
University of Texas Southwestern Medical Center Population Health Strategic Plan

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Chapter 1

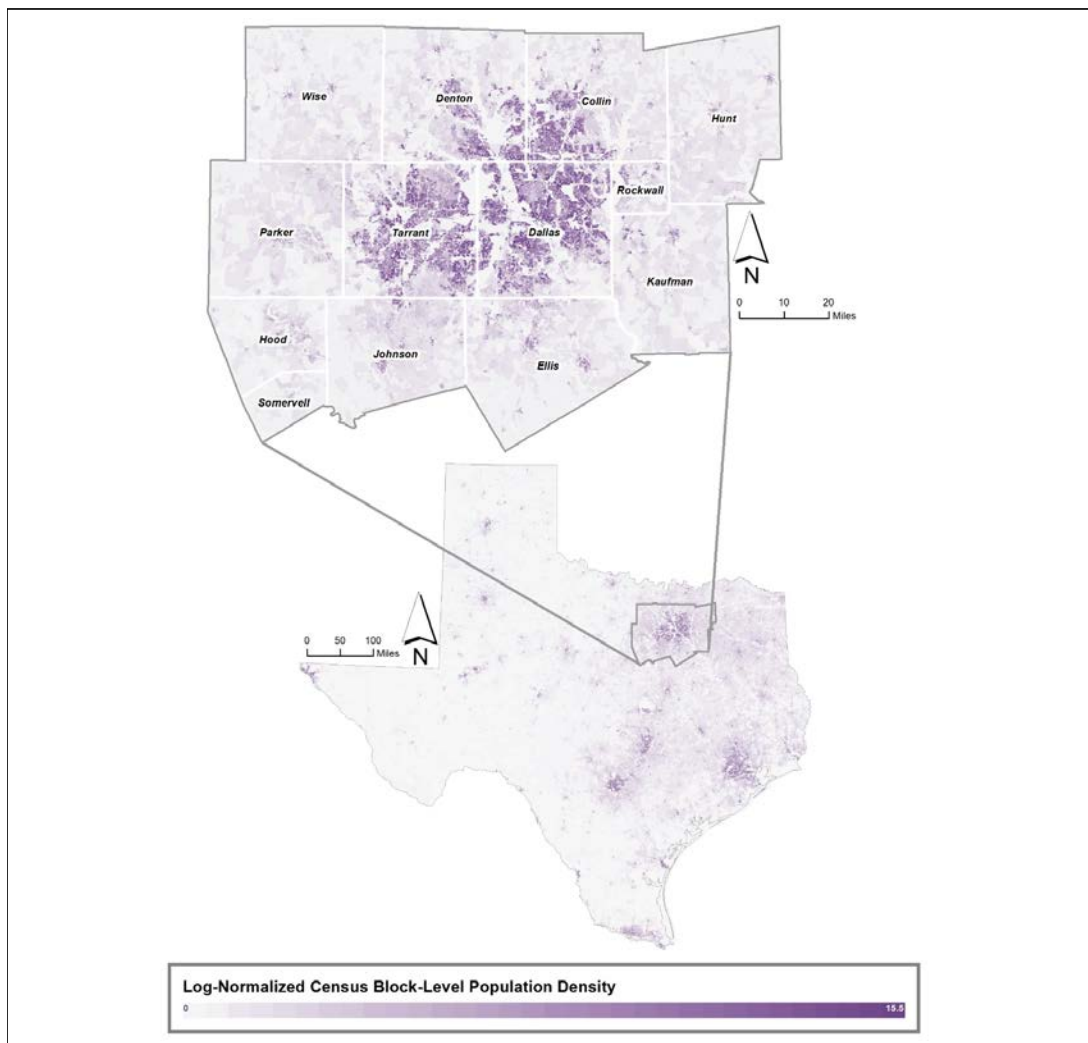
Population Health Catchment Area

Introduction

The University of Texas Southwestern (UT Southwestern) catchment area, shown in Figure 1.1, is defined as the Dallas-Fort Worth-Arlington Metropolitan Statistical Area (DFW-MSA).⁽²⁾ The DFW-MSA comprises 9,279 square miles and comprises 13 counties:

- Collin
- Dallas
- Denton
- Ellis
- Johnson
- Kaufman
- Hood
- Hunt
- Parker
- Rockwall
- Somervell
- Tarrant
- Wise

Figure 1.1. UT Southwestern 13 county catchment area

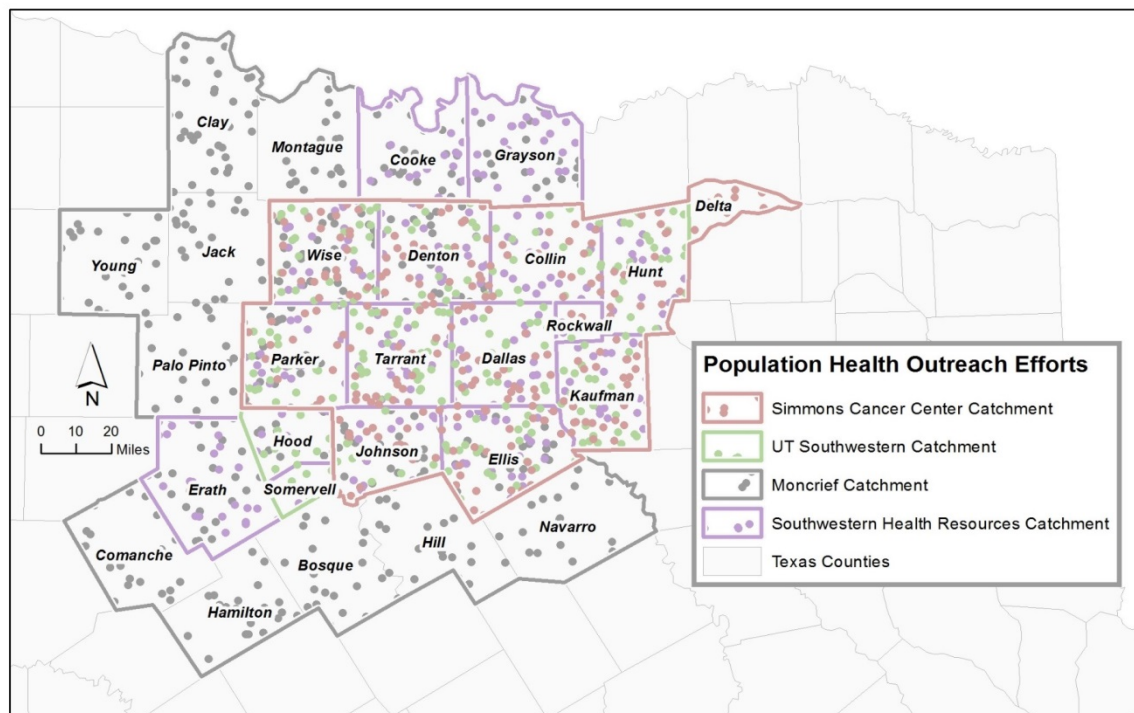


With a population of 6,703,020, the DFW-MSA is the largest metropolitan area in the South, the largest in Texas, and the fourth largest in the United States. The population density for this area, estimated at 722.34 persons per square mile, is greater than the national average population density of 89.88 persons per square mile. The area is diverse in racial/ethnic makeup; 50.2% are Non-Hispanic White, 27.8% Hispanic/Latino of any race, 14.9% African American, and 5.7% Asian. Approximately one person in seven (14.8%) lives in a household with income below the federal poverty level. Per Capita income is \$29,766. One fifth (21.1%) of the total population has no health insurance; 18.6% are insured with Medicaid or another form means-tested public health insurance.(3)

UT Southwestern Catchment and Population Health Outreach Efforts

The majority of population health research and practice conducted by UT Southwestern faculty and staff occurs within the catchment region. For example, the UT Southwestern Center for Translational Medicine (CTSA) also operates within the 13 county region. Notably, however, in recent years, the Moncrief Cancer Center has expanded its catchment region to provide cancer prevention and survivorship services to a more rural population in additional counties to the West. Moreover, in 2016, UT Southwestern and Texas Health Resources aligned to create Southwestern Health Resources (SWHR), which will be one of the largest health networks in the state. The SWHR catchment region comprises 16 counties in North Texas. Figure 1.2 demonstrates how the primary UT Southwestern catchment region aligns with the catchment region for population health outreach efforts conducted by the Simmons

Figure 1.2. Catchment areas for population health outreach efforts, including the primary UT Southwestern region, the Simmons Cancer Center region, Moncrief Cancer Center region, and Southwestern Health Resources catchment region.

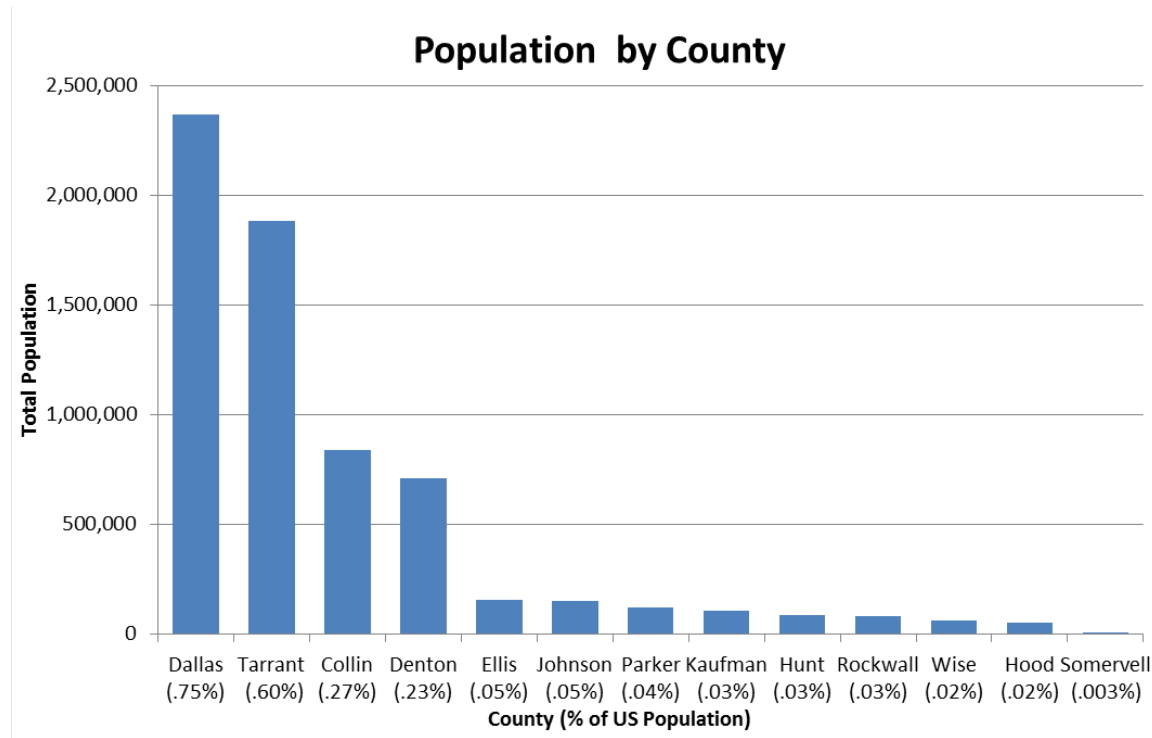


Cancer Center, Moncrief Cancer Center, and Southwestern Health Resources catchment region. The UT Southwestern catchment region is nested inside Public Health Region 3 (15,522 square miles) and Health Service Region 2/3 (43,020 square miles), and is serviced by two hospital referral regions (regions 394 and 391). The UT Southwestern catchment region encompasses four different Regional Health Partnerships (RHP) that administer the Delivery System Reform Incentive Payment (DSRIP) programs for Medicaid beneficiaries as part of the Section 1115 Waiver. Specifically, RHP 9 includes Denton, Dallas, and Kaufman; RHP 10 includes Tarrant, Wise, Parker, Hood, Johnson, Somervell, Ellis, and Navarro, RHP 8 includes Collin and Rockwall, and RHP 1 includes Hunt County.

UT Southwestern Catchment Region Characteristics

The 13 counties that comprise the DFW-MSA are heterogeneous in population size and demographics. Figure 1.3 demonstrates UT Southwestern catchment region’s population by county.

Figure 1.3. Population size by all 13 counties in the UT Southwestern catchment region.



Urban/rural

Overall, the UT Southwestern catchment region is a highly urban environment and all counties are classified as large metropolitan areas with a population equal to or more than one million. However, population density varies somewhat across individual counties. Dallas County, which includes the city of Dallas, and Tarrant County, which includes the city of Fort Worth, are by far the most urban and most populous counties, with an estimated 2.5 and 2.0 million persons, respectively, as of July 1, 2015.(4, 5) Using the National Center for Health Statistics urban/rural scheme, 3 catchment counties are considered

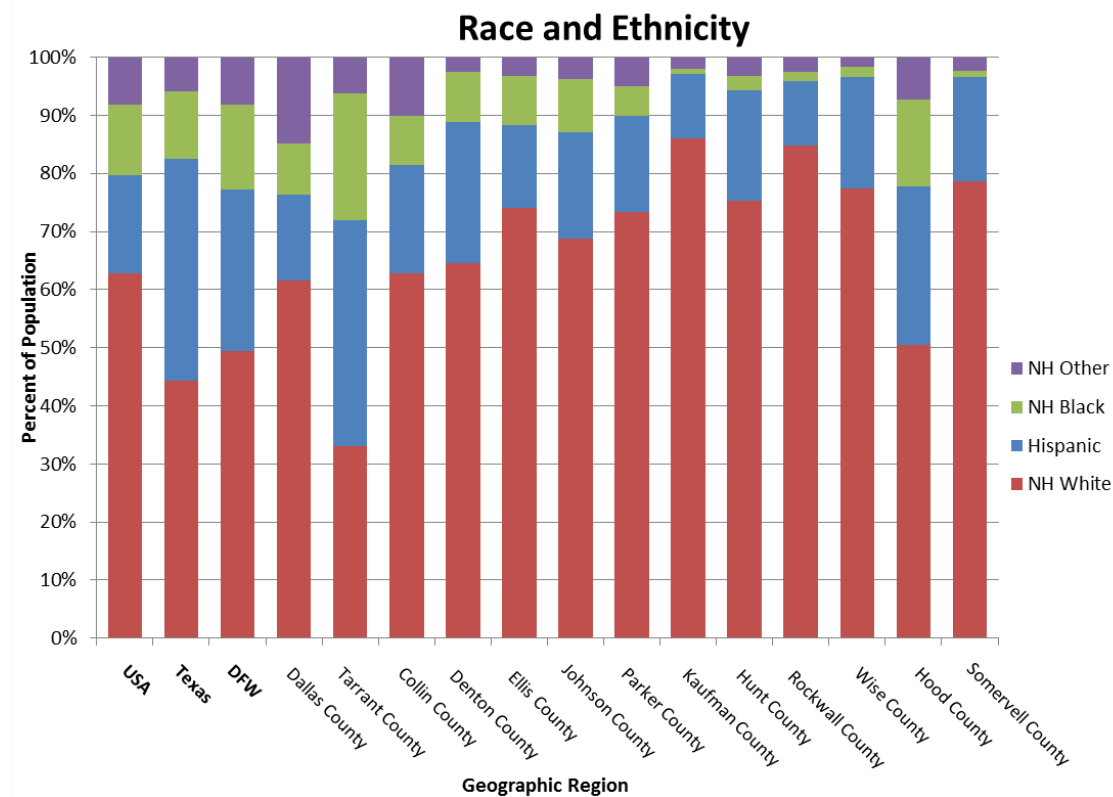
large central metro areas (Dallas, Collin, and Tarrant) and the remaining 10 counties are classified as large fringe metro areas. (6)

Race/ethnicity and place of birth

The proportion of Hispanic (38.8%) and Black (21.9%) residents is greatest in Dallas County.(7) In other counties, representation is as low as 11.0% for Hispanics and <1% for Blacks.(7) Figure 1.4 shows race and ethnicity across all 13 counties in the UT Southwestern catchment region.

Figure 1.5 shows the percentage of the population born outside of the USA. Among Hispanics in the UT Southwestern catchment region, well over a third (38.0%) were born outside the United States, compared to 29.6% for Texas overall.(8) The foreign-born Hispanic population is significant across all counties in the MSA; 9 of the 10 counties for which data are available report a higher proportion of foreign-born Hispanics than Texas overall. Dallas County has the highest proportion of foreign-born Hispanics at 42.6%.(8)

Figure 1.4. Race and ethnicity across all 13 counties in the UT Southwestern catchment region,



Language

Figure 1.6 shows the percentage of population not speaking English at home. In all, 30% of DFW MSA residents speak a language other than English at home. Non-English speakers primarily reside in Dallas

(41.1%) and Tarrant Counties (27.8%); the proportion of non-English speakers in 9 of the remaining 11 counties is <20%.(7)

Figure 1.5. Percentage of the population born outside of the USA across all 13 counties in the UT Southwestern catchment region, Texas, and the US.

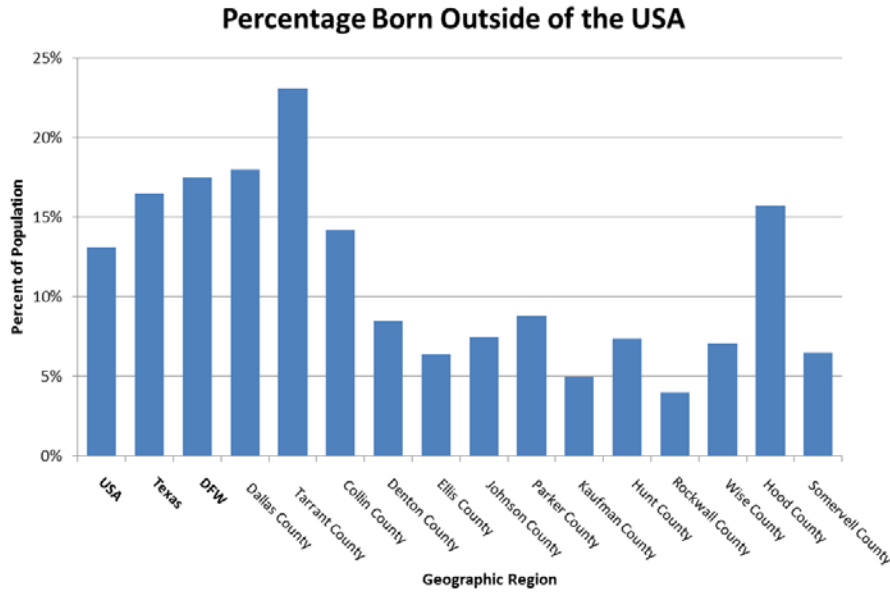
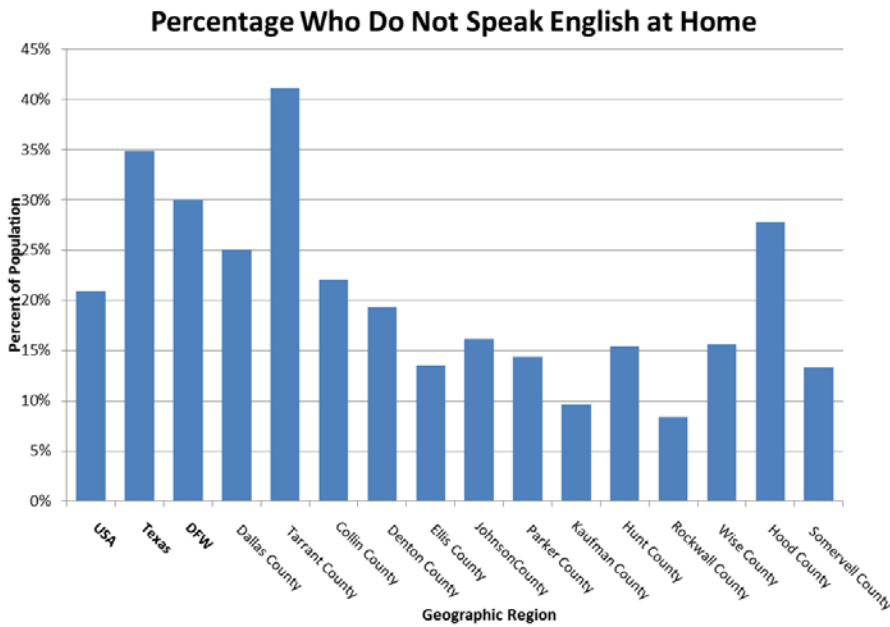


Figure 1.6. Percentage of the population who do not speak English at home across all 13 counties in the UT Southwestern catchment region, Texas, and the US.



Poverty and median income

Figures 1.7 and 1.8 demonstrate poverty and median income across the UT Southwestern catchment region. Although the overall poverty rate of DFW MSA (14.8) is lower than that of the US (15.6), poverty rates within the MSA vary widely – from 6.3% in Rockwall County, to 19.6% in Hunt County.(7) In Dallas County, nearly one in five residents lives below the poverty level (19.3%), which is especially concerning given that Dallas comprises 35% of the total MSA population.(7) People living in poverty face higher rates of mortality and morbidity, often due to intractable daily living conditions such as inadequate and unhealthy housing, unhealthy air quality, and neighborhood violence.

Figure 1.7. Percentage of the population living under the poverty line across all 13 counties in the UT Southwestern catchment region,

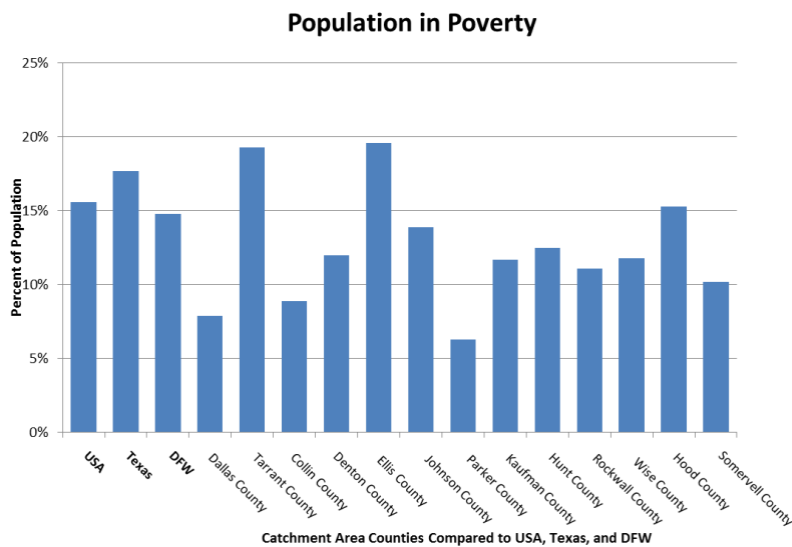
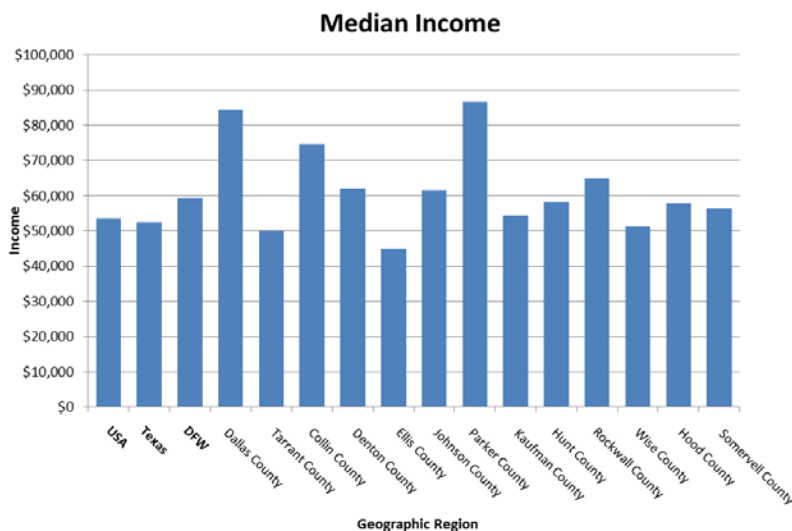


Figure 1.8. Median household income across all 13 counties in the UT Southwestern catchment region, Texas, and the US.



There are numerous health needs in the catchment region, including energy balance (healthy eating/diet and exercise) and its downstream impacts (obesity), mental health (stress and depression), access to care, and chronic disease (diabetes, heart disease, cancer, and asthma). The health needs are described in more detail in Chapter 2.

Chapter 2

Health Outcomes and Health Disparities

Introduction

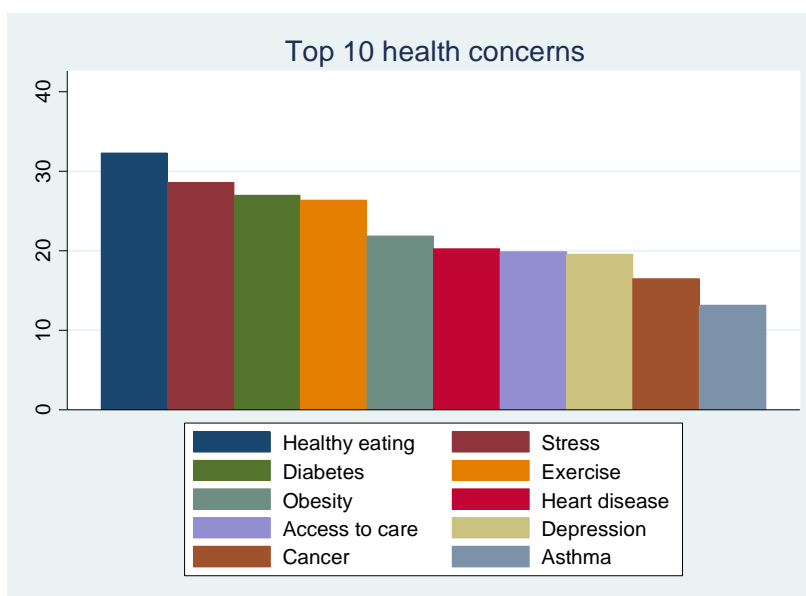
In our unique mixed-methods needs assessment, we applied a community-driven approach to ascertain and describe prevailing health concerns and health disparities facing our UT Southwestern catchment region. We structure our findings in this chapter based on community input—by presenting health issues of primary concern to our residents first. More than 10,000 community residents provided the data presented in this chapter. We present and describe findings obtained from the Community Registry data and from additional secondary data sources. To contextualize our findings regarding each health issue, we present quotes from our focus group participants, which are outlined in green boxes. Throughout the chapter we describe health disparities across multiple dimensions, including race/ethnicity, insurance status, and socioeconomic status, including food insecurity and educational attainment. The qualitative, quantitative, and environmental scan methods employed to generate these findings are described in detail in Chapter 3. In brief, we analyzed existing UT Southwestern’s Community Research Registry (Registry) data, conducted focus groups, reviewed existing needs assessments, and analyzed publicly available and locally warehoused data. Data for this assessment were drawn from across our catchment region.

Health and Health Disparities in North Texas

Community Registry

Among 10,326 community members who reside within our catchment area, the primary health issues of concern and interest to our population are largely focused on factors related to energy balance (healthy eating/diet and exercise) and its downstream impacts (obesity), mental health (stress and depression), access to care, and chronic disease (diabetes, heart disease, cancer, and asthma). Figure 2.1 displays the top 10

Figure 2.1. The top 10 health concerns and percent of residents reporting each concern in Community Registry data (n=10,326).



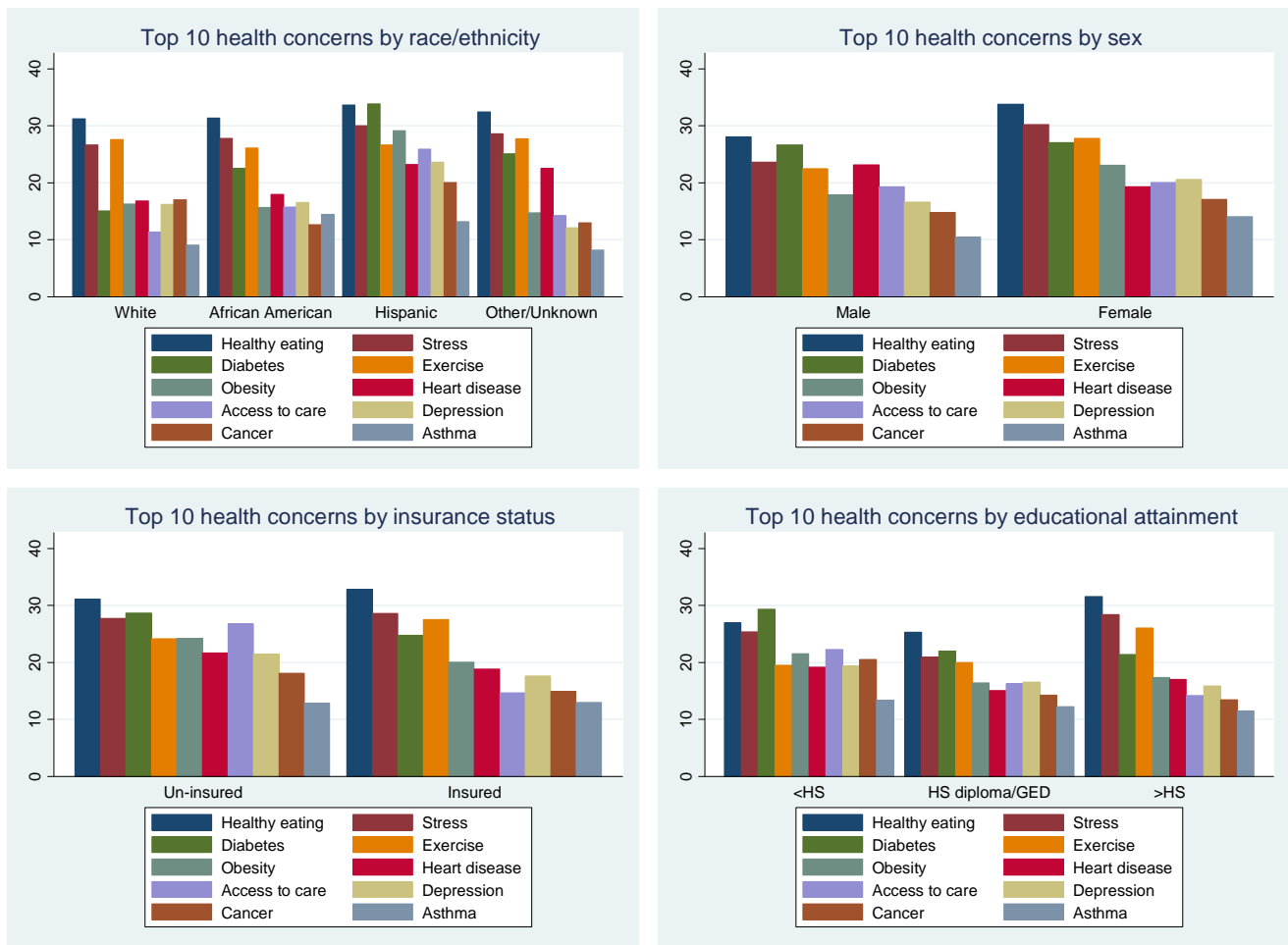
health concerns of our community residents.

Figure 2.2 demonstrates the top 10 health concerns by demographic groups defined by race/ethnicity, sex, insurance status, and educational attainment.

Based on these findings we focus the remainder of this report on the following topics, presented in order of importance as defined by more than 10,000 community members living in the UT Southwestern catchment region.

1. Factors related to energy balance: healthy eating, exercise, and obesity
2. Mental health: stress and depression
3. Access to medical care
4. Chronic disease: diabetes, heart disease, cancer, and asthma
5. Tobacco

Figure 2.2. The top 10 health concerns and percent of community residents reporting each concern, by race/ethnicity, sex, insurance status, and education (n=10,180).



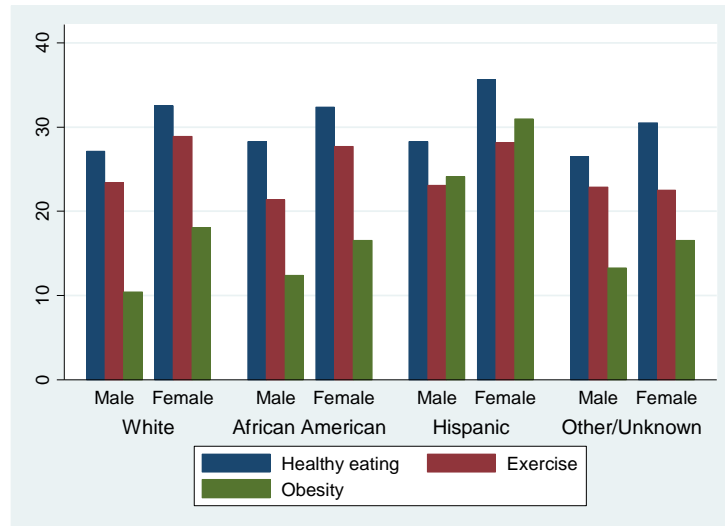
1. Factors related to energy balance: healthy eating, exercise, and obesity are the top concern for North Texans

Healthy eating

Community Registry

Overall, across nearly every demographic group in our Community Registry, the number one health concern of interest to our respondents was diet and healthy eating. There were two exceptions to this trend. Among Hispanics, diabetes was equally likely to be endorsed as a health concern as healthy eating (33.9% vs. 33.7%). Among those with less than a high school education, diabetes was the number one health and healthy eating was the second most common health concern. Figure 2.3 displays the percent of community residents with concerns about diet/healthy eating and the related factors of exercise and obesity.

Figure 2.3. Percent of community residents reporting concerns about healthy eating, exercise, and obesity, by race/ethnicity and sex (n=10,180).



Overall, 32.3% of community respondents report being concerned about diet and healthy eating. Figure 2.3 shows that concerns about healthy eating were high among all racial/ethnic groups and among both men and women. At the same time, however, many participants face a gap between *knowing* what to eat and *being able to* put those healthy foods on the table for their families.

Dallas, Tarrant, and Hunt Counties each rank worse than Texas overall in food environment quality.(9) The food environment index is a composite measure of limited access to healthy food and food insecurity, and is used as a proxy for capturing the community nutrition environment and food desert measurements.(10)

"I think it's a combination of cost as well as the culture... a lot of people in these poor communities cannot afford to go to [chain markets]... They're not financially able to go to farmer's market and get fresh produce. A lot of them have to go and depend on pantries. And what do you get at a pantry? Canned food, beans, rice, processed cheese, white bread – and bread with mold on it. You have to eat what you can afford."

Food insecurity

Secondary Data

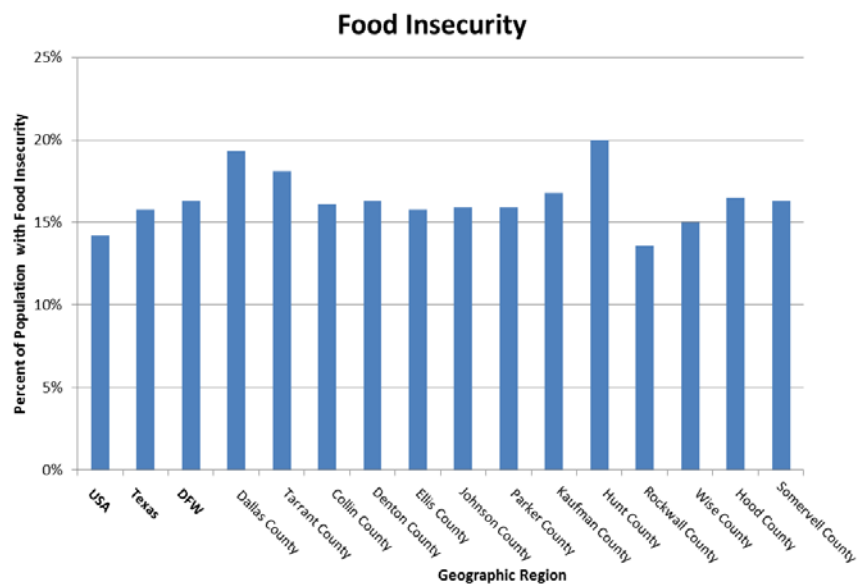
More than one million people (n=1,198,570) including nearly half a million children (n=447,630) in our catchment region are food insecure. Food insecurity is defined by the US Department of Agriculture as having inconsistent access to adequate food because of limited financial and other resources.(11) Figure 2.4 demonstrates the food insecurity rate for the US, Texas, and the UT Southwestern catchment region. Overall, 16.3% of residents living in the UT Southwestern catchment area are food insecure, which is higher than the statewide (15.8%) and national rate (14.2%). Food insecurity across counties within our catchment area varies widely, from 13.6% to 20%. The rate of food insecurity among children is even higher. One-quarter of children in the UTSW catchment area are food insecure (25.1%), which is close to the statewide rate (26.0%), and higher than the national rate (22.7%).(12)

“The doctor say - eat healthy...go over there and buy the healthy food, the organic stuff. Poor people can’t buy organic stuff. You talked about the welfare system and the food stamps. This is why they’re [sick]. They don’t have a choice in what they eat. [Food stamps food] keeps them unhealthy.”

The cost of a single nutritionally-balanced meal in the UTSW catchment region (\$2.82) is much higher than the statewide cost (\$2.66). Costs vary widely across Counties (\$2.48-3.22) in the UTSW catchment region. The cost-of-food index calculates the cost of a single meal meeting nutritional and cost requirements of the USDA’s Thrifty Food Plan.(13)

Food insecurity is closely linked to health. Among clients of the North Texas Food Bank who were surveyed in 2013, more than two thirds (68%) report having to choose between paying for food or medical care at least once in the prior year. More than one half (59%) report having a person in their household who has high blood pressure. One third (33%) report having a person in their household who has diabetes. Additionally, more than a third (36%) report having no household members

Figure 2.4. Food insecurity rate in the US, Texas, and across all 13 counties of the UT Southwestern catchment region. Map the Meal Gap 2014 data.



with health insurance of any kind.(14)

Physical inactivity

Secondary Data

Dallas (25%) and Tarrant (26%) counties report slightly worse rates of physical inactivity compared to Texas overall (24%) among adults age 20 and over.(15) Among the other 11 counties in the MSA, the level of physical inactivity varies from a low of 11% (Collin County) to a high of 32% (Parker County).(15)

Adult obesity

Secondary Data

In 2015, Texas ranked 10th of all 50 states in highest rate of adult obesity, at 32.4%.(16) Rates of obesity across UT Southwestern catchment region range from 24-31%; both Dallas and Tarrant Counties report an adult obesity rate of 28%.(16) Seven of the 13 catchment counties experience higher age-adjusted obesity rates, compared to the national average, and only one county has lower obesity rates compared to the national average.(17)

The following national trends in racial/ethnic disparities in adult obesity(18) are especially concerning for Texas, which has a high proportion of Blacks and Hispanics.

- Overweight and obesity affect more Hispanics (78.8%) and Blacks (76.7%), in comparison to Whites (66.7%).
- About half of Blacks (49.5%) and more than 1 in 3 Hispanics (39.1%) are obese.
- Extreme obesity affects more than 1 in 10 Blacks (13.1%) vs. 5.7% of Whites and 5.0% of Hispanics.

“It’s difficult to understand because [I thought that] medicine is just for physical diseases like diabetes. But there’s a lot of stress, depression problems, and we don’t even know that maybe we have depression and a lot of things go undiagnosed because we really don’t know.”

Childhood obesity

Secondary Data

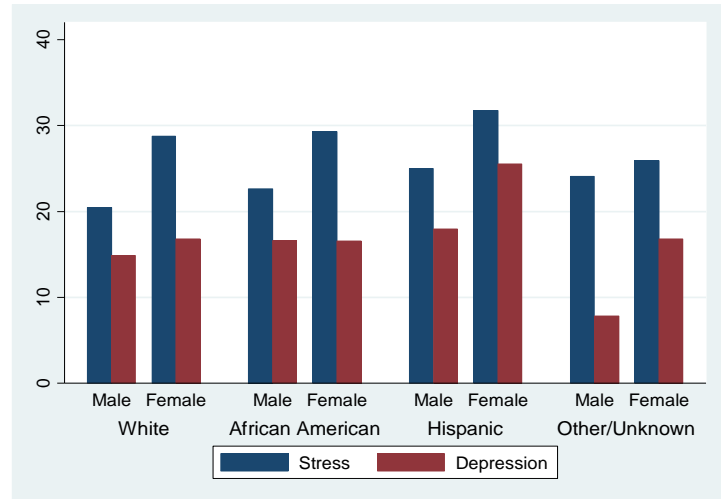
Texas also ranked 10th out of all 50 states in highest rate of childhood obesity.(19) Compared to the national average (16.9%), nearly 1 in 5 children (19.1%) ages 10-17 in Texas is obese.(19) With a rapidly-growing population, especially among Hispanic youth(20), Texas faces a significant burden of morbidity and risk for adult cardiovascular disease and diabetes.

2. Mental health: stress and depression

Community Registry

Overall, community residents reported stress as the second leading health concern. Depression was also cited as one of the top 10 health concerns. For every racial/ethnic and sex group, stress was endorsed as a concern by at least 20% of all community residents. Between one-fifth and one-quarter of all community residents cited stress (28.5%) and depression (19.5%) as health concerns. Figure 2.5 shows the percentage of residents reporting these concerns by race/ethnicity and sex.

Figure 2.5. Percent of community residents reporting concerns about stress and depression, by race/ethnicity and sex (n=10,180).



“Mental health is something that I think affects everybody- it’s something that’s stigmatized and people don’t talk about... and I feel like it’s so critically important that we have some system in place that catches it and can realize it and can figure it out. It’s so swept to the side and nobody talks about it and it’s crazy!” (emphasis original)

Secondary Data

Dallas and Tarrant Counties report higher average of “poor mental health days” compared to Texas overall. (21) Measured as the average number of mentally unhealthy days reported in the last 30 days, Dallas (3.2) and Tarrant (3.1) Counties exceed the overall Texas average (3.0), while other counties within the UT Southwestern catchment region range from 2.5-3.7.(21)

Dallas and Tarrant Counties also report a severe shortage in mental health providers compared to Texas overall. Measured as the ratio of the population to mental health providers, Dallas’ rate of 3,295:1 is over three times worse than Texas, and Tarrant is over two times worse, at 1,903:1.(22) The remainder of catchment counties, however, fare better than the state overall.(22)

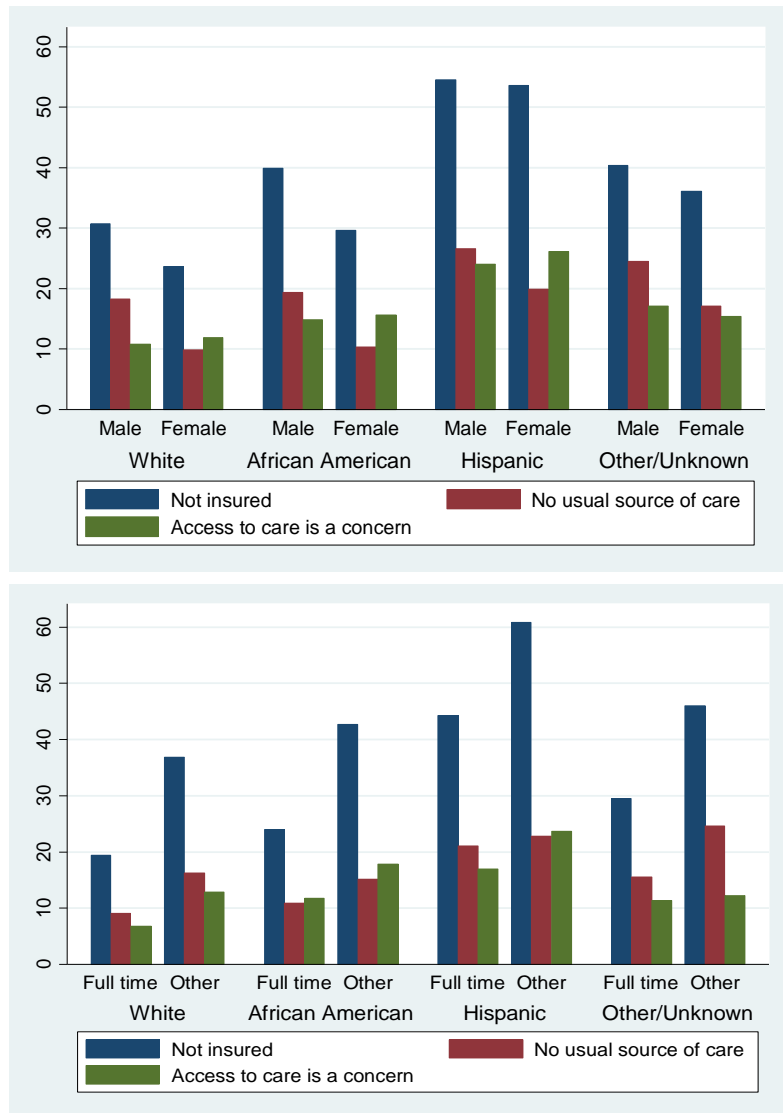
3. Access to medical care

People who lack health insurance or don't have a usual source of care are less likely to obtain screening and preventive care, more likely to delay or go without needed medical attention, and more likely to pay higher costs for medical services.(23, 24) They face higher mortality rates, and are more likely to be diagnosed with diseases at more advanced stages.(25)

Community Registry

Community residents commonly endorsed access to medical care as a health concern. Figure 2.6 displays the percentage of non-elderly (aged 64 or younger) residents without insurance, without a usual source of care, and for whom access to care is a concern. The figures are presented by race/ethnicity, sex, and by employment status. In all, 40.8% are not insured, 19.9% report access to medical care is a concern, and 16.6% report not having a usual source of care. Results demonstrate that overall, Hispanic residents are less likely to have insurance or a source of usual care, and are more likely to report access to medical care as a concern. Results are also displayed by whether residents are employed in a full-time job vs. not employed in a full-time job. Of those not employed full time, residents reported being not employed (40.6%), employed part time (26.1%), being a student (10.2%) or retired (6.5%). As expected, findings indicate that residents who are not employed full time are less likely to have insurance and a usual source of care, and are more likely to report that access to care is a concern.

Figure 2.6. Percent of community residents reporting their health insurance status, whether they have a source of usual medical care, and concerns about access to care, by race/ethnicity, full time employment status, and sex for adults aged 18- 64 years old (n=10,180).



“I had a glucometer I got from Parkland, but [insurance] won't pay for it. They won't pay for the strips. Are you serious?...When you frustrate people, you keeping them stressed out because of things that's going on in their body, the cholesterol, the hypertension, this, that and other and they cannot get the money or the assistance to help them with what they have.”

Secondary Data

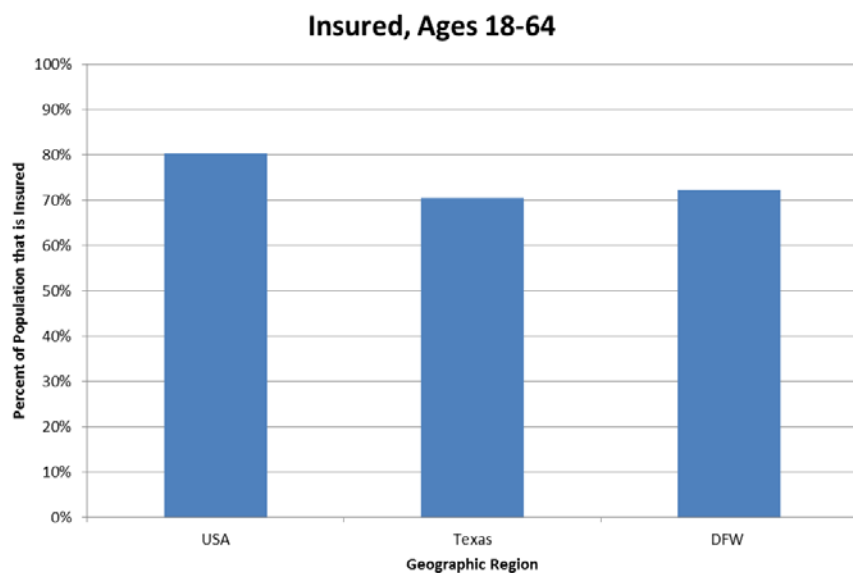
Texas ranks last among all US states in the number of uninsured residents, both before (26.8% in 2010) and after passage of the Affordable Care Act (24.8% in 2014). As one of the states that did not expand Medicaid under the Affordable Care Act, an estimated 1.2 million Texans who would have qualified for affordable health insurance will remain uninsured.(23) Moreover, Texas has a large percentage of foreign-born residents, undocumented immigrants, and people born outside the United States, who are much more likely to be uninsured than those born in the United States.(26)

“I don't go to the doctor. I go when I have to, but right now we can't afford it. We can't afford the medicine. We can't afford the visit...and God forbid we need an ambulance – that's two rents.”

Only about a quarter of uninsured Texans (24%) reported accessing free or reduced-cost care; the majority has not. Uninsured Texans are also more likely to be asked to pay the full cost of medical care before seeing a provider (33%) compared to those with employer-based insurance coverage (18%), and the latter are likely to have experienced this issue only when seeking services not covered by insurance.(27)

The most common reason for postponing care among uninsured Texans is cost (75%).(27) Uninsured persons are often forced to make difficult choices about paying for healthcare services or medication versus paying for basic living needs, like food and shelter.

Figure 2.7. Insurance rate for adults aged 18-64 in the US, Texas, and the UT Southwestern Catchment region (DFW)(1).



Appointment availability also constitutes a significant reason for postponing care; nearly 4 in 10 (39%) Medicaid recipients and 3 in 10 (29%) uninsured adults delayed care because they could not get an appointment soon enough.(27) Further, lack of availability of appointments outside the regular workday hours means some working adults must take time off to get care; when this is not possible, many rely on costly resources, such as urgent care clinics and the emergency department.(27)

Figure 2.7 demonstrates that the overall percentage of the nonelderly adult population with insurance in the UT Southwestern catchment area (DFW) is comparable to the State of Texas but lower than the US. Table 2.1 demonstrates insurance rate across multiple populations: children, non-elderly adults in and not in the labor force, and non-elderly adults employed and unemployed. One in 8 children (12.5%) and 1 in 4 working adults (24.2%) is uninsured in the UT Southwestern catchment. Notably, the greatest burden is in Dallas County, where over a third (36%) of the adult non-elderly population (age 19-64 years) is uninsured.(28) Disparities in the rate of uninsurance by race/ethnicity are striking. Among non-elderly adults in Texas, the rate of uninsurance is 40% greater among Blacks, and over 200% greater among Hispanics, as compared to Whites.(29)

Table 2.1. Health Insurance Coverage by USA, State of Texas, and UT Southwestern catchment region.(7)

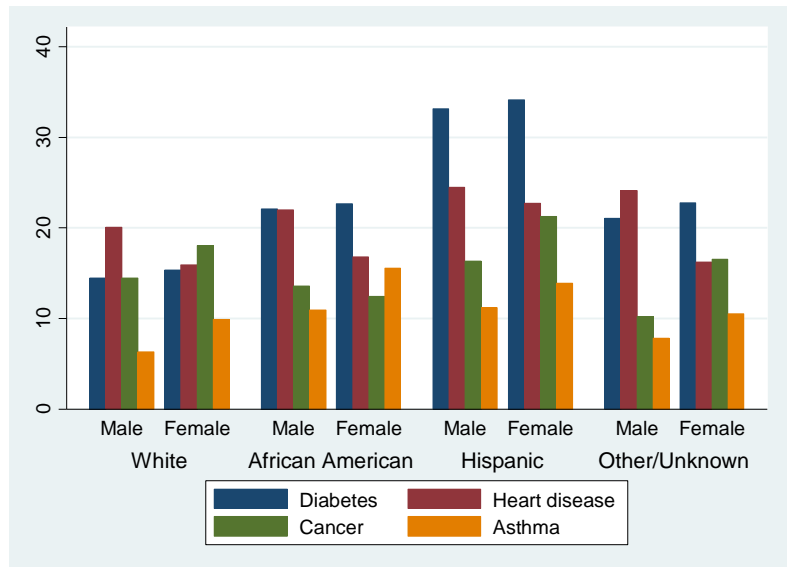
| Category | USA | TX | UTSW Catchment |
|---|--------------|--------------|---------------------------|
| All ages (# persons) | 309,082,258 | 25,613,334 | 6,647,130 |
| no health coverage (%) | 14.2% | 21.9% | 21.1% |
| <18 years (# persons) | 73,636,556 | 6,979,160 | 1,821,786 |
| no health coverage (%) | 7.1% | 12.6% | 12.5% |
| 18-64 yrs(# persons) | 193,574,369 | 15,868,712 | 4,200,393 |
| 18-64 yrs, in labor force (# persons) | 148,743,241 | 12,114,207 | 3,328,883 |
| 18-64 yrs, in labor force, employed (# persons) | 135,293,448 | 11,201,921 | 3,080,968 |
| no health coverage (%) | 17.0% | 26.1% | 24.2% |
| 18-64 yrs, in labor force, unemployed (# persons) | 13,449,793 | 912,286 | 247,915 |
| no health coverage (%) | 43.9% | 56.7% | 54.4% |
| 18-64 yrs, not in labor force (# persons) | 44,831,128 | 3,754,505 | 871,510 |
| no health coverage (%) | 21.0% | 32.9% | 32.4% |

4. Chronic disease: diabetes, heart disease, cancer, and asthma

Community Registry

Four chronic diseases were endorsed as among the top 10 health concerns by community residents. The chronic disease diseases of primary concern include diabetes, heart disease, cancer, and asthma. Of all community residents, more than one-quarter (26.9%) identified diabetes as a health concern and one-fifth endorsed heart disease (20.3%). Figure 2.8 demonstrates the percent of residents concerned about each chronic disease by race/ethnicity and sex.

Figure 2.8. Percent of community residents reporting concerns about diabetes, heart disease, cancer and asthma, by race/ethnicity and sex (n=10,180).



Diabetes

Community Registry

Figure 2.8 demonstrates that diabetes was rated the number one chronic condition issue of concern for both male and female African Americans and Hispanics.

Secondary Data

Texas ranks 16th among the 50 states in highest rates of diagnosed diabetes.(30) Diabetes disproportionately Texas residents who are racial/ethnic minorities, poor, and less educated. Hispanics (12.7%), African-Americans (12.9%) and Native Americans (12.4%) are affected at a much higher rate than non-Hispanic Whites (9.9%).(30) Diabetes among adults with less than a high school graduation (19.1%) is two and a half times the rate of those with a college degree (7.6%). Similarly, rates among those in lower income brackets (17.5% among those with income of <\$25,000, 13.6% among those with incomes \$25-49,000) are much higher than populations with higher annual income (7.3% among those with incomes >\$75,000).

“You know and it goes back toward the income. If you have diabetes and you need medicine or if you have multiple health complications then [wealthy people] go and you get it fixed, you don’t think about it, you handle your business. Whereas if somebody else [not wealthy] has those same medical conditions, they have to decide do I get my medication or do I eat?”

Diabetes is a significant health concern for the UT Southwestern catchment region. All but 2 of the 13 counties rank worse than the US average in age-adjusted adult diagnosed diabetes prevalence.(17) Tarrant County ranks worst among the MSA counties, with a rate of 11.0, exceeding that of Texas overall (10.8).(31)

“If you go to the Black community and there’s 10 people, 9 of those people I guarantee you has diabetes.”

While diagnosed diabetes rates are higher than average in North Texas, the rates of actual diabetes prevalence may be even higher. National estimates indicate that about 28% of people with diabetes are undiagnosed, and rates of pre-diabetes may be up to three times that of diagnosed diabetes.(32) And if, as the CDC estimates, up to 30% of people with prediabetes will develop type 2 diabetes within 5 years,(32) Texas will face a significant health and cost burden from diabetes in the foreseeable future.

“You have this stuff when you don’t even know you have it. I found out in 2010 I was a diabetic, could not believe it. And the only way I found out because I went in the hospital for kidney stones and they brought insulin in and I’m like ‘I’m in here for kidney stones’. They say ‘well you diabetic’. I said ‘no I’m not’. They said ‘yes you are’.”

Heart disease

Community Registry

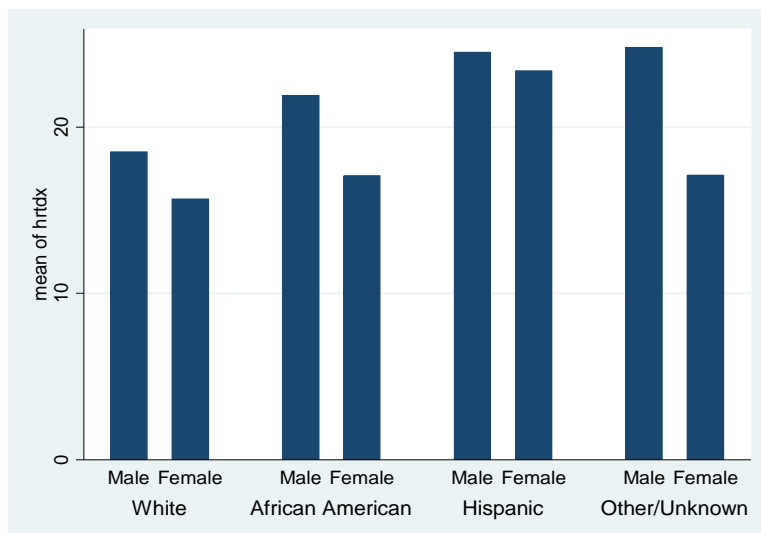
Heart disease was reported as a health concern by 20.7% of all community residents. Figure 2.9 demonstrates that men in general, and particularly Hispanic and Other/unknown race men, are more likely to cite heart disease as a concern.

Secondary data

Overall heart disease-related mortality in Dallas and Tarrant County are lower than that of other counties across the US.(33) Within the UT Southwestern catchment region, Kaufman and

Hunt Counties are consistently worse than other counties, and Denton, Collin and Rockwall Counties are consistently better than other counties, on several measurements including: all heart disease mortality, acute myocardial infarction mortality, stroke mortality, and overall preventable death.(33)

Figure 2.9. Percent of community residents reporting heart disease as a health concern, by race/ethnicity and sex (n=10,180).



However, Dallas and Tarrant Counties both rank in the highest quintile (worst) among all US counties for prevalence of diagnosed diabetes as a heart disease-related risk factor. Other counties in the catchment region vary, but more report rates that are average or worse.(33) In sum, the UT Southwestern catchment region is likely to face higher rates of heart disease in the future, given that the population is already significantly affected by diabetes, among key risk factors.

Cancer

Community Registry

Cancer was endorsed as a health concern by 16.5% of all Community Registry respondents.

When asked specifically which of 16 different cancer types were of concern, breast, colorectal, cervical lung, ovarian and pancreas were endorsed most often (Table 2.2). Notably, four of these cancers are potentially preventable or detectable at an early stage with the use of cancer screening. Cancer screening is recommended by national guidelines for breast, colorectal, cervical, and lung cancer.(34-37)

“When [poor people] find out that they have cancer, they’re in stage four already. There’s something wrong with that picture...[my wife] has a problem and it took her forever – more than 8 or 10 months – to see a doctor [due to cost and appointment delay]... you want me to die before I come see the doctor?”

Our community registry data indicate that breast cancer is the number one cancer of concern for our residents. Among those who endorsed cancer as a concern, 16.2% are concerned about breast cancer (18.6% of women and 8.7% of men). Notably, of the top 5 cancers of concern to our residents (Table 2.2), all except cervical and ovarian feature among the top 5 cancers in our region in terms of either incidence or mortality.

Secondary Data

In the UT Southwestern Catchment region, the overall cancer incidence rate is 567.4 (95% CI: 563.2-571.6) and the overall cancer mortality rate is 224.0 (95% CI: 212.3-214.8). Overall incidence and mortality rates varied by race/ethnicity (see Appendix) and were consistently highest for Blacks and lowest for Hispanics. The top five most commonly diagnosed cancers were: breast, lung/bronchus, prostate, colorectal, and kidney/renal pelvis. The top five cancers with the highest mortality rate were: lung/bronchus, breast, colorectal, pancreas, and liver/intrahepatic bile duct. The cancer data presented in the Appendix depict the age-adjusted incidence and age-adjusted mortality rates for the five most frequently diagnosed cancers for all adults aged 18 years and older diagnosed 2011-2013 in Texas. Data are presented for Texas and for the UT

Table 2.2. Top 5 cancers of concern to community residents (n=1,726).

| Top Five Cancers of Concern | Percent Concerned |
|-------------------------------|-------------------|
| 1. Breast | 16.2 |
| 2. Colorectal | 6.2 |
| 3. Cervical | 5.3 |
| 4. Lung | 5.1 |
| 5. Ovarian and pancreas (tie) | 4.7 |

Southwestern Catchment region. Rates are presented for the total population and also separately by race and ethnicity.(38)

Asthma

Community Registry

Asthma was reported as a health concern by 13.1% of all community residents. Figure 2.10 demonstrates that women in general, and particularly African American women, are more likely to cite asthma as a concern.

Secondary Data

While asthma prevalence in Texas is lower than that of the US overall (11.1% vs 13.5%), significant racial/ethnic disparities exist in

Texas, where rates are much

higher among non-Hispanic Black (16.0%) and multi-race persons (22.3%).(39) Among adults, the UT Southwestern catchment region rate is low, at 4.3%, but in Tarrant County adult asthma prevalence is 11.5%.(40) Among children, our catchment fares worse than Texas overall (9.8% to 7.0%).(40) Asthma hospitalization data indicate a similar pattern: compared to the US, Texas had fewer adult asthma hospitalizations, but more

frequent child asthma hospitalizations. African-Americans are the only racial/ethnic category with significantly higher asthma mortality rates in TX versus US (see Figure).(41)

5. Tobacco

Community Registry

While tobacco use did not score among the top 10, 9.7% of community residents indicate that tobacco is a health concern. Figure 2.11 demonstrates that in general,

Figure 2.10. Percent of community residents reporting asthma as a health concern, by race/ethnicity and sex (n=10,180).

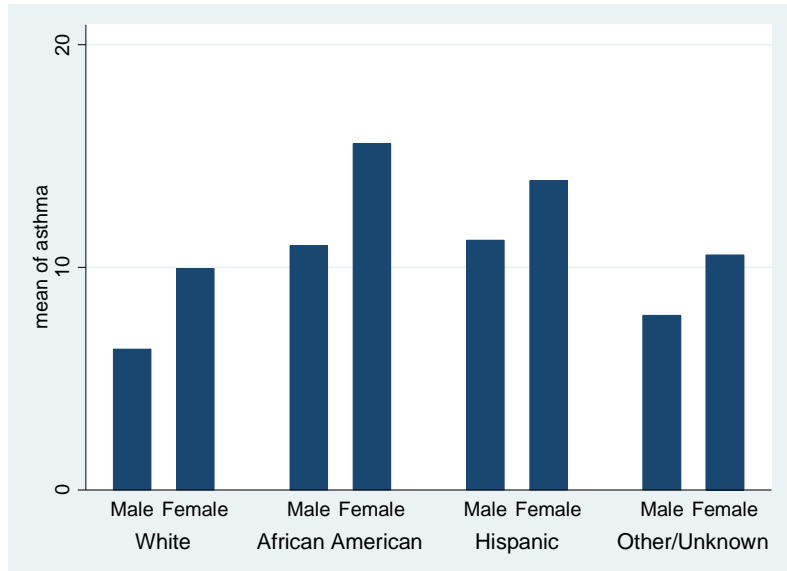
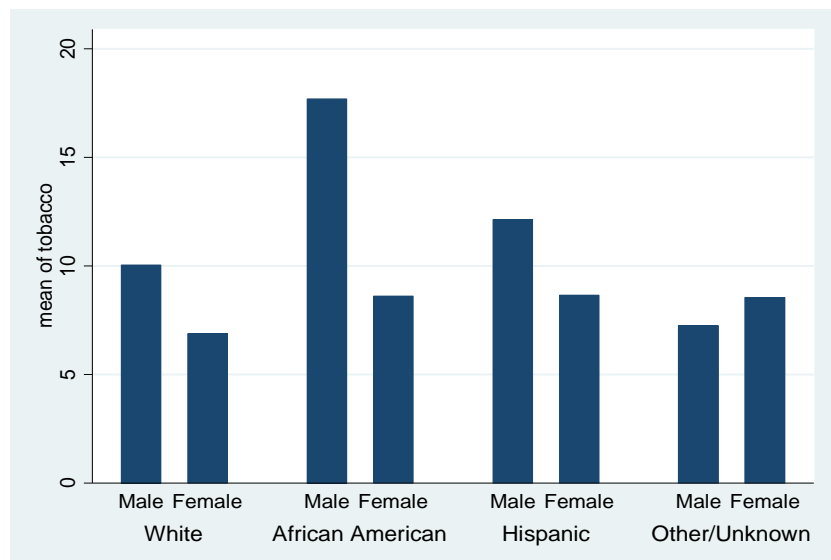


Figure 2.11. Percent of community residents reporting tobacco as a health concern, by race/ethnicity and sex (n=10,180).



men, and particularly African American men, are more likely to indicate that tobacco is a health concern.

Secondary Data

In 2014 the rates of adult smoking in Texas were lower than for the US overall (15.2% to 16.8%).(42) Dallas and Tarrant Counties report adult smoking rates similar to that of the Texas (15%), whereas the other counties range 12-17%.(43)

Among children, however, only 7 states have a higher youth smoking rate than Texas (14.1%), and each year, Texas adds 13,700 new youth smokers.(44) A 2011 report estimated that, among kids alive at the time, over 1.5+ million (1,557,800) will become smokers as adults, and nearly half a million (498,000) will die from smoking.(44) Given that Texas is the 2th fastest growing state in the country (9.4% growth from 2010-2015),(45) Texas will continue to face a significant burden of tobacco-related mortality and morbidity.

Chapter 3

Community Needs and Priorities Assessment

Introduction

We leveraged UT Southwestern’s existing population health infrastructure and data sources for the conduct of our community needs and priority assessment. Specifically, we analyzed existing population health data collected by UT Southwestern, collected additional data from our existing Parkland Community Advisory Panel (CAP), reviewed existing needs assessments conducted by our regional partners, and analyzed secondary data sources including publicly available and locally warehoused data. In conducting our needs assessment, we aimed to ensure representation of community members self-reported needs. To do so, we highlight quantitative and qualitative data drawn from the UT Southwestern catchment region and, wherever possible, incorporate direct quotes from community members asked to reflect on needs of their community.

Analysis of Existing Population Health Data Collected by UT Southwestern

Community Research Registry

Background

In 2009, population researchers at UT Southwestern established The Community Research Registry (Registry) – a novel resource that represents outreach and engagement with diverse community members across the entire catchment region. In addition to providing valuable demographic and health data, the registry provides community members opportunities to participate in health research. This is important because recruitment of participants from medically underserved and underrepresented minority groups constitutes a significant challenge in population health research. (46, 47) The Registry at The UT Southwestern Community Registry facilitates more inclusive recruitment of under-studied populations, which enhances the quality of our population health research. The Registry has been used by 10 investigators in 14 research studies at UT Southwestern and Parkland Health and Hospital System.(46-48)

More than 12,000 members of the DFW community have completed surveys at community-based events. UT Southwestern staff who are fluent in English and Spanish recruit Registry members at, for example, Viva Dallas, KwanzaaFest, the Hispanic Wellness Fair, Bi-National Festival, Asian American Festival and various back-to-school or other health fair events. Participants are asked to complete an anonymous sociodemographic and health survey, and they may elect to provide their name and contact information should they wish to be contacted in the future about opportunities to participate in research. The anonymous survey responses provide important data about the health and sociodemographic characteristics of our community, and the pool of respondents who provide their

contact information serves as an invaluable resource for future research recruitment. The English-language version of the survey tool is included in the Appendix.

The 12,000+ Registry members are diverse in age, race/ethnicity, household composition, level of education, and employment status. They are predominantly non-White. The survey documents participant responses on health-related questions such as: Which health topics are you concerned about or interested in? Respondents were asked to select among the 19 multiple choice items shown in Table 3.1 and were allowed to multiple health topics. Respondents were also asked to provide their home address, demographic information, and were asked about their access to medical care with the following two questions:

- *Do you have any type of health insurance or healthcare coverage?*
- *Do you have a regular place to go when you are sick? (see Appendix 1).*

Table 3.1. Health Issues assessed in the Community Registry survey.

| | | |
|---------------------------------|--------------------------------------|-------------------------------|
| Alcohol use | Asthma | Automobile safety |
| Cancer | Communicating with doctor | Depression |
| Diabetes | Diet/healthy eating | Drugs/substance abuse |
| Exercise (e.g., walking) | Getting medical/dental care (access) | Heart disease |
| HIV/STDs | Immunizations/vaccinations | Obesity in children or adults |
| Pregnancy | Stress management | Tobacco use/second-hand smoke |
| Violence (youth, dating, gangs) | | |

Respondents indicating that cancer was a concern were asked to indicate what cancer type(s) were of particular concern. In all, respondents were queried about 16 different cancer types, including: bladder, breast, cervical/HPV, colorectal, uterine, kidney, leukemia, liver/hepatocellular, lung, melanoma, non-Hodgkin’s lymphoma, ovarian, pancreas, non-melanoma skin cancer, stomach/gastric, and thyroid.

Analysis of Community Registry Data

For the data presented in this report, we used Registry data collected between August 3, 2009 and September 3, 2015. Respondents completed the survey at more than twenty community events, with the majority recruited at KwanzaaFest (37.1%) or Viva Dallas (28.9%). We geocoded residential addresses for 12,073 unique individuals and assigned all geocoded addresses to a county and census tract of residence. For those addresses that could not be geocoded, we matched reported city of residence to corresponding county of residence using text strings. Because the Community Registry survey does not ask respondents to self-report their income, we calculated neighborhood poverty as a proxy measure using American Community Survey 5-year estimates 2010-2014 of the percentage of the census tract population living at or below the federal poverty line. We excluded respondents who did not live in the UT Southwestern 13 county catchment region (N=1,672) and those younger than 18 years of age (N=75) at the time of the survey. In all, 10,326 individuals were included in the analysis.

Table 3.2 displays participating resident’s characteristics. In brief, the average age was 20.9, 75% were female, and 86% were either African American or Hispanic. Residents were diverse in regard to educational attainment, with 20% not having achieved a high school diploma and 25% who had a college

degree or beyond. Residents lived in neighborhoods with a median poverty rate of 18%. Strikingly, 8% of all residents lived in neighborhoods of *concentrated poverty*, defined as neighborhoods with more than 40% of the population living in poverty. Of all, 42% were uninsured; however, 84% reported having a usual source of care. Of those with a usual source of care, most visited a private doctor’s office but more than one-quarter reported visiting Parkland clinics and an additional 6% reported visiting other free clinics.

Table 3.2. Characteristics of Community Registry respondents living in the UT Southwestern catchment region analyzed in this report (n=10,326).

| Characteristic | Percent | Characteristic | Percent |
|---|---------|---------------------------------------|---------|
| Sex | | County | |
| Male | 24.8 | Dallas | 62.1 |
| Female | 75.2 | Tarrant | 9.7 |
| Age | | Collin | 3.4 |
| 18-34 | 33.4 | Denton | 3.7 |
| 35-44 | 29.0 | Remaining 9 counties | 21.2 |
| 45-64 | 33.8 | Neighborhood poverty rate | |
| ≥65 | 3.7 | <10% | 34.1 |
| Race/ethnicity | | 10-20% | 20.7 |
| White | 8.7 | 20-30% | 24.4 |
| African American | 40.3 | 30-40% | 13.0 |
| Hispanic | 46.8 | ≥40% | 7.8 |
| Asian/Pacific Islander | 1.6 | Residence | |
| Other/unknown | 2.6 | Own | 36.6 |
| Birthplace, Hispanics | | Rent | 54.5 |
| Foreign-born | 73.1 | Occupy without paying rent | 8.4 |
| US-born | 26.9 | Insurance status | |
| Birthplace, African American | | Insured | 58.3 |
| Foreign-born | 34.7 | Uninsured | 41.7 |
| US-born | 65.3 | Has usual source of care | |
| Marital status | | No | 16.4 |
| Married/living with partner | 51.4 | Yes | 83.6 |
| Divorced, widowed, or separated | 22.5 | Of those with a usual source of care, | |
| Never married | 26.2 | Location where receive most care | |
| Has at least one child <18 years of age | 29.1 | Private doctor’s office | 53.1 |
| Educational attainment | | Parkland clinic | 26.4 |
| < High school diploma | 19.1 | Emergency room | 7.8 |
| High school diploma/GED | 23.9 | Free clinic | 6.2 |
| Some college or technical/trade school | 34.6 | Other | 6.4 |
| College graduate or beyond | 22.5 | | |

Collection and Analysis of New Primary Data

Community Advisory Panel (CAP)

General Information

The UT Southwestern Center for Patient-Centered Outcomes Research (PCOR Center) established the Parkland Community Advisory Panel (CAP) in 2015, with funding from the Agency for Healthcare

Research and Quality (grant # 4R24HS022418). The purpose of CAP is to provide a forum for researchers at UT Southwestern and Parkland to interact with community stakeholders to obtain feedback about current or planned research.

The CAP is comprised of participants of diverse age, race/ethnicity, and socio-economic status. The 12 CAP members include: 8 women and 4 men; 4 are over the age of 60; and the group is racially/ethnically mixed: 4 African-American, 4 Hispanic, and 4 White (including 1 of Middle Eastern descent). All have at least some connection to Parkland Health and Hospital System (Parkland), the hospital district provider for Dallas County. CAP members may have direct experience as a Parkland patient, are closely related to a Parkland patient, or have a strong personal or professional interest in how and to whom Parkland provides care to the under- and uninsured in Dallas. For example, individual CAP members include: a cancer patient who previously participated in population health research at UT Southwestern, cancer survivor who previously participated in a UT Southwestern clinical trial, a formerly homeless person, a social services provider who conducts patient navigation, a food pantry client, a representative of the local refugee community, the primary caregiver of an adult child with serious chronic illness, and a former hospital board member.

The CAP meets every 2-3 months for 2 hours. At each meeting, an investigator presents information about a research topic and, most times, members are asked to then participate in focus groups to facilitate discussion. Since its establishment, CAP has guided the research efforts of several UT Southwestern investigators:

- Formative input used to design inclusion of social factors in statistical models of hospital readmission
- Feedback on Community Consultation Plan strategy for a randomized controlled trial of an emergency intubation intervention, a research protocol that includes a waiver of informed consent and therefore requires active community education
- Informed the content of educational video for an Advance-Care Planning intervention among African-Americans with serious illness who traditionally utilize hospice care at a lower rate than whites.
- Provided feedback on the formative design of behavioral intervention among older adults with chronic back pain
- Amended a logo design for a research collaborative at a local food distribution center

Analysis of CAP Data

In June 2016, three UT Southwestern qualitatively trained population health staff concurrently conducted 3 semi-structured focus groups with 15 CAP participants. Characteristics of the participants are described in Table 3.3. Participants were asked to define the concept of “community”, discuss most common and impactful health needs experienced in their communities, and discuss successful examples of population health programs in their community and how UT Southwestern could support and improve the health of their community. The focus group guide included open-ended questions about these topics, and facilitators encouraged dialogue about feedback from group members. Focus groups lasted 1 hour, and were audio-recorded and transcribed. Researchers synthesized participant responses

across the 3 focus groups. We included quotes from CAP participants that speak to the health burden and health concerns of local community members.

Table 3.3. CAP Meeting Participant Characteristics by Self-Report, June 2, 2016

| | Gender | | | Race/ethnicity | | | Area of residence within UT Southwestern catchment region |
|---------------|----------------|--------|----------|----------------|------------|----------------|---|
| | # participants | # Male | # Female | # Black | # Hispanic | # White/ Other | |
| Focus group 1 | 5 | 1 | 4 | 2 | 2 | 1 | Dallas |
| Focus group 2 | 5 | 1 | 4 | 4 | 0 | 1 | Dallas, Carrollton, Lewisville, Mesquite |
| Focus group 3 | 5 | 1 | 4 | 1 | 2 | 2 | Dallas, Mesquite, Coppell, Desoto |
| TOTAL # | 15 | 3 | 12 | 7 | 4 | 4 | |
| % of total | 100% | 20% | 80% | 47% | 27% | 27% | |

Review of Existing Needs Assessments

Through our regional networks, we requested community needs assessments conducted in the UT Southwestern catchment region. We obtained and summarized findings from six different needs assessments developed and shared by collaborative groups encompassing multiple regional task forces representing RHP 9 and RHP 10, Texas Health Resources, Baylor University Medical Center at Dallas, Parkland/Dallas County Health and Human Services, and Texas Department of State Health Services.

Secondary Analyses of Existing Data

Map the Meal Gap

We conducted a secondary analysis of the 2014 Map the Meal Gap dataset provided to UT Southwestern investigators by Feeding America. Feeding America is a national network of food banks that secures and distributes 4 billion meals yearly through food pantries and meal programs. The Map the Meal Gap dataset provides county-level estimates for every county in the US. Our analysis calculated and compared national, statewide, and ad UT Southwestern catchment-level data related to prevalence and associated costs of food insecurity in North Texas.

Cancer Data

Cancer data for this report were obtained directly from the Texas Cancer Registry. Rates presented are per 100,000 and age-adjusted to the 2000 US Standard Population (single ages to 84 – Census P25-1130). 95% confidence intervals were calculated using the Tiwari modification.(49)

Additional data sources

To fill gaps in analysis and collection of our own local data resources, we also obtained publicly available data from external sources. We used a variety of trusted data sets, including: US Census/American Community Survey, Robert Wood Johnson's County Health Rankings & Roadmaps, Centers for Disease Control, National Institutes of Health, United Health Foundation, Kaiser Family Foundation, the Texas Department of State Health Services, and Institute of Medicine. We consulted federally funded program websites such as Campaign for Tobacco-Free Kids and Obamacare Facts, and the Robert Wood Johnson-funded program website, Trust for America's Health. We also present findings from the Feeding America regional report generated for the North Texas Food Bank, which serves 13 North Texas counties, 7 of which are located in the UT Southwestern catchment region. The 13 counties represented in the reporting findings include: Dallas, Denton, Collin, Fannin, Rockwall, Hunt, Grayson, Kaufman, Ellis, Navarro, Lamar, Delta and Hopkins. Findings from this report were generated through analysis of n=514 adult clients of the North Texas Food Bank.

Whenever possible, we used a single source to compare data across national, state, catchment region and county-level data; where data were not available from one source, we report state vs. county level data from different resources for the most comparable data possible (e.g. closest in years). When data were unavailable for the entire UT Southwestern catchment region, we aggregated, when feasible, the 13 counties' frequency data to report a total for the UT Southwestern catchment region.

Chapter 4

Identified Resources in the Community

Introduction

UT Southwestern has a wide variety of productive, strategic partnerships with other external healthcare and community organizations relevant to population health across our catchment area. We briefly highlight four exemplar community programs addressing at least one of UT Southwestern’s population health priorities, which are outlined in Chapter 5, particularly Figure 5.2. The four exemplar programs are described in Figure 4.1 and include:

- *Moncrief Cancer Institute* and its regional rural community stakeholder network
- *VitalSign⁶* and its network of community-based primary care clinics
- *Diabetes Health and Wellness Initiative (DHWI)* and its collaboration between the healthcare system and the municipal government
- *Wellness at WIC* and its collaboration between the healthcare system and a federal government food assistance program

Figure 4.1. Highlighted community programs addressing UT Southwestern’s population health priorities.

| | Moncrief | VitalSign ⁶ | DHWI | Wellness at WIC |
|---|----------|------------------------|------|-----------------|
| 1. Chronic disease and multi-morbidity | ✓ | | ✓ | |
| 2. Expanding access for underserved populations | ✓ | ✓ | ✓ | ✓ |
| 3. Preventive screening and early detection | ✓ | ✓ | ✓ | ✓ |
| 4. Community partnerships, service integration | ✓ | ✓ | ✓ | ✓ |
| 5. Behavioral/mental health | ✓ | ✓ | | ✓ |
| 6. Navigation and care coordination | ✓ | ✓ | ✓ | ✓ |

Each of these highlighted programs represent innovative approaches and existing infrastructure in the community for the conduct of additional, future population health research and delivery of evidence-based population health improvement interventions. While the majority of highlighted programs are large, long-lasting, and well-funded, we also highlight Wellness at WIC, an innovative pilot program. Two of our highlighted programs, Moncrief Cancer Institute and VitalSign⁶, partner with a large and growing number of community organizations over increasingly large catchment regions. The remaining two programs, the Diabetes Health and Wellness Initiative and Wellness at WIC, offer a different model in which they partner with either the municipal or federal government to co-locate medical and medical assistance care to residents in neighborhoods with the highest needs.

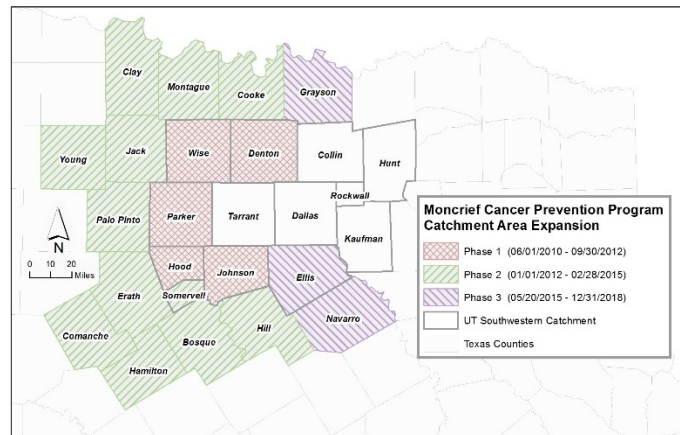
Moncrief Cancer Institute

The Moncrief Cancer Institute (Moncrief) is an affiliate of the NCI-designated UT Southwestern Harold C. Simmons Comprehensive Cancer Center. MCI is geographically located in Fort Worth, Texas, the county seat of Tarrant County. Moncrief delivers evidence-based cancer prevention, control, and survivorship services targeted specifically at under- and un-insured populations living in rural North Texas. Figure 4.2

displays its vast catchment region, which has successfully expanded over the last six years to serve an increasingly larger, more rural region of North Texas. Moncrief, working closely with county stakeholders, developed a robust, multi-sector rural network to successfully implement evidence-based prevention and survivorship programs across its large catchment region.

Moncrief partners with numerous community leaders and organizations across local government, education, social services, private businesses, and small rural health clinics as well as larger healthcare system across its rural catchment area. Moncrief also partners closely with John Peter Smith hospital district to provide services to under- and un-insured patients in Tarrant County. Services span the cancer continuum of care, including: public education and outreach, cancer prevention and early detection (including screening for cervical, breast, and colorectal cancers), behavioral and nutritional counseling, genetic testing and counseling, financial advocacy, survivorship services and population research.

Figure 4.2. Moncrief Cancer Institute's successful expansion of service delivery catchment area, 2010-2018.



Since 2010, MCI has earned or is a participant on 12 prevention grants from CPRIT supporting breast cancer prevention and early detection in the rural counties of North Texas, providing cancer genetic services for rural and underserved patients, community-wide cancer survivorship programming, and evidence-based colorectal cancer screening for the uninsured. One notable program is Moncrief's 1.1 million custom-built 18-wheeler which provides mobile, comprehensive cancer survivorship services. Funded by DSRIP, professionals onboard this van are prepared to offer cancer surveillance using mammography or colonoscopy as well as cancer screening services for cervical, colorectal, and breast cancer.

Across its programs, Moncrief collects detailed data through its structured programmatic databases and its EPIC electronic medical record (EMR). Moncrief's rich data sources and existing rural network provide unparalleled opportunities for future population health research and intervention across, and beyond, the UT Southwestern catchment region.

VitalSign⁶

VitalSign⁶: Making Screening for Depression the Sixth Vital Sign represents robust partnerships between UT Southwestern investigators in the Department of Psychiatry, including PI, Dr. Madhukar Trivedi, and medical directors and physicians at numerous community clinics across the catchment region. VS⁶

provides an easy-to-use, comprehensive program for the identification and treatment of depression in primary care clinics, including community health clinics and safety-net clinics across UT Southwestern's catchment region. It is estimated that 10 percent to 14 percent of patients seen in primary care clinics have major depression.(50) Unfortunately, reports also suggest that half of these patients will not be recognized as having depression.(51, 52) To address these gaps, the innovative VS⁶ program prompts participating clinics to screen every primary care patient for depression annually and facilitates delivery of evidence-based care for patients screening positive for depression. VS⁶ has two objectives:

- Improve access to behavioral healthcare for all patient populations by systematically identifying patients with depression and initiating treatment within the primary care setting.
- Optimize depression treatment outcomes (symptom severity, side-effect burden, and adherence) by providing education and structured guidance on the use of evidence-based pharmacotherapy and brief psychosocial interventions, as well as training in the implementation of validated care coordination strategies.

The VS⁶ infrastructure provides an innovative platform for additional population health interventions and robust research within and beyond mental and behavioral health across the UT Southwestern catchment region.

Wellness at WIC

Wellness at WIC represents an innovative partnership between Children's HealthSM and the federal food assistance program Women Infants & Children (WIC). Wellness at WIC's goal is to connect families to the medical services and other resources needed to be physically, emotionally, spiritually and mentally healthy. Wellness at WIC, while still a pilot program, is successful and is currently expanding. It started at one office and expanded to provide services at five WIC offices across Dallas County. The neighborhood location of WIC offices, which are located in the highest need neighborhoods, presents a unique opportunity to impact women and children where they live. Knowing that families play a significant role in child health outcomes, and that health outcomes are a critical component of wellness, Wellness at WIC seeks to connect vulnerable children to medical homes and facilitate access to community-specific resources that improve family well-being. In this partnership, a Community Navigator from Children's Health screens and navigates WIC-enrolled children and their families onsite at WIC offices. Notably, navigators utilize the Children's EMR onsite at the WIC clinic. This allows navigators to directly assess the child's medical history, including vaccination up-to-date status for children who already receive primary care from Children's Health. For children without an identified primary care physician, the navigator can assign one from anywhere in the large Children's Health physician network and can set appointments. Community navigators can also assist clients with any of the following challenges and needs: food security, housing, child care, abuse (emotional, sexual, domestic violence or substance), family counseling, education/literacy, or transportation.

To date, the most common needs identified by families were food assistance (26%), child care (21%), housing (17%), and education/literacy (14%). Similar to WIC requirements, services are provided to families with household income at or below 185% of the federal poverty line and with household

members who are either pregnant, breastfeeding, or have children under the age of 5. Navigation services are provided for all household members of any age, provided they live in an eligible household. Household members' complete comprehensive needs assessments, which provide guidance for the community navigator and also provide data that can be leveraged in future population health interventions and robust research on the interconnections of social and health needs.

Diabetes Health and Wellness Initiative

The Diabetes Health and Wellness Institute (DHWI) is a joint effort between the City of Dallas, the Baylor Scott & White Health, and Baylor University Medical Center at Dallas. Since 2009, DHWI has offered critical programs specifically to the underserved Juanita J. Craft Center in the Frazier community of South Dallas. The Frazier community was identified by Baylor in consultation with numerous community stakeholders in 2006 as having the greatest potential for health equity improvement. DHWI's goal is to improve the lives of those at risk for developing diabetes or who have been diagnosed with the disease. It provides numerous services using a "family-centric" model for people of all ages who have diabetes or are at risk for developing it. DHWI provides an onsite medical clinic staffed by physicians and nurse practitioners. Example services provided include:

- Diabetes education, including medication adherence education and training, and healthy eating/monitoring
- Nutrition counseling
- Preventive screening (diabetes, high blood pressure)
- Disease management
- Family health center
- Fitness and aerobic room, game room, computer room

DHWI supplements 4 farm stands (with 3 more expected as funded by the Healthy Cities Initiative in November, 2016), serving more than 6,231 total customers with nearly 45K worth of produce sales in 2016 to date. Their Fitness Program has grown from providing 7 fitness classes weekly in 2010 to providing 16 weekly classes as of September, 2016. The number of yearly fitness encounters has grown from 5339 in 2010 to 7,119 as of September, 2016. DHWI collaborates with numerous additional community organizations, including schools and churches, to prevent and manage diabetes. DHWI's co-located and co-supported services with the municipal government in Dallas provide a model for those seeking to develop and implement additional innovative population health interventions for underserved and high-need neighborhoods within the UT Southwestern catchment region.

Chapter 5

Identified Health Priorities

Introduction

Our approach toward identification of UT Southwestern population health priorities occurred in three steps. We first summarized regional health priorities identified by our health partners across the UT Southwestern catchment region. Next, we cross-tabulated those priorities with the results of the UT Southwestern Community Registry needs assessment (see Chapter 2). Next, we assessed UT Southwestern's capacity to address each priority by evaluating existing infrastructure and ongoing population health efforts (see Chapters 4, 6, and 7).

Summary of Regional Health Priorities

We reviewed seven recent community health needs assessments provided by our community partners relating to the health of the UT Catchment region.(53-58) These assessments were conducted by:

- Texas Health Resources
- Regional Health Partnership 9
- Regional Health Partnership 10
- John Peter Smith Health Network
- Parkland Health and Hospital System and Dallas County Health and Human Services
- Baylor University Medical Center at Dallas

Each of the needs assessments were completed since 2013. Most represented partnership efforts by teams of multiple institutions. For example, The Regional Health Partnership (RHP) 9 report identified region-wide collective health priorities as defined by a task force comprising 12 different organizations, including Baylor Health System, UT Southwestern, Parkland Health & Hospital System, North Texas Behavioral Health Authority, Children's Health, and Texas Health Resources. As another example, the Dallas County Community Health Needs Assessment, produced by Dallas County Health and Human Services in conjunction with Parkland, incorporated input gathered from 53 different community agencies.

For each needs assessment, we extracted information regarding the organization's top health priorities. Each CHNA identified between 2 and 7 different health priorities as a target for future strategic planning purposes. If a needs assessment defined high, medium, and low priority health issues, we extracted those identified as medium or high priority. After reviewing the universe of priorities, we identified 12 different target health priority areas each of which encompassed one or more of the health topics identified in each needs assessment.

Nearly all of the needs assessments identified chronic disease and multi-morbidity and behavioral/mental health as health priorities. Figure 5.1 shows each of the health topics in order of frequency across needs assessments.

UT Southwestern Community Registry Top Health Issues

As described in Chapter 2, more than 10,000 diverse community residents indicated their top health concerns. Residents’ top 10 health concerns fall into the following four categories:

1. Factors related to energy balance: healthy eating, exercise, and obesity
2. Mental health: stress and depression
3. Access to medical care
4. Chronic disease: diabetes, heart disease, cancer, and asthma

Figure 5.1. Catchment region health priorities as identified in community health needs assessments by regional partners and UT Southwestern and for each, UT Southwestern’s existing capacity to make a population health impact.

| | Regional Partners | | | | | | | UT Southwestern | |
|---|------------------------|------------------|-----------------|--------|---------------|-------|--------|--|---|
| | Texas Health Resources | John Peter Smith | Parkland/ DCHHS | Baylor | Dallas County | RHP 9 | RHP 10 | Community Registry Top Health Concerns | Population Health Expertise, Infrastructure |
| 1. Chronic disease and multi-morbidity** | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2. Behavioral/mental health** | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Expanding access for underserved populations** | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| 4. Primary care access** | | ✓ | | | ✓ | | ✓ | | |
| 5. Navigation, care coordination | ✓ | ✓ | | | ✓ | | | | ✓ |
| 6. Community partnerships, service integration | | | ✓ | | ✓ | | ✓ | ✓ | ✓ |
| 7. Older adults, palliative care | | ✓ | ✓ | | | ✓ | | | |
| 8. Preventive screening, early detection** | | | | ✓ | | | | ✓ | ✓ |
| 9. Maternal child health | | | ✓ | | | | | | |
| 10. Oral health | | | | | | ✓ | | | |
| 11. Patient safety, hospital acquired conditions | | | | | | ✓ | | | |
| 12. ED use and readmission | | | | | | ✓ | | | ✓ |
| 13. Energy balance** | | | | | | | | ✓ | |

**Indicates that the health priority was identified as a health priority by community residents using the UT Southwestern Community Research Registry data (see Chapter 2).

Because three of the four chronic diseases of concern and four of the five cancer types indicated by community residents can be identified by preventive screening, we also selected preventive screening as a top health concern for our catchment region. Each of these priorities is indicated in Figure 5.1 with asterisks.**

UT Southwestern Health Priorities

After evaluating both community need (see Chapters 2, 3), our regional partners’ priorities, and local capacity (see Chapters 4, 6, 7) to conduct impactful, sustainable population health improvement programs, we have identified 6 overarching health priorities. Health priorities are listed in order of priority given existing population health capacity. Figure 5.2 demonstrates our 6 selected health priorities.

Figure 5.2 UT Southwestern Population Health Priorities

| Priorities |
|---|
| 1. Chronic disease and multi-morbidity |
| 2. Expanding access for underserved populations |
| 3. Preventive screening and early detection |
| 4. Community partnerships, service integration |
| 5. Behavioral/mental health |
| 6. Navigation and care coordination |

Chapter 6

Availability and Gaps in Technology and Infrastructure to Support Population Health at UT Southwestern

Introduction

We have multiple technology and infrastructure resources at UT Southwestern that facilitate population health research and intervention as evidenced by our large portfolio of externally funded population health research studies (see Appendix). The following programs, centers, and departments provide the bulk of existing technology and infrastructure.

- **Department of Clinical Sciences** provides an academic and educational home for population health investigators across all departments and disciplines at UT Southwestern. Collaborative ventures involve the full range of clinical research studies including: large-scale observational epidemiology, outcomes, and health services research projects, population-based, pragmatic intervention trials, methods development work, and serving as the data coordinating center for large-scale NIH-supported clinical trials and networks. The Department is the academic home for social scientists, clinician scientists, biostatisticians, informaticians, database administrators, statistical programmers, and research coordinators, among others.
- **Center for Translational Medicine** is supported in part by the National Center for Advancing Translational Sciences (NCATS), National Institutes of Health (NIH). Its mission is to provide infrastructure to support clinical and translational sciences and to integrate its resources with those of other NIH sponsored resources across UT Southwestern. CTM provides tools, expertise and resources that expedite and improve population health research. Resources include pilot funds, mock grant reviews, biostatistics, research design and ethics, regulatory knowledge and support, and one-on-one study design help, biomedical informatics, access to the Clinical and Translational Research Center, strong tracking and evaluation system for assessment, and others.
- **Simmons Cancer Center** is an NCI-designated Comprehensive Cancer Center. The Simmons Cancer Center serves as a matrix center, integrating cancer research, clinical cancer care, and cancer control outreach for UT Southwestern, Parkland Health & Hospital System, and the Dallas Children's Medical Center. Hailing from over 30 departments, more than 200 members collaboratively promote innovations in cancer diagnosis, treatment and control. Resources include pilot funds, biostatistics, research design and ethics, and multiple research cores.

- **Center for Patient Centered Outcomes Research (PCOR)** is funded by AHRQ to provide research infrastructure, methodological expertise, data access, programming resources, as well as training and mentoring in PCOR and comparative effectiveness research (CER). Its focus is harnessing electronic health record data for observational and interventional research among safety-net healthcare systems. The Center for PCOR has strong cores in: 1) applied clinical informatics; 2) large database analysis; 3) biostatistics; 4) qualitative research methods; 5) intervention development; 6) stakeholder engagement; 7) systematic reviews and meta-analyses; 8) shared decision making; and 9) training and mentoring.

Availability of technology and infrastructure

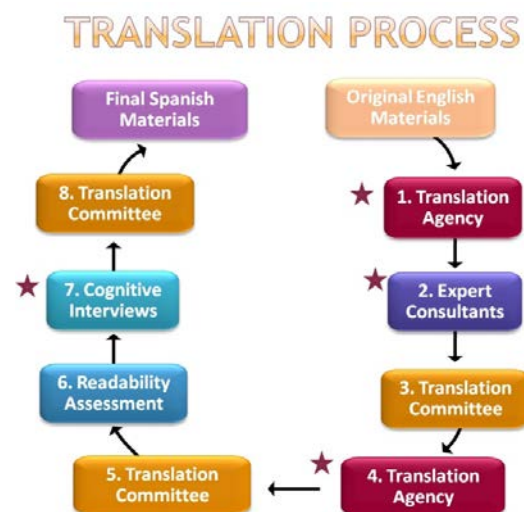
We highlight some of the available technology and infrastructure resources at UT Southwestern that support population health research.

Community Research Registry

In 2009, population researchers at UT Southwestern established The Community Research Registry (Registry) – a novel resource that represents outreach and engagement with diverse community members across the catchment region. To date the registry contains information on more than 12,000 residents across North Texas. The registry is described in greater detail in Chapter 3.

Spanish Language Validation Resource (SLVR)

Since 2011 the Spanish Language Validation Resource (SLVR) at UT Southwestern has worked with over 29 investigators, in 47 studies, resulting in 24 publications to date. (46-48, 59-79) Language validation is a multi-step, systematic process to review Spanish-language study materials and ensure that they are both culturally appropriate and grammatically correct. The SLVR is staffed by individuals from various geographical and cultural backgrounds in Latin America, all of whom speak Spanish fluently. SLVR staff meet to validate Spanish study documents, placing a special emphasis on ensuring that language is below a 9th grade literacy level. SLVR staff also cognitively test both Spanish and English documents to ensure conceptual equivalency and cultural sensitivity.



Computing and Analysis Resources

UT Southwestern has numerous IT resources to support the data intensive, advanced computing needs of investigators. One example is our NCI U54-funded PROSPR Data Center *PROSPR* data center which includes a dedicated computer server that is housed in a secure climate controlled server room, on a restricted vLAN accessible only to those in the *PROSPR Center*, but still enabling fluid connections with non-*PROSPR* resources. The virtual environment is currently being expanded and virtualized to support numerous computer-heavy processes engaged by the Department of Clinical Sciences faculty, including advanced quantitative and qualitative analysis programs for research. It features a VMware virtual environment that enables enhanced flexibility allowing investigators to quickly handle changes in requirements and to efficiently build additional functionality. In addition to system FIPS 140-2 encryption, it also has nightly encrypted backups, stored in an off-site location. This system is greatly enhances our research potential.

Community Advisory Panel (CAP)

The Community Advisory Panel for the PCOR Center is a racially, culturally, educationally, and economically diverse group of community members who meet quarterly to learn about Center for PCOR projects, and to give input and critical feedback in every step of the research process. CAP members specifically include individuals and family members of individuals who have received healthcare at UTSW and affiliates including Parkland (see description below). Hence, CAP members are uniquely positioned to bring both community- and patient-centered perspectives to projects originating in the UTSW Center for PCOR. These projects address many of our priorities, most notably chronic disease and multi-morbidity, expanding access for underserved populations, and preventive screening and early detection.

Epic Electronic Health Record (EHR)

Epic is a multi-user, database-driven electronic health record software application employed across UTSW and Parkland since 2008 and 2009, respectively. The application is an integrated suite of software capabilities that support functions related to patient registration, scheduling, and care. It allows physicians, nurses, emergency personnel, and other providers to access clinical systems and information and also captures data relevant to laboratory, pharmacy, and radiology utilization, as well as billing and service utilization information. Epic is readily accessible for data mining and health outcomes research.

Pilot Funds

Existing pilot funds for population health research include those provided by the American Cancer Society, Center for Translational Medicine, Center for Patient Centered Outcomes Research, the President's Office, among other entities.

Geospatial Analysis Resources

Geospatial resources are available through a collaboration between students, post-docs, and faculty at UT Southwestern, the University of Dallas, University of Texas-Dallas, and UT School of Public Health

Dallas campus. Focused mainly on the UT Southwestern catchment region, resources are available for building spatial databases (database server) and analyzing spatial data (dedicated compute-intensive server), including specialized software licenses (ESRI ArcGIS, Matlab, PySal, Stata, GeoDa, and SatScan). Joint Lab faculty and staff are available for technical consultations and services for faculty from all partnering institutions, providing services such as: geocoding, multilevel modeling, spatial analysis, spatial econometric modeling, Bayesian analyses, mapping, area-based database development and linkage, and related methodologic consultations.

Dallas-Fort Worth Hospital Council Regional Enterprise Master Patient Index

The Dallas-Fort Worth Hospital Council (DFWHC) Foundation developed a regional enterprise master patient index (REMPI) starting in 2006 to allow North Texas hospitals to report and track hospitalization data, readmissions, and other patient information across a diverse regional market. Today, over 80 hospitals, including multiple health systems, acute care hospitals, rehabilitation and psychiatric hospitals, participate in the DFWHC REMPI, which tracks over 100 quality indicators across 8.5 million patient records, representing 95% of the hospital market in North Texas. These data have been successfully used by UT Southwestern investigators for the purpose of both clinical quality improvement and research initiatives.

Gaps in technology and infrastructure

Addressing gaps in technology and infrastructure will enhance UT Southwestern's capacity to address our health priorities, particularly chronic disease and multi-morbidity, preventive screening and early detection, navigation and care coordination.

Access to Multi-System Data

In large part, externally funded population health research at UT Southwestern uses EMR data from a single health system. Often, data are from Parkland Health and Hospital System or UT Southwestern; both of these systems primarily represent Dallas County patients. Existing projects using multi-system data are also conducted using Dallas Fort Worth Hospital Council data, which while representative of our entire catchment region, is largely limited to inpatient data. There is a need for comprehensive (i.e., inpatient and outpatient), research-ready, multi-system EMR data for patients across our catchment area.

Analysis of Multi-System and Administrative Data

While we have significant strengths in analysis of EMR data, we face gaps with handling other types of data. For example, we have limited expertise and capacity analyzing administrative data such as commercial insurance claims (e.g., Blue Cross Blue Shield, MarketScan, Optum, etc.) or government claims (e.g., Medicare, Medicaid). We also face significant gaps with regard to the infrastructure, technological interfaces, and data harmonization required to analyze multi-system EMR data.

Social Media

Currently, the majority of individuals recruited to participate in population health research at UT Southwestern are recruited from community settings (e.g., cultural fairs) or clinic settings (e.g., recruitment in clinic or telephone/mail recruitment of patients using EMR data). There is a need for new infrastructure and technological expertise in the conduct of multilingual social media-based recruitment. Infrastructure in this area is also needed to expand our ability to communicate with potential or current research participants who are already members of the Community Research Registry (see Chapters 3 and 9). For example, such infrastructure would allow UT Southwestern investigators the ability to disseminate research findings back to participants and to engage participants as stakeholders in population health research.

Clinical and Population Informatics

There is a need for the application of development of cutting edge computational methods for data mining, pattern recognition, machine learning, natural language processing, and data modeling. Meeting this need will propel UT Southwestern's capacity to translate findings from massive sources of complex and messy clinical data (e.g., EMR data) toward development of new strategies to improve the delivery of healthcare to populations.

Chapter 7

Availability and Gaps in Population Health Workforce at UT Southwestern

Introduction

We have experienced tremendous growth in our population health workforce since 2008, in part due to several successful strategies described below. However, recent increases in externally funded, large population health projects mean that additional growth of our population health workforce is needed.

Availability of the population health workforce

Faculty and Staff

The Department of Clinical Sciences is the main academic home for PhD faculty members with expertise in population research methodology and provides secondary appointments for clinicians engaged in population research. The Department is comprised of 25 primary, 21 secondary, and 14 adjunct-appointed faculty and 6 postdoctoral fellows. Since 2008, the Department of Clinical Sciences has built a grant-funded research staff of more than 60 individuals consolidated into a highly efficient comprehensive administrative structure that serves population and translational researchers across the UT Southwestern campus. Our professional staff currently manage 43 population research studies led by principal investigators from Departments of Clinical Sciences, Internal Medicine, Pediatrics, Psychiatry, and the UT School of Public Health Dallas Regional Campus. Total enrollment for these studies exceeds 800,000 individuals; data are collected from electronic medical records (EMR), surveys, and qualitative methods such as semi-structured interviews and focus groups (in English and Spanish). Grant-funded research staff also manage, curate, and assist in programming and analysis of “big data” such as Medicare claims, Surveillance, Epidemiology, and End Results (SEER) cancer registry, geospatial data, and sequencing and high-throughput biological data sets for additional studies led by PIs in the Departments of Clinical Sciences, Neurology, Obstetrics & Gynecology, Internal Medicine, Radiation Oncology, Surgery, Pharmacology, Cell Biology, Biochemistry, Immunology, Molecular Biology, Center for Genetics of Host Defense, and Hamon Center for Therapeutic Oncology Research.

Student and Graduate Pipeline

A close collaboration between UT Southwestern and the UT School of Public Health, Dallas Regional Campus provides a pipeline of master’s and doctoral public health students that improve the population health workforce at UT Southwestern. We highlight several aspects of our student and recent graduate pipeline here. The joint MD/MPH program on the Dallas campus currently has 51 active students. These students can participate in population health research experiences under the mentorship of UT Southwestern investigators.

In 2015, UT Southwestern, in collaboration with Southern Methodist University (SMU), launched a new joint PhD program in biostatistics. Students take coursework at SMU, engage in a short-term research experience at UT Southwestern, and then commit to 1-2 years of working in close collaboration with UT Southwestern investigators.

Additional affiliations with regional and state-wide academic institutions, including UT-Dallas, Southern Methodist University, Rice University, University of Dallas, among others, also provide access to students and recent graduates. For example, over the past four years, 2 undergraduate and 4 graduate students with expertise in geospatial analysis from UT-Dallas served as research assistants for UT Southwestern faculty population health projects.

Gaps in the population health workforce

Addressing gaps in the population health workforce will enhance UT Southwestern's capacity to address all six of our stated health priorities.

Stronger Student Pipeline

The current student pipeline could be improved in two main ways. First, we have a limited number of students participating in internships and transitioning directly from graduate programs to staff positions at UT Southwestern. Second, we have a limited number of formal relationships and mechanisms facilitating student recruitment into the UT Southwestern population health workforce. Expanding existing relationships to include additional universities across the region and students from a variety of disciplines (e.g., psychology, economics, anthropology, communication science) would greatly improve our population health workforce.

Team Science

Formal training and support for multidisciplinary team science is needed to facilitate development of novel population health research and practice. Additional financial support for existing team science training programs across campus is also needed.

Research Fellowships

Additional post-doctoral fellowship spots would serve to grow UT Southwestern's capacity to conduct high-quality, relevant population health research. There is a need for additional fellowship spots for clinician-scientists and postdoctoral fellows. A training grant to support the implementation of a formal postdoctoral training program to recruit high-quality candidates is needed. Training grants and programs in collaboration with our regional academic partners such as University of Texas School of Public Health- Dallas Campus and University of Texas- Dallas and would successfully grow our pipeline from pre- to post- doctoral fellows to faculty.

Geospatial Analysis

There is a rapidly growing interest among UT Southwestern faculty in geospatial data analysis. There is a need for training in basic geospatial analysis for existing analysis staff as well as a need to hire at least one masters trained experienced geographic information scientist.

Clinical and Population Informatics

UT Southwestern has invested in growing campus-wide bioinformatics expertise with the recent development of Department of Bioinformatics. However, there is an unmet need for additional expertise in regard to clinical and population informatics. Specifically, there is a need for the application of development of cutting edge computational methods for data mining, pattern recognition, and data modeling. Expertise in this area would allow UT Southwestern to translate findings from massive sources of complex and messy clinical data (e.g., EMR data) toward development of new strategies to improve the delivery of healthcare to populations. Meeting this gap will require recruitment of new senior leaders in clinical informatics, a recently recognized boarded subspecialty recognized by the American Board of Medical Specialties, and development data architecture, a data interface methodology, and technology solutions.

Breadth of Faculty Content Expertise

Our small but growing population health workforce is primarily engaged in cancer prevention and control research. We face gaps with our ability to address some of our catchment region's key health challenges (see Chapter 2), including obesity and additional key drivers of public health, including tobacco prevention and cessation. Additional clinical and research faculty hires are needed to increase the breadth of population health research at UT Southwestern.

Epidemiology Expertise

UT Southwestern is currently recruiting for 2 faculty epidemiologists who can grow and support methodologically robust epidemiological research. These additional hires will improve upon UT Southwestern's current strengths in cancer epidemiology and will expand campus epidemiologic expertise capacity to other health conditions such as diabetes and cardiovascular disease.

Chapter 8

Assessment of Additional Needs

Introduction

Our population health needs are largely for infrastructure and technology (see Chapter 6), and population health workforce (see Chapter 7). Additional needs are described here. Addressing these needs will enhance UT Southwestern's capacity to address all six of our stated health priorities, particularly expanding access for underserved populations, community partnerships/service integration, and navigation and care coordination.

Additional Needs

Population Health Branding and Reputation

UT Southwestern has a reputation as a top-tier institution for basic and translational science discoveries, medical education, and world-class clinical care. However, community members and stakeholders do not yet recognize our strong and growing expertise in population health. This fact has been brought to light through engagement with our Community Advisory Panel (CAP). CAP members participating in the development of this report (see Chapters 2, 3) and in a more recent CAP session provide insight into UT Southwestern's reputation. Overall, CAP members expressed little awareness of UT Southwestern's local efforts to improve population health. Some participants named specific health systems (most commonly Baylor) that conducted health events or community outreach (e.g. newsletters), but most were not aware of any community engagement or health improvement campaigns. These findings demonstrate that community members are not receiving the message that healthcare organizations are interested in and responsive to community needs. Notably, no member mentioned efforts conducted to date by either UT Southwestern or Parkland Health and Hospital System.

Thus, UT Southwestern has a significant unmet need to improve community members' awareness of our efforts to improve population health in our catchment region. This need is particularly urgent given the rapidly growing population and changing demographics of our region, as described in Chapter 1. Many steps need to be taken to improve our reputation in this area. The long-term benefits of improving our branding and reputation will serve to improve community engagement, engender trust, and grow population health improvement efforts.

Community-facing research presence

While UT Southwestern investigators currently use multiple strategies to engage community members in research, these efforts largely occur on our academic campus, via telephone or mail, or in the healthcare system setting. Our community-based recruitment efforts, such as those at food banks or in other settings within underserved neighborhoods, are less common. To improve population health, expansion of efforts beyond the healthcare setting is required.

Many other national academic institutions, some funded via their CTAs, employ recruitment approaches outside their academic campuses. For example, institutions like Washington University School of Medicine in St. Louis, Georgetown, University of Alabama-Birmingham, and others, use mobile research vehicles or storefront spaces located in underserved, urban neighborhoods. Existing models require strong community-academic partnerships and multiple sources of funds to ensure their longevity in the face of uncertain or intermittent peer-reviewed funding.

UT Southwestern currently has a limited community-embedded research presence. One exception is Moncrief Cancer Institute, which operates a mobile cancer survivorship clinic. This clinic, traveling Moncrief's vast catchment region (see Chapter 5), provides comprehensive survivorship services within a 1.1 million custom-built 18-wheeler. Funded by DSRIP, professionals onboard this van are prepared to offer cancer surveillance using mammography or colonoscopy as well as cancer screening services for cervical, colorectal, and breast cancer. Also available are genetic counseling and risk assessment, fitness training and nutritional education and training, psychosocial screening, and navigation services. However, similar services and programs are lacking within the core of our catchment region, which is predominantly urban (see Chapter 1). Developing storefronts and/or additional mobile units would effectively geographically relocate our academic medical center into a neighborhood environment. Doing so would provide a community-facing presence to our academic research and would have multiple benefits, including:

- Facilitating recruitment of underserved populations into our research studies
- Improving the process by which research participants and stakeholder groups can engage with UT Southwestern investigators
- Facilitating community engagement with neighborhood stakeholders and residents
- Improving UT Southwestern's reputation as a leader in population health
- Facilitating dissemination of research findings back to community members

In turn, UT Southwestern will be better positioned to address all six of our population health priorities, particularly expanding access for underserved populations, community partnerships/service integration, and navigation and care coordination.

Chapter 9

Plan and Strategy to Implement Population Health

Introduction to the UT Southwestern Population Health Strategic Plan

The UT Southwestern Medical Center plan to implement population health activities and improve population health is structured as follows. We present our strategic plan themes as well as proposed initiatives. Strategies and projects were selected specifically to highlight UT Southwestern's strengths, areas of current growth, strategic vision, and health priorities (see Chapter 5) and if initiated, will help in the achievement of closing our existing gaps in infrastructure, technology, and workforce (see Chapters 6 and 7). Several of these proposed initiatives will be dependent on achievement of external funding. **The overall long-term goal is to establish UT Southwestern's capacity to improve population health across North Texas.** The pursuit of population health improvement is an emerging *third curve* for academic health systems like UT Southwestern. Our themes and initiatives reflect the recommended next steps and best practices required by academic medical centers to meet our long-term goal.(80)

UT Southwestern Population Health Improvement Themes

We have identified the following 2 over-arching themes that will guide our Population Health Improvement Strategy to address our six health priorities.

1. **Multi-health system, regional representation.** *Advance capacities of UT Southwestern investigators, administrators, and healthcare providers to conduct population health research & deliver population health interventions across multiple regional health systems and a broader multi-county catchment area.*

UT Southwestern has a unique opportunity to study and improve population health across a broad catchment area through its involvement in and collaborations with several expanding, large regional health systems including Southwestern Health Resources, Parkland Health and Hospital System, and Children's Health. By making investments in population health infrastructure and expertise, facilitating partnerships, and coordinating activities across our multiple, regional health systems and other key medical and social service organizations, we will be able to increase the depth and breadth of population health activities within and beyond Dallas County. This includes impact into Tarrant County and the surrounding 11 additional counties in the UT Southwestern catchment area. By expanding reach, we increase generalizability and potential impact of our population health activities. Additionally, while our primary goal is to expand reach across and within our primary catchment area, some of our initiatives below propose expansion beyond our catchment region and across the state.

2. **Community-engagement and team science.** *Advance capacities of UT Southwestern investigators, community organizations, and community-based providers to systematically incorporate culturally and methodologically sound community-engaged and team-science population health research. This theme encompasses:*
 - a. **Community organization partnerships.** *Expand and sustain partnerships with (a) community organizations, (b) community-based healthcare providers, and (c) UT Southwestern investigators to facilitate population health research and coordination of care*
 - b. **Community-member participation.** *Enhance fair and equitable opportunities for community members' participation in population health research.*
 - c. **Team science.** *Promote multidisciplinary collaboration to accelerate population health discoveries and to translate discoveries into population health interventions and real-world clinical practice.*

Proposed UT Southwestern Population Health Initiatives

We are proposing 5 potential Population Health Initiatives that synergize with our two overarching themes. All of the proposed initiatives directly address one or more of the 6 health priorities identified in our needs assessment (Chapter 5). While some initiatives are not directed at specific health problems, they would improve regional capacity to significantly impact population health in the UT Southwestern catchment area. Each initiative leverages existing institutional and/or community infrastructure (see Chapters 6 and 7) and would serve to close noted gaps in existing capacity. Table 9.1 below shows each of initiative and how they meet our 2 themes and address, either directly or indirectly, 6 health priorities.

Table 9.1. Proposed Population Health Initiatives addressing UT Southwestern's population health improvement themes and health priorities.

| Initiatives | Themes | | Health Priorities | | | | | |
|--|-------------------------|-------------------------------------|-------------------|------------------------|-----------------------------|------------------------|---------------|-------------------------------|
| | Regional representation | Community engagement & team science | Chronic disease | Access for underserved | Prevention, early detection | Community partnerships | Mental Health | Navigation, care coordination |
| 1. Establish Population Health Research Institute | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| 2. Increase and Improve Population Health Workforce | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3. Develop Texas Online Population Health Assessment Tool (TOPHAT) | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| 4. Develop, Implement Community-based Depression Screening | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5. Expand, Disseminate Community Research Registry | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |

1. Establishment of the Population Health Research Institute (PHRI)

The new affiliation between UT Southwestern and Texas Health Resources (THR) to form the Southwestern Health Resources venture sets the stage for our first proposed population health initiative. The new Southwestern Health Resources entity is committed to developing a Population Health Research Institute (PHRI) to expand and integrate existing infrastructure and expertise to conduct research among groups of individuals locally, regionally, and nationally. The mission of the PHRI will be *to conduct research among groups of individuals to understand determinants of health and test interventions to improve health outcomes.*

This new entity will be building up the capacity to conduct observational and interventional population health research studies across the new 31 hospital Southwestern Health Resources network (all of which are on the Epic electronic medical record (EMR). The Southwestern Health Resources catchment region is described in Chapter 1. The Institute will also foster studies in our local Parkland Health and Hospital county safety net system, as well as use of large datasets for regional, state, and national studies pertaining to outcomes, health services, and population health research. The Institute is going to be designed as a matrix to create synergies with the existing research programs at UT Southwestern across the Departments of Clinical Sciences and Internal Medicine, as well as the Population Science program in the UT Southwestern Harold C. Simmons Cancer Center.

Thus, the organizing entity for UT Southwestern Population Health Strategic Plan will be the new Population Health Research Institute (PHRI). Goals of the PHRI are to:

1. Leverage and grow existing population health expertise and research infrastructure
2. Create an environment of innovation
3. Lead transformative population health research programs
4. Build a robust and secure population health analytics infrastructure
5. Conduct studies to characterize, explain and/or influence the distributions of health within and across populations and multiple levels (patient, provider, clinic, system, and neighborhood)
6. Recruit, develop and retain talent

The themes, initiatives, and priorities of this UT Southwestern Population Health Strategic Plan will be incorporated into the mission and activities of the Institute. The PHRI will use its multiple, regional health system partners as natural laboratories for observational and interventional studies. It will also support the development, evaluation, and dissemination of innovative population health programs to prevent, detect, and treat disease to facilitate our partner health systems to be learning and community-engaged health systems. Additionally, it will support population health research using state and national datasets. By doing so, the PHRI will create knowledge and model program to improve the quality, outcomes, efficiency, equity, and patient-centeredness of care, as well as the overall health and wellness of the population.

To fulfill this mission, UT Southwestern will need to expand its research infrastructure and personnel to design and manage studies involving thousands of participants and collecting and managing data from multiple sources to answer important research questions about entire populations.

The PHRI will build on UT Southwestern's growing strengths in several key areas:

- Examining variations in healthcare quality, outcomes, access, cost, and equity
- Identifying factors at multiple levels (patient, provider, clinic, system, and neighborhood) that influence health outcomes
- Conducting pragmatic and comparative effectiveness randomized trials using innovative experimental methods to evaluate intervention outcomes in "real world" practice and unselected, population-based patient populations
- Analyzing information from large databases (i.e., Medicare claims, Dallas-Fort Worth Hospital Council all-payer claims, state and national registries, geospatial information systems) and electronic medical records (EMR).
- Conducting community-engaged research in collaboration with local community members and organizations serving our culturally and economically diverse north Texas catchment area

2. Improve the Population Health Workforce

Increase the size, multidisciplinary methodological skills, and capacity of the UT Southwestern population health workforce to conduct rigorous population health research and deliver community-based interventions.

A number of UT Southwestern investigators have been successful in securing large (U54, R24, UL1, RO1) grants for population health observational and interventional research, but the current number of investigators and infrastructure built to support these funded studies is not sufficient to support the depth and breadth of population health research we strive to achieve. The success of the population health initiative at UT Southwestern must be closely linked with and effectively supported by continued investment in the population health workforce.

The Department of Clinical Sciences is the main academic home for PhD faculty members with expertise in population research methodology and provides secondary appointments for clinicians engaged in population research. A priority for the Department is to recruit faculty with expertise in epidemiology, outcomes, healthcare delivery research, medical informatics, community-engaged research, and advanced statistics. Open searches are underway for faculty with expertise in epidemiology, health behavior, and biostatistics. We are also working closely with the Dallas Regional Campus of the UT School of Public Health to recruit a strong regional Dean who will, in turn, grow the regional faculty with new investigators who will collaborate with UT Southwestern population scientists to tackle the big health improvement needs in our North Texas catchment area. We have already collaborated with the School of Public Health to establish a successful MD/MPH program through which 51 UT Southwestern medical students are currently receiving population health training (see Chapter 7).

We recognize that population health intervention studies are costly in terms of staff time for individuals who actually spend time in communities, develop communications materials, collect and manage data, and deliver interventions. When we were ramping up our work in population health, in 2009, we created a new “population sciences career tracks” for UT Southwestern that appropriately advertised for, classified, and compensated individuals with expertise in population science research. These career tracks support continued promotion such that individuals can have rewarding professional careers in population health research through promotion to positions with more responsibility and higher salaries. We have since shared this UT job family classification with colleagues at UT San Antonio and, through the UT-CoPHII effort, propose sharing with all other interested institutions in the UT System. In the Department of Clinical Sciences, we have used this classification to build a grant-funded research staff of more than 60 individuals consolidated into a highly efficient comprehensive administrative structure that serves population and translational researchers across the UT Southwestern campus. Our professional staff currently manage 43 population research studies led by principal investigators from Departments of Clinical Sciences, Internal Medicine, Pediatrics, Psychiatry, and the UT School of Public Health Dallas Regional Campus. Total enrollment for these studies exceeds 800,000 individuals; data are collected from electronic medical records (EMR), surveys, and qualitative methods such as semi-structured interviews and focus groups (in English and Spanish). Grant-funded research staff also manage, curate, and assist in programming and analysis of “big data” such as Medicare claims, Surveillance, Epidemiology, and End Results (SEER) cancer registry, geospatial data, and sequencing and high-throughput biological data sets for additional studies led by PIs in the Departments of Clinical Sciences, Neurology, Obstetrics & Gynecology, Internal Medicine, Radiation Oncology, Surgery, Pharmacology, Cell Biology, Biochemistry, Immunology, Molecular Biology, Center for Genetics of Host Defense, and Hamon Center for Therapeutic Oncology Research.

To accomplish our aims we will need to recruit additional population health research faculty (across a variety of disciplines), post-doctoral fellows, database administrators, statistical programmers and analysts, coordinators and research assistants, among others.

We have been very successful in having junior faculty obtain internal KL2 awards from our CTSA, and then ladder to externally funded NIH K23/K08, VA, and foundation career development awards. However, as we further grow the pool of young faculty, we will also need to recruit more mid-level and senior scientists capable of mentoring a growing cadre of junior faculty and post-doctoral fellows. We are also in the early stages of planning a new doctoral program in Population Sciences through the UT Southwestern Biological Sciences Graduate School. Faculty in the Department of Clinical Sciences and Internal Medicine direct a course in the MS program in the graduate school entitled, “Introduction to Patient-Centered Outcomes and Health Services Research.” We will plan on expanding the population health research content in the course and make it broadly available to a full spectrum of learners including: junior faculty, pre/post-docs, medical/graduate/physician assistant students, programmers, and coordinators. Southwestern Health Resources also will be funding the recruitment of new investigators through a new THR-funded Clinical Scholars program. This provides an additional mechanism for attracting and supporting new faculty interested in epidemiology, outcomes, health services, and population health research in North Texas.

Finally, we recognize that building capacity for team science is important for growing capacity in population health. Therefore, we will work through our UT Southwestern Center for Translational Medicine to develop and implement multi-mode team science training for the entire translational workforce including: faculty, trainees, coordinators, programmers, and research assistants. We will implement small group training opportunities through lectures and cores, web-based education modules, and multi-disciplinary symposia to foster team science training and we will promote multidisciplinary collaboration to accelerate translational discoveries through provision of pilot funds and planning awards to foster exploratory team collaborations. We are already working with our university promotion and tenure committee to develop policies that recognize team science contributions through collaborations as multiple principal investigators for NIH grants and multi-investigator applications.

To monitor progress toward our goal to improve the population health workforce, we will monitor our progress toward the following metrics:

Faculty and Trainees

1. Number of new population health faculty hires, size and sources of funding for new faculty start-up packages
2. Number of opportunities and faculty participation in population health workforce training and retention programs (e.g., LEAD: Leadership Emerging in Academic Departments)
3. Number and source of available institutional pilot awards supporting team science, population health, and community-based collaborations. Existing pilot funds include those provided by the American Cancer Society, Center for Translational Medicine, Center for Patient Centered Outcomes Research, and the President's Office
4. Number of planning awards received by population health faculty
5. Number of residents, clinical fellows, postdoctoral fellows including KL2 scholars engaged in population health research and practice
6. Number of predoctoral students including MPH and PhD students, predoctoral fellows, and MD/MPH students

Staff

7. Number, educational background, retention and promotion rate for population health and team science staff
8. Number of opportunities and participation in population health workforce training and retention for staff (e.g., EPIC EMR training, qualitative methods training, new staff mentoring program initiating January 2017)

3. Expand, Improve, and Disseminate the UT Community Research Registry

Our existing Community Registry (see Chapters 2, 3, and 6), supported by our Center for Translational Medicine, is a key feature of UT Southwestern's population health research capacity. The goal of the

proposed initiative is to improve our existing methods of recruiting individuals to participate in the Registry, to expand our recruitment, and to disseminate our Registry to additional University of Texas CTSA institutions. An expanded community-based research registry can include other University of Texas CTSA institutions to facilitate enrollment of ethnic minority and rural populations into research that translates findings into improved population health. We will offer to help expand the research registry at The University of Texas Southwestern that has enrolled 12,000+ community members (~40% African American, ~46% Hispanic).^{3,4} The Registry has identified effective recruitment strategies including recruiting at community events; reaching individuals in convenient, safe spaces within neighborhoods; and enrolling those interested in being contacted for future health research studies. Registry staff collect and store sociodemographic, healthcare utilization, and contact information to facilitate efficient eligibility screening and recruitment into numerous research studies. To expand the Registry to other UT CTSA institutions, we have met with collaborators from three other UT System institutions and have previously applied, unsuccessfully, for additional funding through the national CTSA network. If sufficient funds are received through UT-CoPHII or another mechanism in the future, our aims will be to:

Aim 1. Participate in the design, implementation, and evaluation of a statewide, community-based research registry supporting enrollment of diverse populations, particularly African American and Hispanic populations, in population health research.

There are four CTSA institutions in the Texas Regional CTSA Consortium (TRCC) Statewide Clinical Trials Network that have expressed interest in expanding patient and community registries to support clinical trials. Pending approval and appropriate resources, we will create a shared information technology infrastructure, recruitment, and enrollment “registry toolkit” to facilitate the development of a UT Community Research Registry that could link the multiple communities served by the four Texas CTSA institutions. With support from UT-CoPHII, additional UT institutions may also be interested in joining this effort.

Aim 2. Develop and test one-on-one and community-wide media strategies for recruiting and enrolling African American and Hispanic populations into the statewide UT Community Research Registry.

We will conduct qualitative and quantitative research across the four CTSA hubs to a) identify best practice strategies for recruitment and enrollment, b) test one-on-one and community-wide media strategies for recruitment, and c) assess the representativeness of the registry relative to the census statewide and each hub’s catchment area.

Aim 3. Characterize how the community-based research registry facilitates engagement of African American and Hispanic populations into population health research studies.

We will quantify enrollment of Registry members in population health research studies across participating institutions and compare recruitment efforts of studies using and not using the UT

Research Registry. We will also qualitatively explore community advisory board, registry members' and researchers' experiences with the UT Research Registry.

The proposed initiative will develop and evaluate an innovative strategy across additional UT System CTSA hubs for a community-based research registry to address the well-documented "road block" of the enrollment of ethnically diverse populations in population health research with promise for applications to CTSA institutions nationwide.

Expansion Targets: The University of Texas Health Science Center at Houston (UTHealth), The University of Texas Medical Branch at Galveston (UTMB), and The University of Texas Health Science Center at San Antonio (UT Health San Antonio), together with UT Southwestern, could serve as hubs for our statewide cross-site community-based research registry (UT Research Registry). The four University of Texas CTSA institutions serve 42% of the 26.5 million individuals living in Texas and reach more than three-fourths of the state of Texas (rural and urban areas). With support from UT-CoPHII, additional UT institutions may also be interested in joining this effort.

4. Development and Implementation of the Texas Online Population Health Assessment Tool



We propose the development of an online, interactive population health assessment tool. The Texas Online Population Health Assessment Tool (TOPHAT) will serve as a resource for anyone interested in conducting population health needs assessments. TOPHAT will provide the public access to multiple, interactive, layers of population health statistics, such as morbidity rates and life expectancy. The public will be able to easily assess the health of neighborhoods, cities, towns and counties for populations defined by race/ethnicity and sex across the state.

TOPHAT investigators, from UT Southwestern, UT Dallas, UT Austin, and the UT System, will work closely with the Texas Department of State Health Services (DSHS) for this project. Each project partner will participate by providing raw data and metadata, analyzing and georeferencing data, creating the interactive mapping interface, storing raw and derived data, and hosting the tool online. Additional project partners will contribute to TOPHAT as it is developed and goes live. TOPHAT will have multiple features; it will be:

1. *Freely Accessible* to increase population health data accessibility and availability to community-members across the UT Southwestern catchment area and the entire state of Texas by pre-processing of raw health statistics obtained from the TX DSHS and other sources.
2. *Easy-to-use and understand* to facilitate conduct of population health needs assessments by researchers, policy-makers, and community members.
3. *Comprehensive and consistent*, to enable conduct of equivalent and directly comparable population health needs assessments by standardizing methods for data obtained across the state.

TOPHAT is an emerging project. The short-term goals are to:

1. Receive IRB approval for vital statistics data request from DSHS for all participating investigators and institutions
2. Convene stakeholder meeting of multidisciplinary investigators and staff across UT institutions around the state and state officials who generate and have an interest in population health statistics and needs assessments
3. Obtain raw vital statistics and calculate population health, mortality rate, and life expectancy values for multiple geographies and populations across the state
4. Develop a sustainable funding plan for TOPHAT for first 5 years of project support, including web hosting fees, web programming, geographic information systems (GIS) support, technical assistance, and project communications.

5. Development and Implementation of Community-based Depression Screening and Referral

Assuming adequate funding, we will initiate an integrated, evidence-based depression screening and referral program for clients of the largest charitable food distributor in North Texas as a proof of concept program assessing mental health conditions in a community, social service setting. This community-based project will screen adult clients using the Patient Health Questionnaire-2 (PHQ-2).^(81, 82) Clients screening positive will be referred to community mental health providers who provide services for the under- and un-insured. The referral process is critical to the success of any mental health screening program, particularly one among a vulnerable, under-served populations such as food insecure clients receiving charitable food assistance. Thus, this project, to be successful, must be developed in close collaboration with multidisciplinary experts and stakeholders from multiple institutions.

This project will leverage three existing community-based collaborative efforts. First, this project builds on an existing collaborative mental health screening and referral project at Paul Quinn College, a private, historically black college (HBCU) located in South Dallas. This project, currently funded by a UT Southwestern community-based pilot award, is a collaboration between investigators in the UT Southwestern Department of Psychiatry and Metrocare, the largest provider of mental health services in Dallas, which provides safety-net mental health services to the under- and un-insured residents of Dallas County. In this project, students are screened on campus for multiple behavioral and mental health needs and are referred to services if needed. Second, this project builds on CARE (Community Assistance Research), an existing academic-community partnership focused on the health of food insecure residents of Dallas County.⁽⁸³⁾ CARE collaborators include North Texas Food Bank, Crossroads Community Services, which is NTFB's largest food distributor, and multidisciplinary academic investigators at UT Southwestern, University of Dallas, and University of Texas-Dallas. The three ongoing CARE research projects are currently funded by Robert Wood Johnson Foundation⁽⁸⁴⁾ and two internal pilot awards. The proposed project will require additional funding. Last, this project builds from expertise and practices established in *VitalSign*⁶ and its network of which implement computerized depression screening and referral protocols in community-based primary care clinics (see Chapter 4).

Over the last 3 years, CARE facilitated a detailed needs assessment and planning process through which mental health, particularly depression, were identified as a health priority for the food insecure population in North Texas. As part of this assessment, UT Southwestern investigators conducted, in Spanish and English, 8 focus groups of 47 clients receiving charitable food from the regional food bank. Of the health issues discussed, mental health problems were reported as the most common concern to participants and their families.(83) CARE also facilitated a meeting of stakeholders to solicit feedback on the health issues of highest priority to tackle among the food insecure population of North Texas in 2014. Stakeholders identified depression as one of the top 3 priority health issues for food insecure populations that was amenable to additional research and intervention. Stakeholders represented the following regional institutions:

- University of Texas Southwestern Medical Center
- University of North Texas
- University of Texas at Dallas
- Southern Methodist University
- United Way
- North Texas Food Bank
- Crossroads Community Services

CARE investigators also engaged charitable food providers, including leadership, staff, and volunteers, to identify the ways in which their services improve health. Providers reported that 1) providing social support and respectful listening were key to supporting mental health of their clients and 2) providing appropriate referrals was an existing way in which they can improve the lives of their clients. However, regional charitable food providers to date have no organized, centralized, evidence-based, or accountable method to screen or refer for depression. The PHQ-2 is currently being programmed (but will not go live) into the existing data entry system at Crossroads Community Services, the largest distributor of charitable food the North Texas Food Bank 13-county region.

Next steps are to:

1. Convene stakeholder meeting
2. Identify best practices for depression referral
3. Develop procedures, policies, and documentation processes
4. Identify funds to support short-term project pilot testing and longer-term project sustainability
5. Develop, implement, and evaluate staff training prior to and continuously throughout life of project
6. Project initiation and continuous monitoring

Taking what we learn from implementation of screening via the food bank and our other community mental health screening projects described above, we will look for additional opportunities and partnerships to expand the community-based screening program.

Summary

Our proposed initiatives, if supported with additional funding, will serve to meet our long-term goal to establish UT Southwestern's capacity to improve population health across North Texas. Proposed initiatives meet our current health priority areas (see Chapter 5) and also will improve and expand our capacity to meet additional community health needs (see Chapters 2 and 3) in which we currently have less capacity. Taken together, our themes and proposed initiatives reflect the recommended next steps and best practices required by academic medical centers to accomplish improved population health.(80)

Chapter 10

Environmental Impact Assessment

Introduction

We assess the potential positive and negative impacts that each of our population health initiatives may have over time as illustrated in the Table below. We also present strategies designed to mitigate potential unintended consequences in Table 10.1.

Table 10.1. Potential impacts of proposed population health initiatives and mitigate any potential negative impacts

| Initiative | Positive | Negative | Strategy to Lessen Negative Impact |
|--|--|---|--|
| 1. Establish Population Health Research Institute | Growth in institutional expertise and capacity | Growth is intermittent, sporadic, or does not keep pace with workforce development efforts or existing infrastructure | Development of strategic planning process and timeline to ensure prioritization of projects and implementation of a realistic, sustainable growth plan in terms of faculty and staff recruitment and increasing population health infrastructure resources. |
| 2. Increase and improve population health workforce | Growth in workforce size, institutional expertise and capacity | Growth in workforce size may outpace workforce retention and training resources | Regular staff surveys to assess satisfaction and workforce needs Ongoing workforce development process to ensure staff needs are assessed and met |
| 3. Develop Texas Online Population Health Assessment Tool (TOPHAT) | Public availability of interactive population health statistics Increased awareness of statewide variation in population health | Stakeholders and community members perceive threat or slander if their community has suboptimal health Small sample sizes may prevent assessment of some population subgroup- and geographic area-specific measures | Stakeholder engagement to facilitate communication and accurate action-oriented interpretation of population health statistics Ongoing assessment of best practices for population assessment in light of small sample sizes |
| 4. Develop, Implement Community-based Depression Screening | Increased early intervention and treatment for depressive symptoms | Greater identification of individuals at risk of depression may not translate into greater number of individuals referred or treated for depressive symptoms Unintended effects of depression screening, including identification of false positives | Monitoring and assessment of screening and referral pathways Stakeholder engagement to facilitate the screening, referral, reminder, and follow-up processes Stakeholder engagement to evaluate failures and opportunities for improvement in the screening referral, reminder and follow-up process Monitor and assess the sensitivity and specificity and other test characteristics of depression screening tool |
| 5. Expand, Disseminate Community Research Registry | Better regional and statewide representation of populations represented in the research registry | Increased recruitment of respondents for the survey may not translate into increased agreement to participate in research registry or increased participation in research | Qualitative research and stakeholder engagement to ensure recruitment methods and survey tool are culturally sensitive, at appropriate reading level, equivalent across languages, and appropriate across geographic regions and populations |

Appendices

1. Health Topics Survey used in the Community Research Registry (English language version)
2. Texas Cancer Registry data for UT Southwestern catchment region vs. state
3. Externally funded population health research at UT Southwestern as of October, 2016

Appendix 1. English-language version of the Health Topics Survey used in the Community Research Registry

| | | | | | |
|--|---|--|---|--|--|
| Event <input style="width: 100%;" type="text"/> | Date: <input style="width: 20px;" type="text"/> / <input style="width: 20px;" type="text"/> / <input style="width: 20px;" type="text"/> | Interviewer Administered Survey <input type="radio"/> | | | |
| HEALTH TOPICS SURVEY | | | | | |
| Please check all health topics you are concerned about or interested in: | | | | | |
| <input type="radio"/> Drug Abuse | <input type="radio"/> Immunizations/Vaccinations | <input type="radio"/> Tobacco use/ Secondhand smoke | | | |
| <input type="radio"/> Alcohol use | <input type="radio"/> Healthy Eating | <input type="radio"/> Violence (gang, battering, dating) | | | |
| <input type="radio"/> Diabetes | <input type="radio"/> Exercise (like walking) | <input type="radio"/> Depression / Mental health issues | | | |
| <input type="radio"/> Asthma | <input type="radio"/> Heart Disease | <input type="radio"/> HIV/Sexually Transmitted Diseases | | | |
| <input type="radio"/> Pregnancy | <input type="radio"/> Obesity in children or adults | <input type="radio"/> Automobile safety (car crash) | | | |
| <input type="radio"/> Stress Management | <input type="radio"/> Communicating with doctor | <input type="radio"/> Getting medical/dental care | | | |
| <input type="radio"/> Cancer (What kind?) <input style="width: 150px;" type="text"/> | <input type="radio"/> Other: <input style="width: 150px;" type="text"/> | | | | |
| Date of Birth | Sex | Zip Code | | | |
| <input style="width: 20px;" type="text"/> / <input style="width: 20px;" type="text"/> / <input style="width: 20px;" type="text"/> month day year | <input type="radio"/> Male <input type="radio"/> Female | <input style="width: 40px;" type="text"/> | | | |
| | | <input type="radio"/> Yes <input type="radio"/> No | | | |
| How do you describe yourself? <i>Check only one of the following:</i> | | What is your highest level of education? <i>Check only one of the following:</i> | | | |
| <input type="radio"/> Black or African American <input type="radio"/> White <input type="radio"/> American Indian or Alaska Native <input type="radio"/> Native Hawaiian or Pacific Islander <input type="radio"/> Asian <input type="radio"/> Other <input style="width: 100px;" type="text"/> | | <input type="radio"/> Grade school (1st-8th grade) <input type="radio"/> Some high school <input type="radio"/> High school diploma/ GED <input type="radio"/> Technical or vocational degree <input type="radio"/> Some college <input type="radio"/> College graduate | | | |
| Are you: <i>Check only one of the following that best describes you.</i> | | What is your current employment status? <i>Check only one of the following:</i> | | | |
| <input type="radio"/> Married <input type="radio"/> Living with partner <input type="radio"/> Separated <input type="radio"/> Divorced <input type="radio"/> Widowed <input type="radio"/> Single, Never Married | | <input type="radio"/> Employed, full-time <input type="radio"/> Employed, part-time <input type="radio"/> Not employed <input type="radio"/> Retired <input type="radio"/> Student <input type="radio"/> Other: <input style="width: 150px;" type="text"/> | | | |
| Are you a parent? | | Are any of your children under age 18? | | | |
| <input type="radio"/> Yes <input type="radio"/> No | | <input type="radio"/> Yes <input type="radio"/> No | | | |
| List the age and sex of each of your children: | | | | | |
| Age: <input style="width: 20px;" type="text"/> <input type="radio"/> Male <input type="radio"/> Female | Age: <input style="width: 20px;" type="text"/> <input type="radio"/> Male <input type="radio"/> Female | Age: <input style="width: 20px;" type="text"/> <input type="radio"/> Male <input type="radio"/> Female | Age: <input style="width: 20px;" type="text"/> <input type="radio"/> Male <input type="radio"/> Female | Age: <input style="width: 20px;" type="text"/> <input type="radio"/> Male <input type="radio"/> Female | Age: <input style="width: 20px;" type="text"/> <input type="radio"/> Male <input type="radio"/> Female |
| Do you currently rent or own your home? | | | How many people live in your home, including you? | | |
| <input type="radio"/> Own <input type="radio"/> Rent <input type="radio"/> Occupy without paying rent | | | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 or more | | |

(SURVEY CONTINUES ON BACK SIDE)

Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare, Medicaid, or Parkland Plus?

Yes No

Is there a place that you usually go to when you are sick or need advice about your health?

No Yes

↳ **If YES, where do you go most?**

- Private doctor's office
- Parkland clinic
- A free clinic (ex. Los Barrios, MLK, Dallas Central Ministries)
- Emergency Room
- Other:

Were you born in the US?

Yes No

↳ **If NO, how many years have been in the United States?**

What country are you from originally?

Do you speak any language other than English?

No Yes

↳ **If YES, what language(s)?**

If you speak Spanish please complete the following questions about your language preference:

| <i>Check one language preference for each of the following questions:</i> | SPANISH ONLY | SPANISH BETTER THAN ENGLISH | BOTH EQUALLY | ENGLISH BETTER THAN SPANISH | ENGLISH ONLY |
|---|-----------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|
| In what language do <u>you usually think</u> ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In general, what language do <u>you read and speak</u> ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| What language do <u>you usually speak with friends</u> ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| What language do <u>you usually speak at home</u> ? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

May we contact you in the future for research studies?

If YES, please provide all of the following contact information:

Yes No

Please print

First Name

Last Name

Email

Street Address

City

Zip Code

Home Phone #

Mobile/ Cell Phone #

Work Phone #

Appendix 2. Cancer Statistics for the UT Southwestern Catchment Region compared to the State of Texas

Age-adjusted incidence and mortality rates with 95% confidence intervals (CIs) for all cancers, both sexes, ages ≥ 18 , diagnosed 2011-2013.

Incidence

| UT Southwestern 13 Counties Region, 2011-2013 | | | |
|--|-------------|-----------------|-----------------|
| | Rate | Lower CI | Upper CI |
| NH White | 596.0 | 590.8 | 601.2 |
| NH Black | 628.5 | 615.7 | 641.5 |
| Hispanic | 445.3 | 434.2 | 456.6 |
| All | 567.4 | 563.2 | 571.6 |

| Texas, 2011-2013 | | | |
|-------------------------|-------------|-----------------|-----------------|
| | Rate | Lower CI | Upper CI |
| NH White | 581.8 | 579.2 | 584.5 |
| NH Black | 605.2 | 598.4 | 612.0 |
| Hispanic | 452.0 | 448.2 | 455.8 |
| All | 545.0 | 543.0 | 547.0 |

Mortality

| UT Southwestern 13 Counties Region, 2011-2013 | | | |
|--|-------------|-----------------|-----------------|
| | Rate | Lower CI | Upper CI |
| NH White | 217.4 | 214.3 | 220.6 |
| NH Black | 269.0 | 260.1 | 278.2 |
| Hispanic | 147.7 | 140.7 | 154.9 |
| All | 211.8 | 209.1 | 214.5 |

| Texas, 2011-2013 | | | |
|-------------------------|-------------|-----------------|-----------------|
| | Rate | Lower CI | Upper CI |
| NH White | 224.0 | 222.3 | 225.6 |
| NH Black | 268.6 | 263.9 | 273.4 |
| Hispanic | 170.3 | 167.9 | 172.8 |
| All | 213.5 | 212.3 | 214.8 |

Age-adjusted incidence and mortality rates with 95% confidence intervals (CIs) for all cancers, both sexes, ages ≥18, diagnosed 2011-2013, for the top 5 cancer types.

Incidence

| UT Southwestern 13 Counties Region Incidence, 2011-2013 | | | | | |
|---|-------------------------|-----------|-------|----------|----------|
| | | Frequency | Rate | Lower CI | Upper CI |
| All Race | Breast (Female) | 11,802 | 85.4 | 83.8 | 87.0 |
| | Lung and Bronchus | 9,319 | 75.7 | 74.1 | 77.3 |
| | Prostate | 8,905 | 63.9 | 62.5 | 65.3 |
| | Colorectal | 6,493 | 49.5 | 48.3 | 50.8 |
| | Kidney and Renal Pelvis | 3,310 | 24.6 | 23.7 | 25.5 |
| NH White | Breast (Female) | 8,057 | 170.0 | 166.2 | 173.8 |
| | Lung and Bronchus | 7,121 | 81.2 | 79.3 | 83.2 |
| | Prostate | 6,100 | 137.8 | 134.3 | 141.5 |
| | Colorectal | 4,320 | 49.0 | 47.6 | 50.6 |
| | Urinary Bladder | 2,413 | 27.9 | 26.7 | 29.0 |
| NH Black | Breast (Female) | 1,793 | 166.4 | 158.4 | 174.7 |
| | Prostate | 1,691 | 228.3 | 216.0 | 241.1 |
| | Lung and Bronchus | 1,431 | 93.1 | 88.0 | 98.5 |
| | Colorectal | 1,109 | 65.6 | 61.4 | 69.9 |
| | Kidney and Renal Pelvis | 484 | 28.3 | 25.7 | 31.2 |
| Hispanic | Breast (Female) | 1,342 | 110.6 | 104.1 | 117.4 |
| | Prostate | 812 | 109.0 | 100.5 | 118.0 |
| | Colorectal | 777 | 41.6 | 38.2 | 45.1 |
| | Kidney and Renal Pelvis | 527 | 26.7 | 24.1 | 29.5 |
| | Lung and Bronchus | 508 | 37.4 | 33.8 | 41.2 |

| Texas Incidence, 2011-2013 | | | | | |
|----------------------------|-------------------------|-----------|-------|----------|----------|
| | | Frequency | Rate | Lower CI | Upper CI |
| All Race | Breast (Female) | 43,755 | 147.5 | 146.1 | 148.9 |
| | Lung and Bronchus | 39,105 | 73.4 | 72.7 | 74.2 |
| | Prostate | 34,539 | 131.8 | 130.3 | 133.2 |
| | Colorectal | 28,126 | 51.4 | 50.8 | 52.0 |
| | Kidney and Renal Pelvis | 13,555 | 24.2 | 23.8 | 24.7 |
| NH White | Lung and Bronchus | 28,732 | 84.3 | 83.4 | 85.3 |
| | Breast (Female) | 27,367 | 159.9 | 158.0 | 161.9 |
| | Prostate | 22,196 | 132.7 | 130.9 | 134.5 |
| | Colorectal | 17,040 | 51.4 | 50.7 | 52.2 |
| | Urinary Bladder | 8,396 | 25.1 | 24.5 | 25.6 |
| NH Black | Breast (Female) | 5,278 | 159.8 | 155.4 | 164.3 |
| | Prostate | 5,227 | 208.0 | 201.8 | 214.3 |
| | Lung and Bronchus | 4,768 | 91.4 | 88.7 | 94.2 |
| | Colorectal | 3,611 | 64.4 | 62.2 | 66.7 |
| | Kidney and Renal Pelvis | 1,474 | 25.8 | 24.4 | 27.2 |
| Hispanic | Breast (Female) | 9,465 | 118.2 | 115.8 | 120.7 |
| | Colorectal | 6,505 | 47.8 | 46.6 | 49.1 |
| | Prostate | 5,915 | 103.6 | 100.7 | 106.4 |
| | Lung and Bronchus | 4,691 | 40.1 | 38.9 | 41.3 |
| | Kidney and Renal Pelvis | 3,860 | 27.0 | 26.1 | 27.9 |

Mortality

| UT Southwestern 13 Counties Region Mortality, 2011-2013 | | | | | |
|---|----------------------------------|-----------|------|----------|----------|
| | | Frequency | Rate | Lower CI | Upper CI |
| All Race | Lung and Bronchus | 6,764 | 56.2 | 54.9 | 57.6 |
| | Colorectal | 2,420 | 19.5 | 18.7 | 20.3 |
| | Breast (Female) | 2,009 | 27.8 | 26.6 | 29.1 |
| | Pancreas | 1,612 | 13.3 | 12.6 | 14.0 |
| | Liver and Intrahepatic Bile Duct | 1,249 | 9.5 | 9.0 | 10.1 |
| NH White | Lung and Bronchus | 5,345 | 61.8 | 60.1 | 63.5 |
| | Colorectal | 1,672 | 19.3 | 18.3 | 20.2 |
| | Breast (Female) | 1,321 | 27.0 | 25.5 | 28.5 |
| | Pancreas | 1,152 | 13.3 | 12.5 | 14.1 |
| | Leukemia | 836 | 10.1 | 9.4 | 10.8 |
| NH Black | Lung and Bronchus | 974 | 66.4 | 61.9 | 71.0 |
| | Breast (Female) | 443 | 45.3 | 41.0 | 50.0 |
| | Colorectal | 433 | 28.2 | 25.4 | 31.3 |
| | Pancreas | 266 | 18.3 | 16.0 | 20.8 |
| | Liver and Intrahepatic Bile Duct | 225 | 13.3 | 11.4 | 15.3 |
| Hispanic | Lung and Bronchus | 277 | 21.8 | 19.0 | 24.8 |
| | Colorectal | 226 | 14.4 | 12.3 | 16.7 |
| | Liver and Intrahepatic Bile Duct | 222 | 14.6 | 12.5 | 16.9 |
| | Breast (Female) | 179 | 15.8 | 13.3 | 18.6 |
| | Pancreas | 150 | 10.1 | 8.4 | 12.1 |

| Texas Mortality, 2011-2013 | | | | | |
|----------------------------|----------------------------------|-----------|------|----------|----------|
| | | Frequency | Rate | Lower CI | Upper CI |
| All Race | Lung and Bronchus | 28,657 | 54.6 | 54.0 | 55.3 |
| | Colorectal | 10,515 | 19.8 | 19.4 | 20.1 |
| | Breast (Female) | 8,173 | 27.5 | 26.9 | 28.1 |
| | Pancreas | 7,190 | 13.7 | 13.4 | 14.0 |
| | Liver and Intrahepatic Bile Duct | 6,013 | 10.7 | 10.4 | 11.0 |
| NH White | Lung and Bronchus | 21,612 | 63.7 | 62.9 | 64.6 |
| | Colorectal | 6,541 | 19.5 | 19.0 | 20.0 |
| | Breast (Female) | 5,013 | 27.6 | 26.8 | 28.4 |
| | Pancreas | 4,697 | 13.9 | 13.5 | 14.3 |
| | Prostate | 3,240 | 23.8 | 23.0 | 24.7 |
| NH Black | Lung and Bronchus | 3,458 | 68.8 | 66.4 | 71.2 |
| | Colorectal | 1,512 | 29.1 | 27.5 | 30.7 |
| | Breast (Female) | 1,362 | 42.9 | 40.6 | 45.4 |
| | Pancreas | 882 | 17.6 | 16.4 | 18.9 |
| | Prostate | 803 | 50.6 | 47.0 | 54.5 |
| Hispanic | Lung and Bronchus | 2,993 | 26.5 | 25.6 | 27.5 |
| | Colorectal | 2,176 | 17.5 | 16.7 | 18.3 |
| | Liver and Intrahepatic Bile Duct | 2,000 | 15.7 | 15.0 | 16.5 |
| | Breast (Female) | 1,570 | 21.0 | 19.9 | 22.1 |
| | Pancreas | 1,435 | 12.2 | 11.6 | 12.9 |

Technical Notes

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (single ages to 84 - Census P25-1130) standard; Confidence intervals (Tiwari mod) are 95% for rates.

13 counties include: Collin, Dallas, Denton, Ellis, Hunt, Kaufman, Rockwall, Hood, Johnson, Parker, Somervell, Tarrant, and Wise

Prepared by the Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry. Data Request #16394, 10/24/2016.

UT Southwestern externally funded population health research studies current as of October 2016

| Name | Agency | Grant # | Project Start | Project End | Title | Budget Direct \$ | Budget Total \$ |
|----------------------------------|---|--------------------------------|---------------|-------------|--|---------------------|--------------------|
| Argenbright, Keith Edward | CANCER PREVENTION & RESEARCH INST OF TX | PP120229-03 | 8/31/2012 | 8/30/2016 | Evidence-Based Colorectal Cancer Screening for Uninsured | 489,319.00 | 567,693.00 |
| Argenbright, Keith Edward | CANCER PREVENTION & RESEARCH INST OF TX | PP140182 | 8/31/2014 | 8/30/2017 | Population Based Screening for Hereditary Breast and Ovarian Cancer | 490,706.00 | 490,706.00 |
| Argenbright, Keith Edward | CANCER PREVENTION & RESEARCH INST OF TX | PP150061 | 6/1/2015 | 5/31/2018 | The C-SPAN Coalition: Colorectal Screening and Patient Navigation | 2,019,529.00 | 2,019,529.00 |
| Bowen, Michael E | UNIVERSITY OF TEXAS SYSTEM | Quality of Care Research Grant | 7/1/2013 | 6/30/2016 | Harnessing EMR to Reduce Delays in Diagnosis of Type 2 Diabetes: Systems-Based, Decision Support Approach | 50,000.00 | 50,000.00 |
| Bowen, Michael E | NIH-NATIONAL INSTITUTES OF HEALTH | 5 K23 DK104065-02 | 8/25/2014 | 6/30/2019 | Predicting Diabetes Risk Using Glucose Data in the Electronic Medical Record | 159,176.00 | 171,910.00 |
| Brown, Edson Sherwood | NIH-NATIONAL HEART, LUNG AND BLOOD INST | 5 R18 HL092862-05 | 7/1/2010 | 5/31/2016 | Antidepressant Treatment at Inner City Asthma Clinic | 67,651.00 | 107,565.00 |
| Brown, Edson Sherwood | NIH-NATIONAL INSTITUTES OF HEALTH | 1 R01 HL123609-01A1 | 9/15/2015 | 6/30/2019 | Treating Caregiver Depression to Improve Childhood Asthma: Impact and Mediators | 653,997.00 | 825,118.00 |
| Cowell, Lindsay Grey | NIH-NATIONAL INSTITUTES OF HEALTH | 5 R01 AI097403-04 | 4/1/2012 | 3/31/2017 | RepServer: Antigen Receptor Repertoire Analysis Pipelines via the WWW | 414,537.00 | 598,306.00 |
| Cowell, Lindsay Grey | PCORI/UK | CDRN-1306-04631 | 10/1/2015 | 9/30/2018 | Greater Plains Collaborative Clinical Data Research Network Phase II | 113,692.00 | 159,169.00 |
| Gerber, David Eric | CANCER PREVENTION & RESEARCH INST OF TX | RP150587 | 6/1/2015 | 5/31/2020 | A Randomized Controlled Trial (RCT) of Patient Navigation for Lung Cancer Screening in Urban Safety-Net System | 474,700.00 | 499,669.00 |

| Name | Agency | Grant # | Project Start | Project End | Title | Budget Direct \$ | Budget Total \$ |
|------------------------------|---|-----------------------------------|---------------|-------------|--|---------------------|--------------------|
| Gerber, David Eric | NIH-NATIONAL INSTITUTES OF HEALTH | 1 R03 CA191875-01A1 | 7/10/2015 | 6/30/2017 | Evaluating prior cancer exclusion policy to increase lung cancer trial accrual (MPI) | 50,000.00 | 80,750.00 |
| Gruchalla, Rebecca S | UNIVERSITY OF WISCONSIN - MADISON | UM1 AI114271-02; U Wisc/NIH Subct | 8/1/2015 | 7/31/2016 | ICAC3 - Inner City Asthma Consortium 3 | 364,790.00 | 589,136.00 |
| Gruchalla, Rebecca S | UNIVERSITY OF WISCONSIN - MADISON | UM1 AI114271-02; U Wisc/NIH Subct | 8/1/2015 | 7/31/2016 | Inner City Asthma Consortium_CoNAC | 21,310.00 | 34,416.00 |
| Gruchalla, Rebecca S | UNIVERSITY OF WISCONSIN - MADISON | UM1 AI114271-02; U Wisc/NIH Subct | 8/1/2015 | 7/31/2016 | Inner City Asthma Consortium_MUPPETS | 42,880.00 | 69,251.00 |
| Gruchalla, Rebecca S | UNIVERSITY OF WISCONSIN - MADISON | UM1 AI114271-02; U Wisc/NIH Subct | 8/1/2015 | 7/31/2016 | Registry for Astma Characterization and Recruitment 2 | 41,888.00 | 67,649.00 |
| Halm, Ethan A | NORTHERN CALIFORNIA INST - RSRCH & EDUC | 5 R01 HL114563-03 | 5/1/2015 | 4/30/2016 | Comparative Effectiveness of Carotid Artery Revascularization vs. Medical Therapy | 12,461.00 | 19,813.00 |
| Halm, Ethan A | AGENCY FOR HEALTHCARE RESEARCH & QUAL | 4 R24 HS022418-03 | 9/30/2013 | 9/29/2018 | UT Southwestern Center of Patient-Centered Outcomes Research (PCOR) | 676,736.00 | 999,998.00 |
| Hobbs, Helen Haskell | NIH-NATIONAL INSTITUTES OF HEALTH | 5 R01 DK090066-05 | 8/1/2014 | 7/31/2018 | Role of PNPLA3 in Fatty Liver Disease | 217,500.00 | 345,825.00 |
| Hsiang, Michelle Sang | NIH-NATIONAL INSTITUTES OF HEALTH | 7 K23 AI101012-04 | 6/1/2015 | 5/31/2017 | Evaluating Re-active Surveillance Strategies for Malaria Elimination | 121,750.00 | 131,490.00 |
| Hsiang, Michelle Sang | BURROUGHS WELLCOME FUND | BWF Grant; ASTMH | 7/1/2015 | 6/30/2016 | Malaria elimination surveillance in Swaziland | 63,730.00 | 63,730.00 |
| Kennard, Beth | NIH-NATIONAL INSTITUTES OF HEALTH | 5 R34 MH100375-03 | 2/1/2014 | 11/30/2016 | 2/2 Brief Intervention for Suicide Risk Reduction in High Risk Adolescents | 135,000.00 | 214,650.00 |
| Kennard, Beth | UNIVERSITY OF CALIFORNIA, MERCED | RO1 DK092939 | 1/1/2014 | 4/30/2016 | A self-regulation approach to diabetes adherence into emerging adulthood | 103,938.00 | 165,261.00 |
| Lee, Simon Craddock | NIH-NATIONAL INSTITUTES OF HEALTH | R03 CA159706-01A1 | 3/1/2012 | 2/28/2014 | An Inter-personal Framework for Lung Cancer Decision-making in African Americans | 100,000.00 | 158,875.00 |

| Name | Agency | Grant # | Project Start | Project End | Title | Budget Direct \$ | Budget Total \$ |
|---------------------|---|-----------------------------------|---------------|-------------|---|---------------------|--------------------|
| Lee, Simon Craddock | UT SIMMONS CANCER CENTER INSTUTUIONAL RESEARCH GRANT/ AMERICAN CANCER SOCIETY | ACS-IRG 02-196-07 | | | Auditing Race and Ethnicity Electronic Data Sources for the Capacity to Determine Adequate Minority Enrollment in Cancer Trials at UT Simmons Cancer Center and Parkland Hospital | | |
| Lee, Simon Craddock | CANCER PREVENTION & RESEARCH INST OF TX | PP150053 | 6/1/2015 | 5/31/2018 | BSPAN3: Breast Screening and Patient Navigation for Rural and Underserved Women across North Texas | 499,201.00 | 499,201.00 |
| Lee, Simon Craddock | NIH-NATIONAL INSTITUTES OF HEALTH | 1 R01 CA203856-01 | 5/18/2016 | 4/30/2021 | Care coordination for complex cancer survivors in an integrated safety-net system | 369,826.00 | 523,019.00 |
| Lee, Simon Craddock | DEPARTMENT | N/A | N/A | | Impact of Attitudes Toward Lung Cancer | | |
| Lee, Simon Craddock | DEPARTMENT | N/A | N/A | | Multi-morbidity care coordination of cancer patients in a safety-net system: Preliminary data | | |
| Lee, Simon Craddock | DEPARTMENT | N/A | N/A | | Pilot study of patient communication channels and health information technology in the cancer center | | |
| Lee, Simon Craddock | DEPARTMENT | N/A | N/A | | Racial and Ethnic Variations in Longitudinal Hospitalization Usage Patterns: Do Hispanics Have a Recovery Advantage? | | |
| Makris, Una | AMERICAN COLLEGE OF RHEUMATOLOGY | Career Dev Award | N/A | | Epidemiology of Restricting Back Pain | | |
| Nguyen, Oanh | PDEMCHID | N/A | 7/1/2015 | 6/30/2016 | Building Capacity for Effective, Equitable Implementation of a Social-Health Information Exchange for the Underserved in Dallas | 75,000.00 | 75,000.00 |
| Nguyen, Oanh | PDEMCHID | N/A | 3/1/2016 | 2/28/2019 | Program for Development and Evaluation of Model Community Health Initiatives in Dallas | | |
| Nijhawan, Ank E | MIRIAM HOSPITAL | R01 DA030778-03 | 7/1/2015 | 6/30/2016 | Improving linkage to care following release from incarceration | 21,884.00 | 34,795.00 |
| Nijhawan, Ank E | UNIV OF TX HEALTH SCI CTR AT SAN ANTONIO | RFP-2014; UT System Grant; 156375 | 7/1/2014 | 6/30/2016 | Improving Retention in HIV care and Clinic Efficiency by Reducing Missed Medical Visits | 24,118.00 | 24,118.00 |

| Name | Agency | Grant # | Project Start | Project End | Title | Budget Direct \$ | Budget Total \$ |
|-----------------------------|---|---------------------|---------------|-------------|--|---------------------|--------------------|
| Nijhawan, Ank E | DEPARTMENT | | | | Preventable readmissions in HIV-infected individuals: a qualitative study | | |
| Nijhawan, Ank E | NIH-NATIONAL INSTITUTES OF HEALTH | 5 K23 AI112477-02 | 1/1/2015 | 12/31/2018 | Reducing Readmissions and Improving Outcomes in HIV-Infected Patients | 160,700.00 | 173,556.00 |
| Paulk, Mary | WEILL CORNELL MEDICAL COLLEGE | N/A | | | Coping With Cancer III | | |
| Pruitt, Sandi | ROBERT WOOD JOHNSON FOUNDATION | 38438 | 4/1/2016 | 9/30/2018 | A Multisector Solution to Build a Culture of Health among Food Insecure Populations in Dallas County | 124,400.00 | 129,376.00 |
| Pruitt, Sandi | FEEDING AMERICA/CTR FOR POVERTY RESRCH | N/A | 10/1/2016 | 12/31/2017 | Expanding Our Understanding of the Implications of Map the Meal Gap | 27,273.00 | 30,000.00 |
| Pruitt, Sandi | CANCER PREVENTION & RESEARCH INST OF TX | R1208-04 | 3/1/2012 | 2/29/2016 | Recruitment of First-Time, Tenure-Track Faculty Members Effect of Health Shocks on Food Insecure Households Immune Repertoire Signatures of Cervical Cancer Progression and Regression | 246,986.00 | 259,985.00 |
| Sher, David Jonathan | RADIATION ONCOLOGY INSTITUTE | ROI2015-915 | 7/1/2015 | 6/30/2016 | Comparative value of transoral surgery and radiation for oropharynx cancer | 186,235.00 | 190,710.00 |
| Singal, Amit | BAYLOR COLLEGE OF MEDICINE | RP150587 | 6/1/2015 | 5/31/2020 | A comparative effectiveness randomized controlled trial of strategies to increase HCC | 65,024.00 | 69,499.00 |
| Singal, Amit | UNIVERSITY OF TEXAS MD ANDERSON CANCER | 1 R01 CA186566-01A1 | 4/10/2015 | 3/31/2020 | Genome-Wide Association Study in Hepatocellular Carcinoma | 12,918.00 | 20,863.00 |
| Singal, Amit | CANCER PREVENTION & RESEARCH INST OF TX | PP160075 | 8/31/2016 | 8/30/2019 | Implementation an Evidence-Based Colorectal Cancer Screening Outreach Program among Socioeconomically Disadvantaged Patients in a Safety Net Health System | 505,299.00 | 505,299.00 |
| Singal, Amit | DEPARTMENT | N/A | | | RCT of strategies to improve screening rates among a cohort of cirrhotic patients at high risk for developing HCC, in a safety-net health system. | | |

| Name | Agency | Grant # | Project Start | Project End | Title | Budget Direct \$ | Budget Total \$ |
|------------------------------------|--|--------------------------------|---------------|-------------|--|---------------------|--------------------|
| Singal, Amit | UNIV OF TX HEALTH SCI CTR AT SAN ANTONIO | PP150079 | 6/1/2015 | 5/31/2018 | STOP HCC–Evidence-Based Hepatocellular Cancer Prevention Targeting Hepatitis C | 157,939.00 | 166,247.00 |
| Singal, Amit | GILEAD | | 4/1/2016 | 3/31/2017 | STOP HCC–Evidence-Based Hepatocellular Cancer Prevention Targeting Hepatitis C | 269,316.00 | 296,248.00 |
| Skinner, Celette Sugg | NIH-NATIONAL INSTITUTES OF HEALTH | R01 CA 122330 | | | Facilitating Risk-Appropriate Colorectal Cancer Testing - Testing the Cancer Risk Intake System (CRIS) | | |
| Skinner, Celette Sugg | DEPARTMENT | N/A | | | Health Topics Survey | | |
| Skinner, Celette Sugg | NIH-NATIONAL INSTITUTES OF HEALTH | 5 U54 CA163308-05 | 9/23/2011 | 5/31/2016 | Parkland-UT Southwestern PROSPR Center: Colon Cancer Screening in Safety Net (MPI, Skinner, Halm) | 832,345.00 | 1,207,118.00 |
| Skinner, Celette Sugg | NIH-NATIONAL INSTITUTES OF HEALTH | 3 U54 CA163308- 05S1 | 7/30/2014 | 5/31/2016 | Parkland-UT Southwestern PROSPR Center: Colon Cancer Screening in Safety Net (MPI) - Supplement (Skinner, Tiro) | 493,171.00 | 649,133.00 |
| Tiro, Jasmin A | NIH-NATIONAL INSTITUTES OF HEALTH | 5 R01 CA178414-04 | 7/1/2013 | 4/30/2018 | Developing a self-persuasion intervention promoting adolescent HPV vaccination | 365,807.00 | 532,702.00 |
| Tiro, Jasmin A | NIH-NATIONAL INSTITUTES OF HEALTH | 5 R01 CA178414- 04S1 | 5/1/2014 | 4/30/2016 | Developing a self-persuasion intervention promoting adolescent HPV vaccination - Diversity Supplement | 39,640.00 | 54,055.00 |
| Tiro, Jasmin A | UTSW MONCREIF CANCER CNETER | N/A | | | Experience with follow up cancer care and adherence to surveillance regimens among breast and colon cancer survivors: A pilot study | | |
| Tiro, Jasmin A | DEPARTMENT | N/A | | | Parkland-UT Southwestern Cervical Biorepository | | |
| Tiro, Jasmin A | UNIVERSITY OF WASHINGTON | 5 R01 CA168598-03 | 4/1/2015 | 3/31/2016 | Randomized Trial of In-Home Cervical Cancer Screening | 7,222.00 | 11,664.00 |
| Toto, Robert Daniel | NIH-NATIONAL INSTITUTES OF HEALTH | 5 UL1 TR001105-03 | 9/26/2013 | 4/30/2018 | UT Southwestern Center for Translational Medicine - UL1 | 3,397,080.00 | 5,216,957.00 |
| Trivedi, Madhukar Hariprasad | MASSACHUSETTS GENERAL HOSPITAL | HHSN271201100006I -03; NIDA | 3/1/2012 | 3/11/2016 | Rapidly-Acting Treatments for Treatment- Resistant Depression (RAPID) | 126,686.00 | 201,431.00 |
| Turer, Christy | DEPARTMENT | N/A | | | Primary Care, Communication and Improving Children's Health | | |

| Name | Agency | Grant # | Project Start | Project End | Title | Budget Direct \$ | Budget Total \$ |
|-------------------------------|---|-----------------------|---------------|-------------|--|---------------------|---------------------|
| Turer, Christy | American Academy of Pediatrics | Johnston/AAP | 8/1/2016 | 7/31/2017 | Relative Importance of parent/Child Characteristics | 3,000.00 | 3,000.00 |
| Turer, Christy | COMMERCIAL REAL ESTATE WOMEN (CREW) | | 1/1/2016 | 12/31/2016 | The Biggest Winner: Primary care clinical practices that improve health in overweight school-age girls | 16,816.00 | 16,816.00 |
| Vazquez, Miguel A | NIH-NATIONAL INSTITUTES OF HEALTH | 4 UH3 DK104655-02 | 9/1/2015 | 8/31/2019 | Improving Chronic Disease Management with Pieces (ICD-Pieces) | 1,259,870.00 | 1,374,845.00 |
| Westover, Arthur Naoki | NIH-NATIONAL INSTITUTES OF HEALTH | 5 K08 DA031245-03 | 2/1/2012 | 1/31/2017 | Cardiovascular Risks of Prescription Amphetamine Use in National Veterans Study | 158,477.00 | 171,155.00 |
| Xie, Xian-Jin | NIH-NATIONAL INSTITUTES OF HEALTH | 1 P50 CA 196516-01A0 | 8/1/2016 | 7/31/2021 | Kidney SPORE Core C | 108,778.00 | 126,225.00 |
| Xie, Yang | CANCER PREVENTION & RESEARCH INST OF TX | RP120732-C2; RP121040 | 9/1/2012 | 8/31/2017 | C2: Biostatistics, Bioinformatics and Database Core | 142,489.00 | 149,988.00 |
| Zhang, Song | NATIONAL SCIENCE FOUNDATION | IIS-1302497 | 9/15/2013 | 8/31/2017 | Corobust large-Scale | 37,391.00 | 49,452.00 |
| | | | | | TOTAL | \$16,620,181 | \$21,192,966 |

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