OU Medicine's 2020
Community Health Needs Assessment

Executive Summary

OU Medicine

At OU Medicine, our mission is leading healthcare – in patient care, education and research. Through our combined efforts we strive to improve the lives of all people. In the summer of 2019, OU Medicine began its first, triennial community health needs assessment – the 2020 Community Health Needs Assessment (CHNA), to explore health-impacting resources, strengths and needs in Oklahoma, Oklahoma County and the neighborhoods adjacent to the Oklahoma Health Campus. The bulk of the 2020 CHNA was done prior to the COVID 19 outbreak in Oklahoma.   In the coming months, OU Medicine will adapt its community health response as more information is learned about COVID 19 impacts.

Approach

OU Medicine's 2020 CHNA was developed through a collaborative approach aimed at broadly exploring what creates and maintains health in our communities and identifying potential gaps. The 2020 CHNA pulls data from many different sources and builds on the work of many local organizations. Data sources include the Oklahoma City-County Health Department, Oklahoma State Department of Health, Centers for Disease Control and Prevention, the Bureau of Labor Statistics, the Census Bureau and more. Additionally, the OU Medicine CHNA team hosted several advisory committee meetings, seeking feedback and guidance from organizational representatives from different sectors in the community, began unstructured key informant interviews, and several organizational site visits. The OU Medicine CHNA team also hosted feedback-seeking sessions from internal Oklahoma Health Campus faculty and staff, who are experts in specific content areas. The multiple advisory committees voted on the criteria used to prioritize health and determinants of health needs.

Community Demographic Context

Overall, Oklahoma's growth is steady, but slower than the national average. With approximately 34% of Oklahoma's population living in rural settings and 20% in suburban settings, Oklahoma is more rural and suburban than most other states in the country. Additionally, across the state those rural and suburban communities are less racially diverse than the national average; however, in Oklahoma County, diversity is greater than what would be expected nationally.[1] Today, the neighborhoods of color surrounding Oklahoma Health Campus still experience the residual effects of historic displacement and systemic redlining.[2,3,4]
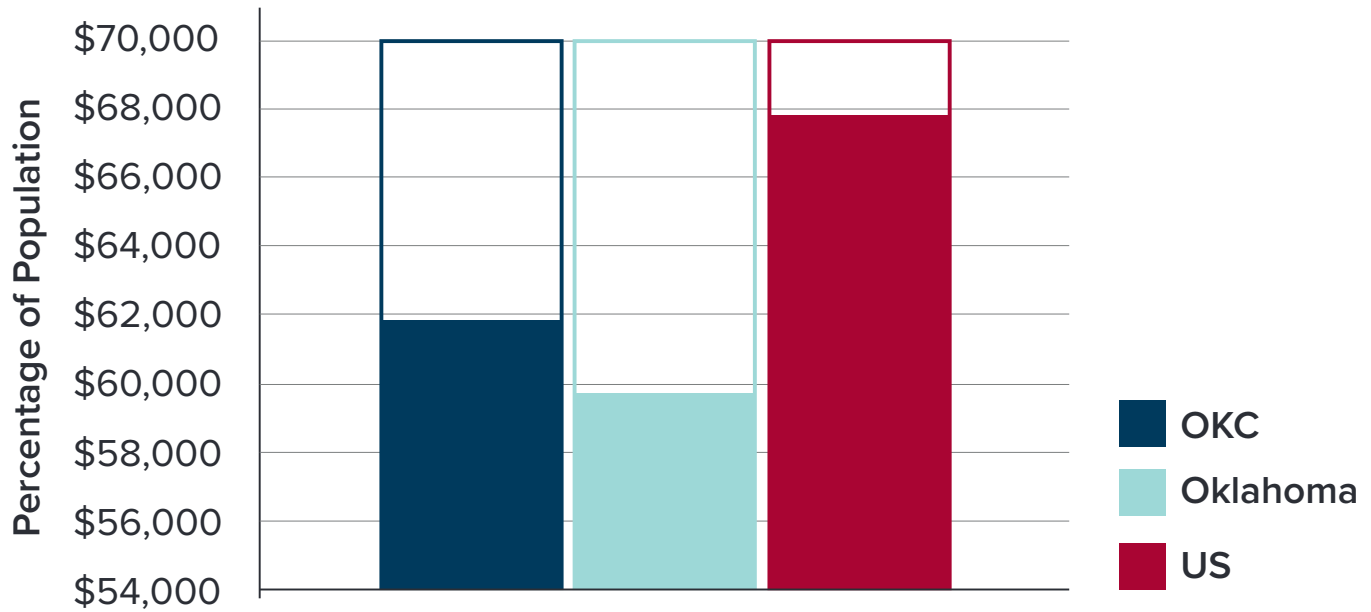
As highlighted in COVID 19's disproportionate impact throughout Oklahoma and the country, this history innately impacts housing stability – significant because shelter is among the most basic of human needs. For many Oklahomans, Oklahoma City residents, and Oklahoma Health Campus neighbors housing is all too often unstable which results in poor living conditions, crowding or homelessness.

While over the past decade Oklahoma has maintained a consistently lower unemployment rate than the national average, underemploymen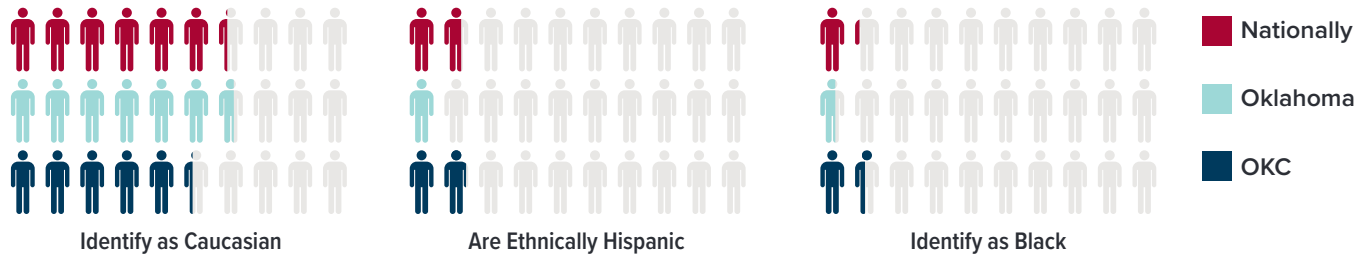t and the availability of quality, safe jobs seem to be prevalent issues. With a notably lower median income than the national average, many Oklahoma households struggle to feed all family members and more Oklahoma children grow up in poverty than what would be expected given the national average.5,6   Due to COVID 19, it is unclear how this landscape will change. Additionally, Oklahoma workers tend to be at higher risk of occupation-related fatalities than in most other states.[7] In the social environment, Oklahoma ranks well with the religiosity of the population when compared to other states.[8] However, when we think of social efficacy, voting activity emerges as a potential metric, and Oklahoma has a lower percentage of registered voters than the national average.[9] Unfortunately, we also know that people in Oklahoma are more likely to experience an aggravated assault than the national average.[10]

Furthermore, due to Oklahoma's rural nature, the state has abundant green spaces and natural habitats, which innately promote health; however, if we consider the built environment, we see that urban sprawl predominates the inhabited landscape. In addition, amenities that promote healthy behaviors, including physical activity and healthy eating, are limited. ∎
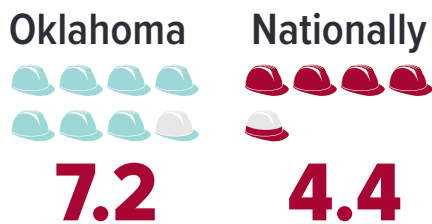
Median Family Income[11]

Percentage of Population

$70,000
$68,000
$66,000
$64,000
$62,000
$60,000
$58,000
$56,000
$54,000

- OKC
- Oklahoma
- US

Percentage[12] of People Who ...

Identify as Caucasian

Are Ethnically Hispanic

Identify as Black

- Nationally
- Oklahoma
- OKC

Employment Safety[13]

Occupational-related deaths per 100,000 workers
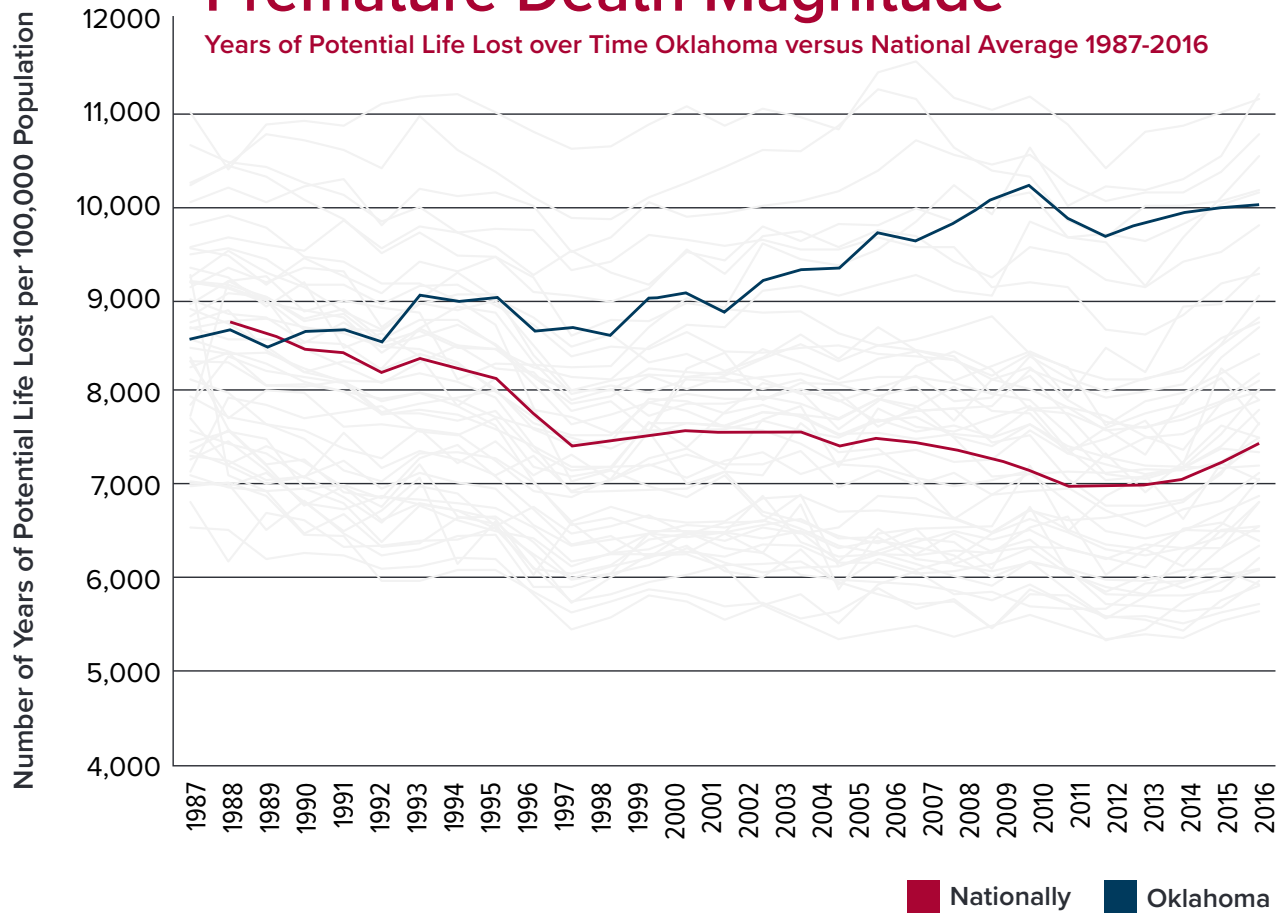
Oklahoma

7.2

Nationally

4.4

-3 YEARS

Oklahomans' life expectancy, 76.1 years, is 3 years shorter than the national average, 79.1 years.[14]

Premature Death Magnitude[15]

Years of Potential Life Lost over Time Oklahoma versus National Average 1987-2016

Y-axis: Number of Years of Potential Life Lost per 100,000 Population

Y-axis values: 12000, 11,000, 10,000, 9,000, 8,000, 7,000, 6,000, 5,000, 4,000

X-axis values: 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016

Legend: ■ Nationally ■ Oklahoma

Key Themes & Prioritized Health Needs

In Oklahoma, life expectancy is less than the national average. This represents an economic loss to the state — an estimated $16 billion in lost productivity annually due to high incidence of premature death. Likewise, regardless of age, in Oklahoma we see markedly higher rates of death associated with cardiovascular disease, cancers, chronic lung disease, diabetes and more.[16]

When exploring origins of the leading causes of death in Oklahoma, participants in the needs assessment process identified diabetes, chronic diseases overall, and cancers as highly prevalent diseases that contributed to the leading causes of death. When we consider chronic disease and cancer hospitalizations alone, Oklahoma's employers are losing more than $700 million in productivity annually. Based on community input and the prioritized criteria, the following list shows the prioritized health needs in Oklahoma, Oklahoma County and neighborhoods adjacent to Oklahoma Health Campus. ■

Child Health

Location of Children Under Age 18 Living in Deep Poverty

(under 50% of Federal Poverty Level)
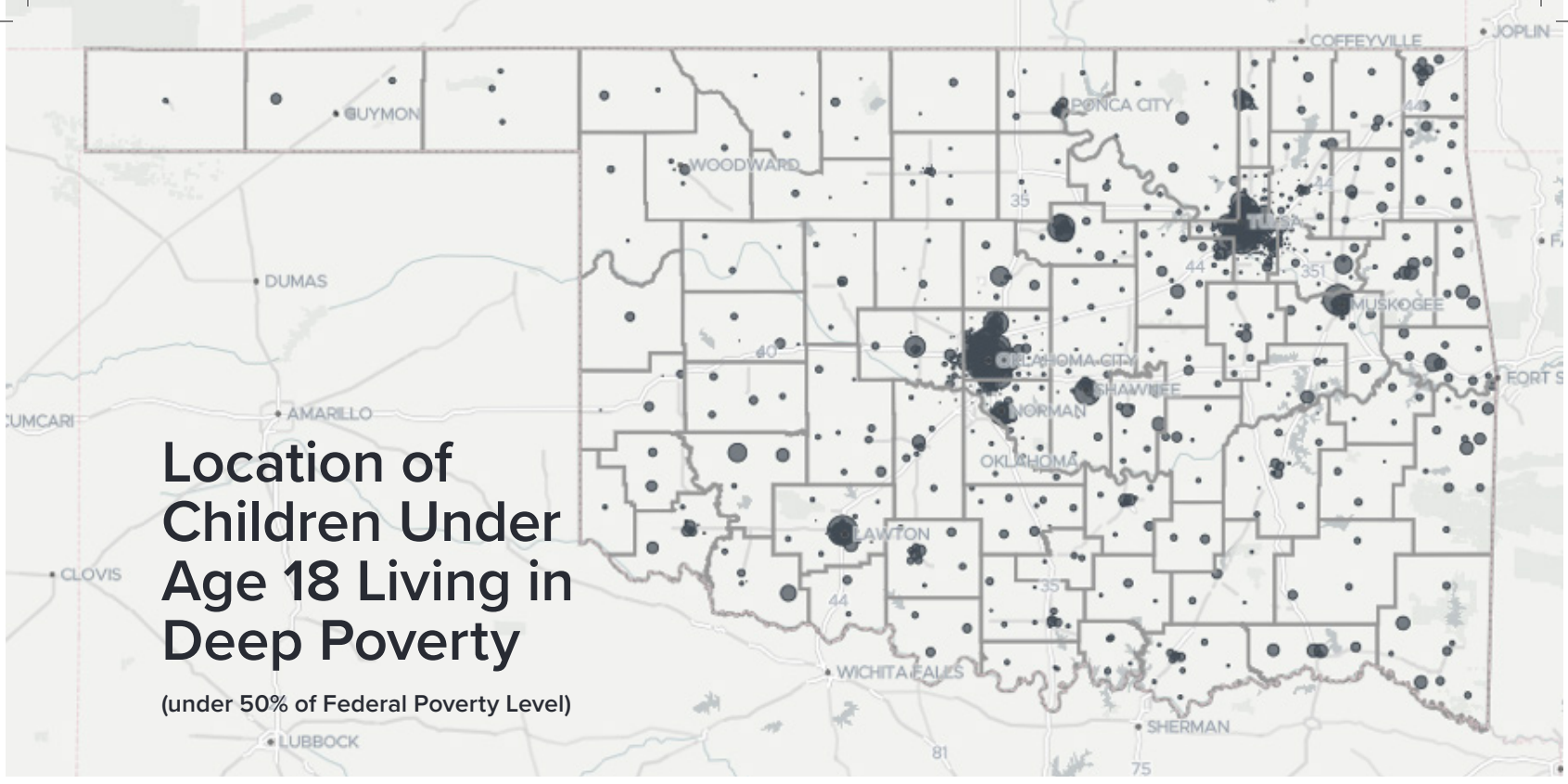
Language Access[16]

People 5 years and older who speak other languages at home outside of English

20.3%
Oklahoma City

10.3%
Oklahoma

21.5%
Nationally

In addition to a strikingly high need among Oklahoma's youth, many stakeholders highlighted the health of Oklahoma children as a priority area. When discussing determinants of health, stakeholders across the board noted the need to improve conditions for our children. The inequities observed across the state and in neighborhoods adjacent to the Oklahoma Health Campus disproportionately impact children from families experiencing poverty and other forms of systemic discrimination.

For almost all leading causes of death among 5-14 year-olds, mortality rates in Oklahoma are higher than the national average. In order of magnitude, these disparities include: unintentional injuries, malignant neoplasms, intentional self-harm (suicide), congenital malformations, assault (homicide), chronic lower respiratory disease, influenza and pneumonia.[18] We see that respiratory disorders, including asthma and pneumonia, are extremely common reasons for hospital admissions among children.[19] Making matters worse, Oklahoma children are exposed to heightened levels of adverse childhood events (28.5%) compared to the national average (20.5%).[20]
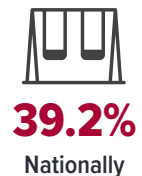
Additionally, Oklahoma children aged 19-35 months are less likely to receive recommended vaccinations than the national average, with only 67.3% of Oklahoma children being immunized compared to 70.4% nationwide. ◾

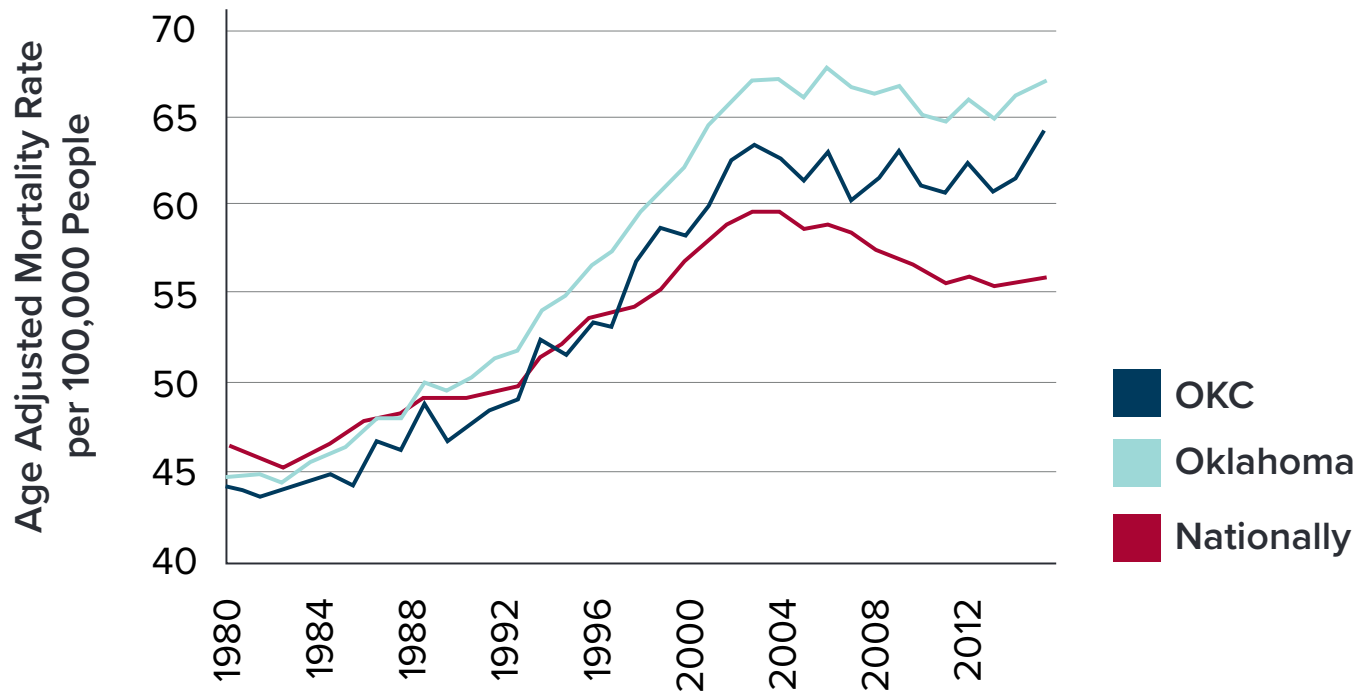## Children in Smoking Households[22]

 22.9% Oklahoma

 15.5% Nationally
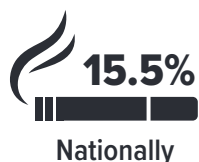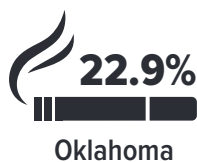
Percentage of Children Who ...[23]

Live near amenities such as parks or recreational facilities

 18.4% Oklahoma

 39.2% Nationally
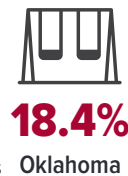
Historical Diabetes Deaths[24]

Y-axis: Age Adjusted Mortality Rate per 100,000 People (40, 45, 50, 55, 60, 65, 70)

X-axis: 1980, 1984, 1988, 1992, 1996, 2000, 2004, 2008, 2012

Legend: OKC, Oklahoma, Nationally

Diabetes

Diabetes is a growing problem in Oklahoma. Many stakeholders cited diabetes and its compounding effects on health outcomes in the state: the rate of diabetes in Oklahoma and its contribution to the leading causes of death made it an obvious priority for the needs assessment. Additionally, diabetes-related deaths disproportionately impact people who identify as black or Native American as compared to Asian and white Americans.[25] Overall, the American Diabetes Association estimates that diabetes and prediabetes cost Oklahomans more than $3.7 billion dollars annually.[26]

Maternal Health

Throughout conversations around the health of Oklahomans, maternal health emerged as a common concern among stakeholders. Oklahomans experience heightened levels of risk behaviors at the beginning of pregnancies, with many mothers lacking health insurance and unable to access prenatal care in the first trimester.[27]

Once enrolled in insurance, pregnant Oklahomans tend to seek care and their risk behaviors improve well beyond the national average. The only exceptions are the frequency of smoking among pregnant Oklahoma women and dental care.[28] With these striking risk factors, it is therefore predictable that more women die of pregnancy-related causes than would be expected given national trends.[29] Maternal mortality inequitably and disproportionately impacts communities of color and rural communities in the state. Additionally, the neighborhoods adjacent to Oklahoma Health Campus are home to higher numbers of single-mother households when compared to the rest of the city, which is a critical concern for the OU Medicine enterprise.

Older Adults

When we look at Oklahoma's aging population, we also see that a higher percentage of older adults report experiencing poor health and are living with a disability than we see nationally. When considering the number of people in the state who are experiencing housing instability, it seems clear that those affected will experience compounding effects as they age.

Trauma

The state loses approximately $34.9 million in workforce productivity annually due to injuries that result in hospitalization. Oklahoma is the fifth worst state in the nation for deaths associated with injuries, and injuries are a leading cause of death for children in Oklahoma.[30]

To illustrate economic impact of these deaths, we could add $25.4 million annually to the Oklahoma economy if we brought the injury death rate down to the national average. Motor vehicle fatalities are a major contributor to this statistic. While the state overall has seen a slow but steady decrease in those fatalities over the past five years, urban motor vehicle deaths have steadily increased. For intentional injuries, Oklahomans are more likely to die from homicide or suicide than the average American.[31] Those statistics are more dire among Oklahoma City residents. In particular, gun-related deaths are most common in neighborhoods adjacent to the Oklahoma Health Campus.[32]

Cancer

When we consider costs of cancer treatment, lost productivity in employment and overall losses within communities, cancer prevalence costs the state more than $3.8 billion annually. When exploring cancer prevalence in Oklahoma, malignant cancers disproportionately impact American Indian or native communities than other population groups.[33] Overall estimates for 2020 suggest there will be 20,530 new cancer cases in Oklahoma and 8,430 people will die because of cancer.[34] In addition to being a leading cause of death for Oklahomans, cancer-related deaths disproportionately impact people of color in Oklahoma.

Mental Health

Given the heightened levels of Adverse Childhood Events (ACEs) and high suicide and homicide rates, it is unsurprising that most stakeholders cited mental health for priority consideration in the 2020 needs assessment.[35] This is particularly notable with the ongoing historical and structural trauma experienced in neighborhoods surrounding the Oklahoma Health Campus, but mental health is a statewide priority and an issue exacerbated by the COVID 19 pandemic.[36, 37, 38]
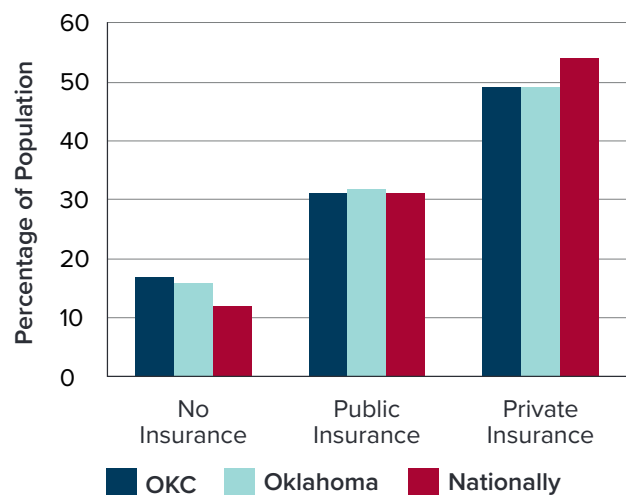
Prioritized Social Determinants of Health

Through our outreach with service-providing organizations from different sectors, it seems well understood that the health outcomes we experience are tied to determinants of health; there are specific needs related to these determinants of health that Oklahomans must first meet in order to improve health. As our collective understanding deepens in this field, it becomes clearer that exposures experienced outside the doctor's office influence health outcomes more than the experience within the doctor's office. Housing quality, opportunities to exercise, access to affordable and healthy food, and earning capacity can have tremendous impact on individual and family health.[39] During the needs assessment process, the external, cross-sectorial advisory committee identified three prioritized social determinants of health, through which we can begin to target specific needs in our community:

Access to Care

Stakeholders identified a need for improved access to care. Identified barriers to care included the closure of rural hospitals; low numbers of insured individuals; too few physicians and specifically physicians of color; statewide shortage of providers at all levels; absence of a health information exchange; certification challenges and licensures, to name a few. It is not surprising that the percentage of Oklahomans who are uninsured is far higher than the national average.[41] Likewise, Oklahoma has fewer primary care

Insurance Coverage Rates[40]

Bar chart titled "Insurance Coverage Rates" showing Percentage of Population (y-axis, 0 to 60) across three categories: No Insurance, Public Insurance, Private Insurance. Legend: OKC, Oklahoma, Nationally.

physicians per person than the national average. These conditions affect wait times, access to preventative services and more. Reduced access to care has a tremendous economic effect on the state's healthcare institutions and the state's overall productivity.

Education

The external advisory committee recognized that bettering education is key to improving the health outcomes of residents locally and throughout the state. Education is linked to longer, healthier and more satisfying lives. Education not only includes one's ability to receive formal education but also informal education via interactions with institutions and people. It also includes educational opportunities with non-traditional venues of learning found in organizations or groups. For longer-term educational attainment numbers we see that Oklahomans above the age of 25 have an average American level of high school attainment; however, when we look at Oklahoma City that number decreases but the percentage of college-educated people increases.[42] In other words, educational attainment in Oklahoma City and county bifurcates with highly educated and less-educated people living in proximity. Looking at short-term outcomes, we see a slightly different story emerge with fewer Oklahoma teenagers completing high school in four years than the national average.[43] When discussing barriers that Oklahomans, Oklahoma City residents, and Oklahoma Health Campus neighbors face when trying to obtain education, several themes emerged:

- Limited funding and resources
- Low levels of educational attainment for many Oklahomans
- Limited after-school programs
- Limited connection to larger workforce pipeline efforts, and more

Housing

Housing was also prioritized by cross-sectorial partners. Housing is the dwelling in which a person or household resides and consists of many different characteristics. Quality, affordability and stability are just a few ways in which housing and housing access affect a person's health. In Oklahoma, crowding and home-lessness are the results of housing instability. About 3.8% of Oklahoma children experience homelessness as they grow up, with lasting effects on health.[44] In contrast, Oklahomans are more likely than the national average to own their homes; however, when we look more specifically at Oklahoma City, we see fewer owner-occupied households than the national average.[45]

When discussing gaps of the housing ecosystem in Oklahoma, Oklahoma County and adjacent neighborhoods, several issues were identified:

- Truly affordable housing is limited
- A perpetuated myth that affordable housing developments are unsustainable
- People who have histories with the criminal justice system and eviction have restricted access
- Most affordable housing offers limited or no access to health-promoting environments
- When considering ways to improve the health and wellness of Oklahomans, housing for Oklahoma County residents and those in neighboring communities ought to be a key component of that work.

Next Steps

Building on community engagement, the scientific evidence examined and the incorporated population metrics, this CHNA documents community health priorities. The ongoing implementation-planning phase of the community health improvement process will provide an opportunity to incorporate the learning from the CHNA to efficiently use our resources and align strategies with these prioritized populations, outcomes and determinants of health. Due to 2020's COVID 19 pandemic, the implementation planning phase will involve continual evaluation of ways OU Medicine can better serve the ever-evolving needs of the community. ■

End Notes & Citations

[1] Percent of total population of Oklahoma and United States, U.S. Census Bureau, Decennial Census, 2010.

[2] James M. Smallwood, "NAACP," The Encyclopedia of Oklahoma History and Culture, www.okhistory.org/publications/enc/entry.php?entry=NA001.

[3] Ackerman, L. (2016, March 19) Bricktown and Deep Deuce, Oklahoma City (1889-). Retrieved from www.blackpast.org/african-american-history/bricktown-and-deep-deuce-oklahoma-city-1889/

[4] The Bricktown Association, "The History of Bricktown." Oklahoma News 9, 2013, www.news9.com/story/7690410/the-history-of-bricktown, Accessed 2020.

[5] America's Health Rankings analysis of U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, United Health Foundation, AmericasHealthRankings.org, Accessed 2020.

[6] Percentage of children who live in households below the poverty threshold; U.S. Census Bureau, American Community Survey, 2018

[7] Number of fatal occupational injuries in construction, manufacturing, trade, transportation, utilities, and professional and business services per 100,000 workers (3-year estimate); U.S. Bureau of Labor Statistics, Census of Fatal Occupational Injuries; U.S. Bureau of Economic Analysis, 2015-2017

[8] Religious Landscape Study www.pewforum.org/religious-landscape-study/ Accessed February 2020

[9] U.S. Census Bureau, Current Population Survey, Voter Registration, 2018

[10] Number of murders, rapes, robberies and aggravated assaults per 100,000 population; U.S. Department of Justice, Federal Bureau of Investigation, 2018

[11] America's Health Rankings analysis of U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, United Health Foundation, AmericasHealthRankings.org, Accessed 2020.

[12] Percent of total population of Oklahoma and United States, U.S. Census Bureau, Decennial Census, 2010.

[13] Number of fatal occupational injuries in construction, manufacturing, trade, transportation, utilities, and professional and business services per 100,000 workers (3-year estimate); U.S. Bureau of Labor Statistics, Census of Fatal Occupational Injuries; U.S. Bureau of Economic Analysis, 2015-2017

[14] Life expectancy trends (1980 to 2014) for Oklahoma and the United States (IHME 2017).

[15] CDC WONDER Online Database, Underlying Cause of Death, Multiple Cause of Death files, Longitudinal Data collected by America's Health Rankings

[16] Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at wonder.cdc.gov/mcd-icd10.html in 2020

[17] U.S. Census Bureau, American Community Survey, 5-year estimate, 2014-2018

[18] CDC WONDER Online Database, Underlying Cause of Death, Multiple Cause of Death files, Longitudinal Data collected by America's Health Rankings

[19] Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Oklahoma Inpatient Discharge Data 2016, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). www.health.ok.gov/ok2share Accessed: January 2020.

[20] Embrace OKC Presentation to Board of Oklahoma City Public School board, September 24, 2018. www.okcps.org/Page/3482 Accessed: January 2020.

[21] CDC, National Immunization Survey-Child, 2017; America's Health Rankings analysis of CDC, National Immunization Survey-Child, United Health Foundation, AmericasHealthRankings.org, Accessed January 2020

[22] Percentage of children ages 0-17 who live in households where someone uses cigarettes, cigars or pipe tobacco (2-year estimate), America's Health Rankings analysis of U.S. HHS, HRSA, Maternal and Child Health Bureau (MCHB), Child and Adolescent Health Measurement Initiative (CAHMI), National Survey of Children's Health Indicator Data Set, Data Resource Center for Child and Adolescent Health, United Health Foundation, AmericasHealthRankings.org, Accessed 2020.

[23] Percentage of children ages 0-17 with access to a park or playground; recreation center, community center or boys' and girls' club; library or bookmobile; and sidewalks or walking paths (2-year estimate), U.S. HHS, HRSA, Maternal and Child Health Bureau (MCHB), Child and Adolescent Health Measurement Initiative (CAHMI), National Survey of Children's Health Indicator Data Set, Data Resource Center for Child and Adolescent Health, 2016-2017

[24] Age-adjusted mortality from 1980 to 2014 for the 4-county area (IHME 2016).

[25] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. Chronic Disease Indicators (CDI) Data [online]. 2016 [Accessed 2020]. URL: nccd.cdc.gov/cdi.

[26] URL: main.diabetes.org/dorg/PDFs/Advocacy/burden-of-diabetes/oklahoma.pdf Accessed January 2020.

[27] Approximately 53.7% (95% CI: 50.2-57.2) of pregnant Oklahomans had private insurance as they were becoming pregnant when compared to the national average of 63.0% (95% CI: 62.2-63.7). These numbers are similar for public insurance, where we see only 15.8% (95% CI: 13.4-18.6) of Oklahomans compared to) 23.0% (95% CI: 22.3-23.6) nationally.

[28] CDC, Pregnancy Risk Assessment Monitoring System data for 2016-2017

[29] Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. URL: wonder.cdc.gov/mcd-icd10.html Accessed: January 2020

[30] Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. URL: wonder.cdc.gov/mcd-icd10.html Accessed: January 2020

[31] Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. wonder.cdc.gov/mcd-icd10.html Accessed: January 2020

[32] Oklahoma City County Health Department, WellnessScore Report, www.occhd.org/WellnessScore Accessed January 2020

[33] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. Chronic Disease Indicators (CDI) Data [online]. 2016. URL: nccd.cdc.gov/cdi. Accessed: January 2020

[34] American Cancer Society, 2020

[35] U.S. HHS, HRSA, Maternal and Child Health Bureau (MCHB), Child and Adolescent Health Measurement Initiative (CAHMI), National Survey of Children's Health Indicator Data Set, Data Resource Center for Child and Adolescent Health, 2016-2017

[36] James M. Smallwood, "NAACP," The Encyclopedia of Oklahoma History and Culture, www.okhistory.org/publications/enc/entry.php?entry=NA001.

[37] Ackerman, L. (2016, March 19) Bricktown and Deep Deuce, Oklahoma City (1889-). Retrieved from www.blackpast.org/african-american-history/bricktown-and-deep-deuce-oklahoma-city-1889/

[38] The Bricktown Association, "The History of Bricktown." Oklahoma News 9, 2013, www.news9.com/story/7690410/the-history-of-bricktown, Accessed 2020.

[39] Tarlov, A. (1999). Public Policy Frameworks For Improving Population Health. Annals Of The New York Academy Of Sciences. 896. 281-93.

[40] U.S. Census Bureau, Health Insurance Coverage in the United States, 2017-2018

[41] America's Health Rankings analysis of Special data request for information on active state licensed physicians provided by Redi-Data, Inc., Sept. 23, 2019; U.S. Census Bureau Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2018, United Health Foundation, AmericasHealthRankings.org, Accessed 2020.

[42] Percentage of Adults Aged 25 and Above with HS education for Oklahoma City, Oklahoma, and US. U.S. Census Bureau, American Community Survey, 5-year estimates 2014-2018

[43] U.S. Department of Education, National Center for Education Statistics

[44] Percentage of public school students who lack a fixed, regular and adequate nighttime residence; America's Health Rankings analysis of U.S. Department of Education, National Center for Education Statistics, Digest of Education Statistics, United Health Foundation, AmericasHealthRankings.org, Accessed 2020.

[45] Percentage of Owner-Occupied Units; U.S. Census Bureau, American Community Survey, 5-year estimates 2014-2018. www.census.gov/quickfacts/fact/table/oklahomacitycityoklahoma,US,OK/PST045219 Accessed: January 2020

[46] Percentage of Adults Aged 25 and Above with HS education for Oklahoma City, Oklahoma, and US. U.S. Census Bureau, American Community Survey, 5-year estimates 2014-2018. www.census.gov/quickfacts/fact/table/oklahomacitycityoklahoma,US,OK/PST045219 Accessed: January 2020

[47] Percentage of Owner-Occupied Units; U.S. Census Bureau, American Community Survey, 5-year estimates 2014-2018. www.census.gov/quickfacts/fact/table/oklahomacitycityoklahoma,US,OK/PST045219 Accessed: January 2020