Economic Impacts of Health Disparities in Texas

EPISCOPAL HEALTH FOUNDATION

Methodist Healthcare Ministries
OF SOUTH TEXAS, INC.
"Serving Humanity to Honor God"

Foreword/ Commentary

The Episcopal Health Foundation (EHF) and Methodist Healthcare Ministries of South Texas, Inc. believe that ALL Texans deserve to live a healthy life – especially those living in poverty and who have little or no access to resources. We believe that ALL Texans should be able to live in communities and neighborhoods that enable families and children to thrive. EHF and Methodist Healthcare Ministries support the well-being and health of Texans by working to fulfill our vision of healthy communities for ALL.

We know racial and ethnic diversity in Texas has changed dramatically in the past decade, and will continue to change as Texas reaches 40 million people by the year 2050. Today, Texas is about 43 percent White and 40 percent Hispanic. Two-thirds of the seven million children in Texas are children of color; half are Hispanic.

Yet today, health disparities still exist and healthcare opportunities remain out of reach for many Texans. The average Hispanic or Black child in Texas is much more likely to be born into a reinforcing cycle of poorer health, lower educational attainment, fewer employment opportunities, and less financial stability than the average White child. Texas remains the state with the highest uninsured rate; most notably, almost one-third of Hispanics and 14 percent of Blacks in Texas do not have health insurance as compared to 10 percent of Whites.

In the attached report, *Economic Impacts of Health Disparities in Texas*, researchers from Altarum Institute, in partnership with George Washington University and Johns Hopkins University, estimate that health disparities for people of color in Texas cost families, employers, insurers and government an estimated $1.7 billion in excess medical care spending and $2.9 billion in lost productivity.

And as our population increases, so too does the economic impact of health disparities in Texas. By 2050, if current conditions remain, additional medical care spending will increase to $3 billion per year. The expansion of Medicaid in Texas would ensure that those who are uninsured and those who fall within the coverage gap would gain access to needed health insurance to access care, and ultimately have better health outcomes.

We encourage you to read through the *Economic Impacts of Health Disparities in Texas* report and use the information to start conversations with organizations and elected officials in your communities, and begin developing strategies to inform the policy and budgetary priorities of the next State legislative session.

Given the enormous economic burden of health disparities in Texas, we must work together to transform the health of ALL communities and make access to care for ALL a priority in our state.

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Economic Impacts of Health Disparities in Texas

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Our health is influenced by our environment and life circumstances, as well as by the medical care we receive. In Texas and elsewhere, health status and the factors that influence health vary substantially by racial and ethnic group. Significant disparities in health cause some groups to experience more illness and disability and have a greater chance of premature death than others.

Life outcomes such as health are strongly influenced by forces that start at birth and are interconnected and reinforcing. Healthier, better-educated people tend to earn more and live in higher-income neighborhoods, where they experience lower crime rates, less pollution, better quality education and community amenities, and have more resources to stay healthy. The wealth accumulated through homeownership in neighborhoods with increasing home values improves financial stability and allows families to support higher education and make other investments in future generations. For people born into neighborhoods of concentrated poverty, the reinforcing cycle works in the opposite direction. The average Hispanic or Black child in Texas is much more likely to be born into the reinforcing cycle of poorer health, lower educational attainment, fewer employment opportunities, and less financial stability than the average White child.[1]

Strategies for reducing disparities in health by making environments healthier, supporting healthier behaviors, and increasing access to needed health care services have obvious value in improving the wellbeing of the population. But these strategies may require investments of time and resources, for which there will always be competing priorities. In weighing the value of investments to reduce health disparities, it is important to understand that in addition to the human toll, disparities in health represent a significant economic burden to the Texas economy.

This study applied published methods that were developed to estimate the economic burden associated with racial and ethnic health disparities in the U.S.[2] We applied these methods to Texas using state-specific population and health data to estimate three types of economic impacts: higher health care spending; lost productivity in terms of more days off work, fewer hours worked, and lower wages associated with poorer health; and a valuation of life years lost due to premature death.[3]

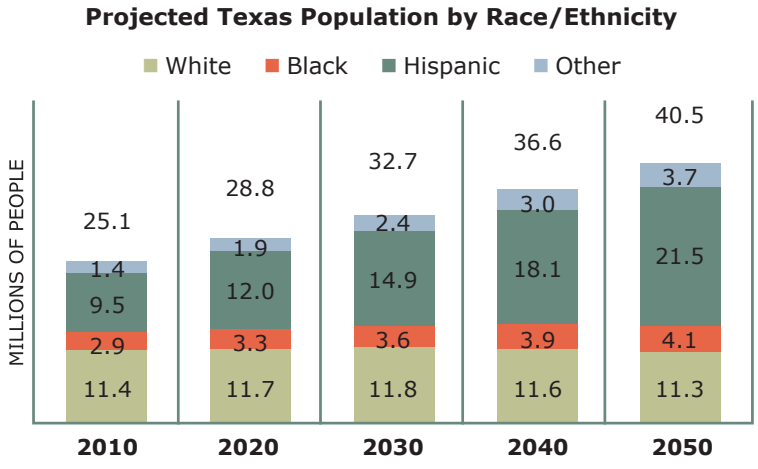
We estimate that disparities in health for people of color in Texas cost families, employers, insurers, and governments an estimated $1.7 billion in excess medical care spending and $2.9 billion in lost productivity. Racial and ethnic health disparities in Texas translate to premature deaths on the order of 400,000 lost life years, conservatively valued at $20 billion. By 2050, with the expected growth and increasing diversity of the Texas population, unless gaps in health are narrowed, these economic effects are expected to increase by more than 80% to $3 billion in excess medical care spending, $5.5 billion in lost productivity, and 690,000 lost life years at a value of $35 billion.[4]

Demographic trends in Texas

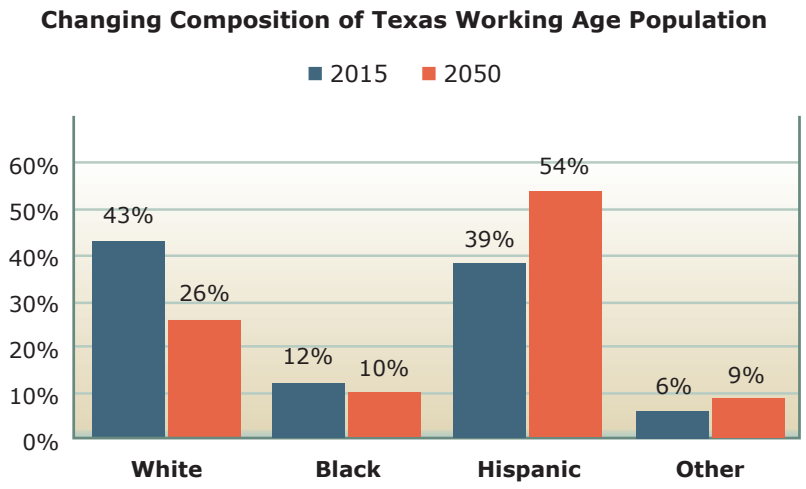
Texas has long been one of the fastest growing states in the nation, and this growth is expected to continue. From a current population of about 27 million people, moderate assumptions about future growth put the Texas population at more than 40 million people by 2050.[5] About half this growth is from the natural increase in the resident population; the other half is from people moving to Texas from around the country and the world.[6]

Texas is not only growing in size but also in racial and ethnic diversity. Virtually all of the projected population increase will be people of color, mostly people of Hispanic origins. In 1990, Texas was roughly two-thirds White and one-quarter Hispanic.[7] Between 2000 and 2010, the White population fell below 50 percent, as the population of Hispanic origin grew. Today, Texas is about 43% White and 40% Hispanic. Two-thirds of the 7 million children in Texas today are children of color, and half are Hispanic.

Unlike other parts of the country, Texas is projected to maintain and even grow the size of its workforce. The working age population (age 18 to 64) will grow by 6.8 million people by 2050. More than 90% of this growth will be 6.3 million people of Hispanic origin. The workforce in Texas will shift from predominantly White to predominantly Hispanic, as Whites shrink from 43% to 26% of the working age population, and Hispanics grow from 39% to 54% of working age Texans.



Source: Texas Demographic Center, Texas Population Projections Program, 2014 Population Projections by Age, Sex, and Race/Ethnicity, 2010-2050, middle series.



Source: Texas Demographic Center, Texas Population Projections Program, 2014 Population Projections by Age, Sex, and Race/Ethnicity, 2010-2050, middle series

Given these demographic trends, the health of the workforce and the population in Texas in the decades to come will be driven by the health of the populations of color, particularly those of Hispanic origin.

Current health challenges in Texas

Texas is ranked 34th out of the 50 states by America's Health Rankings, based on an overall measure that combines more than 30 health-related metrics.[8] While there are opportunities for improvement in all areas, individual metrics show Texas does relatively well compared to other states in having low rates of smoking, high rates of high school graduation (more education is associated with better health), and comparatively fewer days lost due to physical or mental illness.

Major health-related challenges in Texas include lack of health insurance (Texas ranked 50th out of 50 on the percent of the population without health insurance), low public health funding per person, and low rates of some childhood immunizations. Access to health care providers is also a challenge in Texas, particularly in the rural areas of the state.[9] Texans show high rates of obesity, physical inactivity, and diabetes. Finally, disparities in health status are higher in Texas than in many states, an issue that will increase in importance given the changing composition of the Texas population.

Racial and ethnic health disparities in Texas translate to premature deaths on the order of 400,000 lost life years, conservatively valued at $20 billion.

Current health disparities in Texas

Beneath the overall health metrics, there is considerable variation in average health status and disease prevalence among the major racial and ethnic groups in Texas. Notable disparities in health include the following.

- Just under half of adults in Texas report they are in very good or excellent health, but this figure is 56% for Whites and only 33% for Hispanics and 43% for Blacks.[10]
- About 32% of the adult population in Texas is obese, with obesity rates highest for Blacks at 47%, followed by Hispanics at 36% and Whites at 28%.[11]
- Hispanics and Blacks have higher rates of diabetes; 13% of Hispanic and Black adults in Texas have been diagnosed with diabetes compared to 10% of Whites.[12]
- Texas has a lower infant mortality rate than the national average, at 5.8 deaths per 1,000 live births (compared to 6.0 for the nation). White and Hispanic populations have similar rates at 5.2 and 5.3, while Blacks experience double that rate at 10.8 deaths per 1,000 births.[13]
- Texas has the largest population of uninsured in the nation. In 2015, 17% of Texans under age 65 – about 5 million people – lacked health insurance, compared to 9% for the nation.[14] As of March 2016, nearly one-third of nonelderly adult Hispanics in Texas remain uninsured, along with 14% of Blacks and 10% of Whites.[15] Recent studies of individuals who are newly insured have shown that those who gain coverage receive more care and experience better physical and mental health and improved financial stability.[16,17]

Estimated economic impacts of health disparities in Texas

As the examples above show, health varies considerably among subgroups of the Texas population. This study estimates the economic burden represented by differences in health for historically minority racial and ethnic groups, primarily the Hispanic and Black populations in Texas. The basic approach was to compute expected costs under the current health of each racial/ethnic group, and then compute what costs would be if all racial/ethnic groups had the profile of the healthiest group in Texas for their corresponding age and gender. The gap between these two estimates represents the economic burden, or the lost economic potential, of racial/ethnic disparities in health. Our approach assumes there may be conditions in Texas that affect the health of all populations, but that the gaps among racial and ethnic groups within Texas could and should be narrowed, and that the average already being achieved by the healthiest groups represents a reasonable target. The Appendix to this report presents more detail on our data and methods.

If disparities in health for people of color in Texas were eliminated, we estimate that annual health care spending could be nearly **$1.7 billion** lower. This spending includes government, private insurance, and out of pocket spending on health care goods and services such as hospital care,

physician services, and prescription drugs. About half of these excess health care costs are driven by health disparities for Hispanics ($880 million) while a bit less than half ($770 million) are driven by disparities for Blacks, and the remainder for Asian-Americans.

We estimate that productivity would be about **$3 billion** higher per year in the absence of health disparities for populations of color. Only $20 million of this figure is due to lost work days, consistent with the relatively low reported numbers of days lost due to physical and mental health in Texas. Most of the productivity effect is the $2 billion associated with more annual hours off work due to poorer health. The remaining $880 million reflects reduced wages associated with poorer health.

Applying Texas-specific death rates for each racial and ethnic group and comparing the results to the deaths that would have occurred using the lowest death rates for that age/gender category in Texas produced an estimate of premature deaths due to health disparities. We computed lost life years assuming people would have lived to age 75 had these deaths not occurred prematurely. We estimate that disparities in health are associated with nearly 400,000 lost life years in Texas today, split about evenly between Blacks and Hispanics. Using a valuation of $50,000 per life year, which is at the low end of standard values used in cost-effectiveness analyses for medical interventions,[18] this loss of life represents an economic impact of nearly **$20 billion.**

Population growth patterns will magnify impacts of health disparities

The economic impacts of disparities in health by race and ethnicity are poised to increase as the Texas population grows and people of color become a larger share. By 2050, if current disparities in socioeconomic factors and health remain, the growth and changing racial and ethnic composition of the population will increase excess medical care spending to **$3 billion** per year.[19] Changes in the working age population will increase the productivity costs of disparities to **$5.5 billion** per year. Finally, by 2050, without a closing of the gaps in mortality rates, an estimated 690,000 life years would be lost due to disparities in health, at a conservative valuation of **$35 billion**.

Appendix: Data and methods for estimating economic impacts

The estimation of the economic impact of health disparities on Texas was conducted as three separate, but related, economic analyses:

1. Estimating the direct medical costs;
2. Estimating the value of lost productivity associated with health disparities; and
3. Estimating the costs of premature death.

We used data from the Medical Expenditure Panel Survey (MEPS)[20,21] for the years 2006-2009 to estimate the potential cost savings of eliminating health disparities for racial and ethnic minorities. We divided the sample into 14 cohorts based on gender and seven age groups: 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75 and over. Within each cohort, we computed

the prevalence for several health conditions for four mutually exclusive racial/ethnic groups -- African Americans, Asians, Hispanics, and Whites. Hispanics are persons of Hispanic origins regardless of race. The other racial groups include only non-Hispanics.

The health status and health conditions measures were:

- Self-reported general health status (ranging from excellent to poor)
- Self-reported mental health status (ranging from excellent to poor)
- Presence of a functional limitation
- Body mass index (BMI)/obesity measure
- Presence of chronic conditions (diabetes, asthma, asthma attack, high blood pressure, heart attack, angina, other heart disease, stroke, emphysema, joint pain, or arthritis).

After computing these values for Texas, we determined which racial/ethnic group had the best health outcomes within each age/gender cohort for each health status/condition. In most cases, it was Asians, but in a few cases Whites or Hispanics had the best health profile within a given age/gender group.

We estimated the impact of these health conditions on health care expenditures, days off from work because of the health condition, annual hours off work because of the health condition, and reduced hourly wages because of the health condition. We then simulated the health care and labor market outcomes by assigning each minority group the best health profile, i.e., eliminating disparities in health in the corresponding age/gender cohort. We computed the costs of disparities as the difference between the predicted outcomes with the actual health conditions and predicted outcomes with the simulated health conditions.

We used econometric models developed for prior studies to simulate direct health care costs and labor market productivity[22,23] Using 2009 data, we developed a model to estimate health care expenditures for each racial/ethnic group (African American, Asian, Hispanic, and White). Total expenditures in MEPS include both out-of-pocket and third-party payments to health care providers, but do not include health insurance premiums. Expenditures for hospital-based services include inpatient, emergency room, outpatient (hospital, clinic, and office-based visits), prescription drugs, and other services (e.g., home health services, vision care services, dental care, ambulance services, and medical equipment). Prescription drug expenditures do not include over-the-counter purchases. We estimated health care spending as function of demographic, socioeconomic, geographic, and health status measures.

We used a two-part health care expenditure model.[24,25,26,27] First, we used a logistic regression model to estimate the probability of having any type of health care expenditures. Second, we used generalized linear models to predict levels of expenditures for individuals with positive expenditures.

To compute the value of lost productivity, we developed three labor market models using the 2009 MEPS. We estimated the impact of health status, disability and illness on sick days, annual hours of work and wages for working age adults, ages 25-64. The model specifications depended upon the dependent variables. For missed days of work, we estimated the impact of health on the

probability of missing a workday during the year followed by generalized linear models to predict levels of days of work missed for individuals with positive days of work missed.

We used two-part models for hours worked and wages, too.[28] The first part estimated the impact of health status on the probability that an adult is working. The second part estimated the impact of health on hours worked and hourly wages. Combining the results from these different parts of the models, we computed the productivity costs associated with health disparities. We used a two-step estimator for labor supply to predict lost productivity due to health disparities and adjusted the models by using an inverse mills ratio to account potential selection bias.[29,30] The health expenditure and labor market models were estimated using the survey regression procedures in STATA 14, which appropriately incorporate the design factors and sample weights.

We computed the predicted values for direct and indirect savings for Texas using Monte Carlo simulations for the different race/ethnic groups (Blacks, Hispanic, and Asians) and for the best model (the racial group with the best prevalence) using the model coefficients (Direct & Indirect Costs). We randomly chose "10000" samples to get "one" predicted probability and "one" predicted mean for the models. We repeated this exercise 1000 times so we could get 1000 predicted probabilities and 1000 predicted means by race (Stata 14 was used to complete the Monte Carlo simulations).

We used data from Texas State Vital Statistics to compute the costs of premature death. Specifically, we obtained the number of deaths and crude death rates by age and race for 2012 (the data included seven age groups: under 1, 1-14, 15-24, 25-34, 35-44, 45-54, 55-64, and 65-74). We then estimated the number of deaths that would have occurred for each racial/ethnic group if every group's death rate were equal to that of the racial/ethnic group with the lowest death rate within the age/gender category. The difference between the actual number of deaths and the estimated deaths represents "excess deaths." For each age group, we computed number of years of life loss by subtracting its midpoint from 75, hence assuming that death prior to age 75 is premature. We valued each year of life lost at $50,000.[31] This figure is based on the standard value used in cost-effectiveness analysis for medical intervention. Given that more recent studies have valued a quality-adjusted life year at $95,000 to $264,000[32], $50,000 is a conservative estimate.

The results of our analyses are shown in **Table 1** on the next page.

Table 1. Direct Medical Care Costs, Loss of Productivity Costs and Costs of Premature Death Attributable to Health Disparities for the State of Texas (in $2012 billions)

	Blacks	Hispanics	Asians	Total
Direct Costs	**0.77**	**0.88**	**0**	**1.65**
Indirect Costs				
Days	**0.01**	**0.01**	**0**	**0.02**
Hours	**0.55**	**1.32**	**0.11**	**1.98**
Wages	**0.22**	**0.66**	**0**	**0.88**
Sub-total Indirect Cost	**0.78**	**1.99**	**0.11**	**2.88**
Premature Death	**9.71**	**9.76**	**0.01**	**19.48**
Grand Total	**11.26**	**12.63**	**0.12**	**24.01**

Authors' calculations using data from the 2009 MEPS; Models adjusted for age, gender, race, marital status, insurance status, education, family income, health status and health conditions, and location (urban/rural status and different regions of the country). Figures were adjusted for inflation using the CPI for medical care (accessed July 17, 2016 @ http://www.bls.gov/cpi/cpid1606.pdf; see table 26, page 82). Premature death was calculated using mortality data from Center for Health Statistics of the Texas Department of State Health Services @ http://soupfin.tdh.state.tx.us.

Notes

1 Center for Public Policy Priorities, Texas Kids Count Project, State of Texas Children 2016: Race and Equity, May 2016, "The Future of Texas," page 4.

2 Gaskin DJ LaVeist TA, Richard P. "State of Urban Health: Eliminating Health Disparities to Save Lives and Cut Costs", (Washington DC: National Urban League Policy Institute), December 2012.

3 See the Appendix for a description of data and methods.

4 Projections to 2050 are ballpark estimates presented in 2012 dollars, based on 2012 per capita impacts for Black, Hispanic, and Asian/other populations multiplied by Texas Demographic Center middle series population projections by race and ethnicity. Health care cost and longevity effects used the total Texas population, while productivity impacts were applied to projections of theworking age population aged 18 to 64.

5 Texas Demographic Center, Texas Population Projections Program, 2014 Population Projections by Age, Sex, and Race/Ethnicity, 2010-2050, middle series (assumes in-state migration continues at only half the pace seen from 2000 to 2010). Projections that assume migration continues at current pace estimate more than 50 million Texans by 2050.
Downloaded from http://osd.texas.gov/Data/TPEPP/Projections/ on March 11, 2016.

6 Office of the State Demographer, Introduction to Texas Domestic Migration, April 2016.

7 Throughout this report, Hispanic refers to those of any race whose ethnicity is identified as Hispanic or Latino, White refers to those who identify as white and are not Hispanic, and Black refers to those who identify as black or African-American and are not Hispanic.

8 http://www.americashealthrankings.org/states.

9 Merritt Hawkins, "The Physician Workforce in Texas," prepared for the North Texas Regional Extension Center, April 2015. http://www.merritthawkins.com/UploadedFiles/MerrittHawkings/Surveys/Merritt_Hawkins_NTREC_Physician_Workforce_Survey.pdf

10 America's Health Rankings Annual Report for Texas, 2015 data.

11 Ibid.

12 Ibid.

13 Ibid.

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17 The Oregon Health Insurance Experiment Results http://www.nber.org/oregon/3.results.html.

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19 2050 projected impacts are estimated by dividing base year economic impacts by associated Hispanic, Black, and Asian population counts to produce per capita impacts, then multiplying the per capita estimates by projected 2050 populations for each racial or ethnic group. Population projections are from the Texas Demographic Center, Texas Population Projections Program, 2014 Population Projections by Age, Sex, and Race/Ethnicity, 2010-2050, middle series (assumes in-state migration continues at only half the pace seen from 2000 to 2010). All ages were used to project excess health care cost and longevity impacts and working age populations were used to project productivity impacts. Economic impact estimates for 2050 are expressed in 2012 dollars.

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21 Agency for Healthcare Research and Quality, Center for Financing, Access, and Cost Trends: Medical Expenditure Panel Survey Household Component, 2010. Table 4.a Total population and uninsured persons under age 65: Percent by selected population characteristics, United States, 2010. http://meps.ahrq.gov/mepsweb/data_stats/summ_tables/hc/hlth_insr/2010/t4a_d10.htm accessed Nov 2012.

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