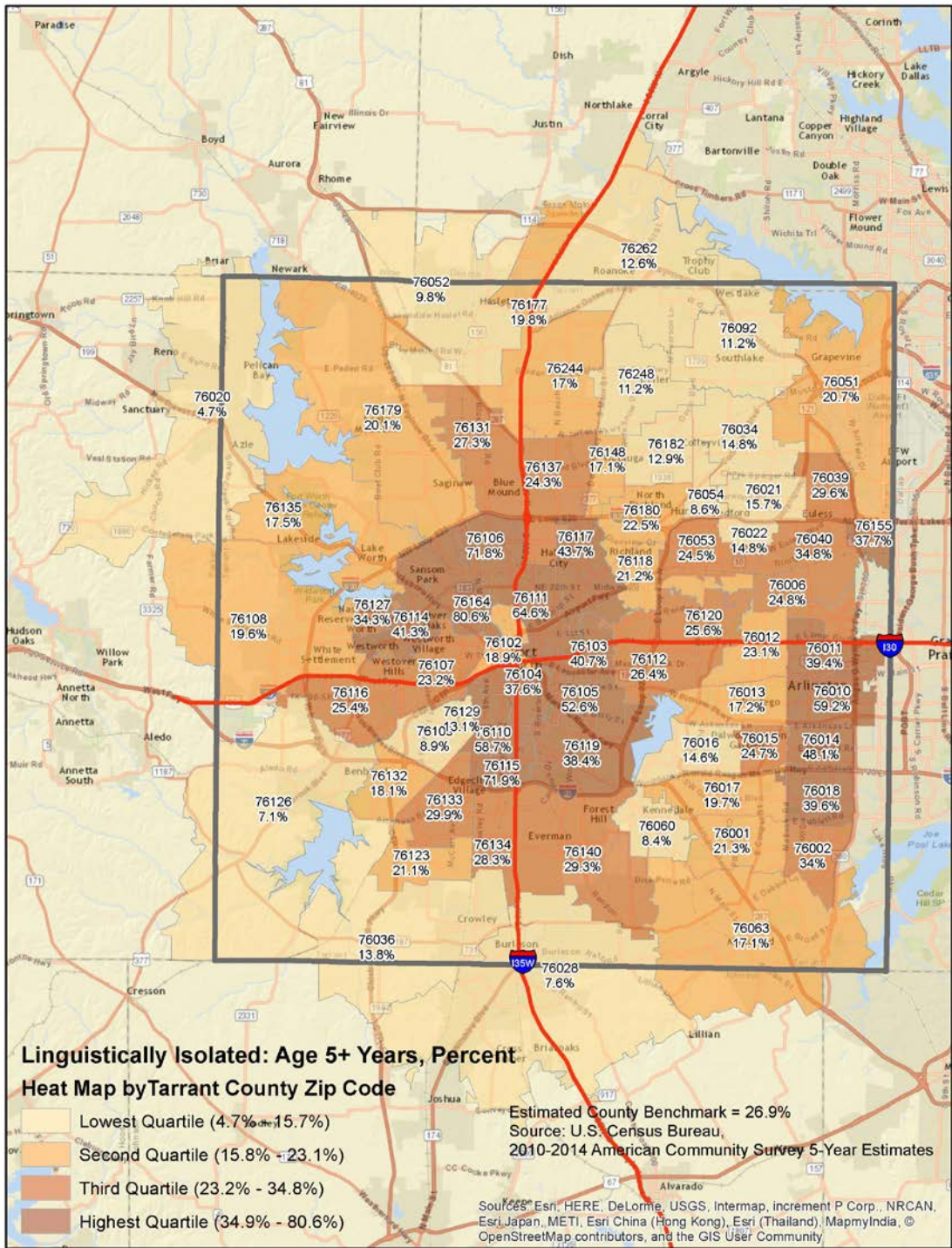
Appendix 13: Heat Map and Hot Spot Map for Self-Reported Episodes of Depression





Appendix 13: Heat Map and Hot Spot Map for Linguistic Isolation





Appendix 14: Heat Map and Hot Spot Map for Oral Health Care Access

