Healthy Oklahoma 2020:
Oklahoma Health
Improvement Plan Update

A Strategic Plan to Improve the Health
of all Oklahomans

Vision, Mission and Values of the Oklahoma Health Improvement Plan

Vision: Oklahoma will become a culture of health.

Mission: Oklahomans working together to improve and sustain our health and wellness

Values:

Accountability: To the people of Oklahoma for a greater good.

Adaptability: To innovate and think beyond traditional solutions.

Integrity: To ensure the health improvement process is transparent, fair and ethical.

Sustainability: To sustain a culture of health.

Inclusivity: To actively engage a diverse range of stakeholders.

We are pleased to provide you with the following update to the Oklahoma Health Improvement Plan (OHIP) that will take us into the year 2020. This is an update to a process that began in 2009 to improve the health status of all Oklahomans.

There is much to be proud of since we issued our 2009 report. Oklahoma has achieved dramatic improvement in infant mortality, decreasing by 21% since 2007. Yet there continue to be challenges in the Sooner State. Oklahoma is ranked 44th in overall health according to the United Health Foundation America's Health Rankings, 2013. As concerning is the fact that Oklahoma's death rate exceeds the nation's rate and deaths due to individual diseases or conditions are often much higher than other states. This means more Oklahomans are dying than necessary each and every year.

- Oklahoma has the 12th highest rate of deaths due to cancer in the nation
- Oklahoma has the third highest rate of deaths due to heart disease in the nation
- Oklahoma has the fourth highest rate of deaths due to stroke in the nation
- Oklahoma has the highest rate of deaths due to chronic lower respiratory disease in the nation
- Oklahoma has the fourth highest rate of deaths due to diabetes in the nation
- Oklahoma had nearly a 50% increase in deaths due to unintentional injuries from 2000 to 2012

As we recognize the 5th anniversary of the Oklahoma Health Improvement Plan (OHIP), it is appropriate to celebrate the successes of this initiative as well as to identify those health issues that remain challenges. There are many successes:

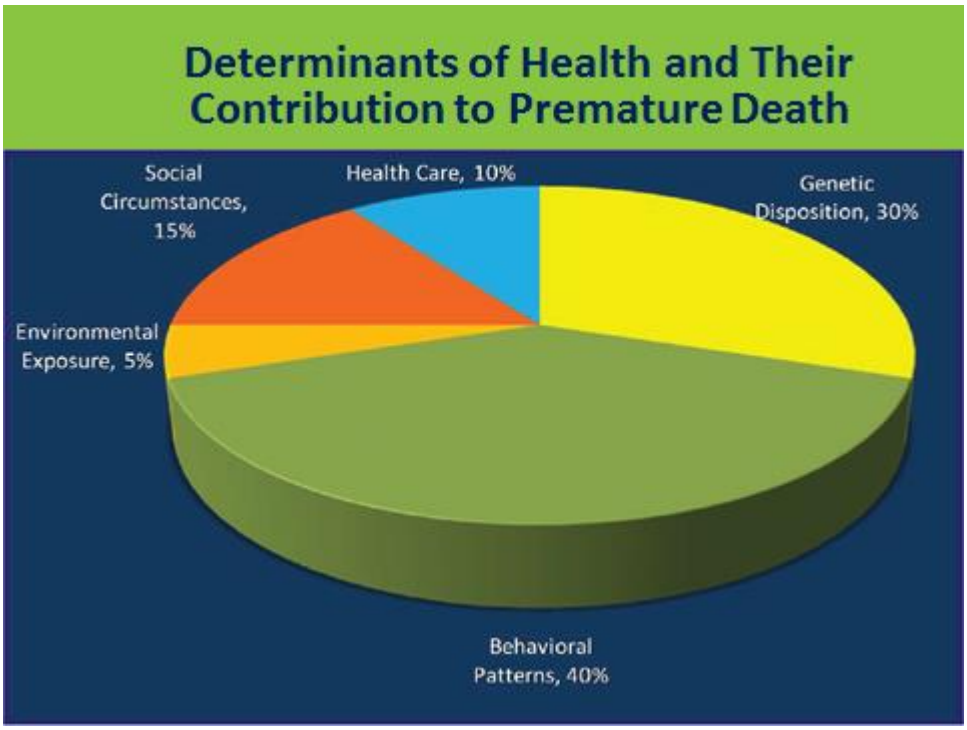
- **Infant Mortality** - Since 2007 the infant mortality rate has dropped 21%. This means more babies are living to their first birthday.
- **Obesity -**The percentage of public high school students age 15 to 19 that were obese decreased from 17% in 2011 to 11.8% in 2013.
- **Smoking -** Adults who smoke decreased from 26.1 in 2011 to 23.7% in 2013. Schools that are tobacco free increased 23%.
- **Community Engagement -**There has been exponential growth in the state's Certified Healthy Oklahoma program. Certificates have increased from 490 to 1146 over the past five years. These certifications mean communities are implementing policies to encourage increased fitness and decrease tobacco use. Schools are finding ways to bring healthy meals to students. Businesses are creating work environments conducive to health.[1]

Despite these notable improvements, Oklahoma has the 4th highest rate of deaths from all causes in the nation, 23% higher than the national rate. Perhaps more disturbing is the fact that

while Oklahoma's mortality rate dropped 5% over the past 20 years, the U.S. mortality rate dropped 20 percent. So Oklahoma is not keeping up with the rest of the nation.[2]

More needs to be done if we are to achieve optimal health for Oklahomans throughout their lives. Oklahoma intends to meet that challenge through the engagement of private and public partnerships and through the involvement of communities in shaping positive health strategies. Priorities identified in OHIP when accomplished, will address key risk factors contributing to negative health outcomes. Health transformation will look at how our system can deliver care that achieves optimal health; will produce the number and type of health workers needed to adequately serve Oklahomans now and in the future, will reduce barriers and create equal access to care and improve efficiency and quality through health information technology. The plan also addresses individual conditions, health behaviors and key populations through a focus on flagship issues targeting tobacco, obesity, children's health and behavioral health.

Obtaining high quality healthcare, while important in maintaining and improving health, is not enough. In fact, traditional healthcare contributes only 10% to a person's overall health. Achieving optimal health goes well beyond medical/clinical care. It must address broad social, economic and environmental factors that are the underlying causes of persistent inequalities in health for a wide range of diseases and conditions across population groups. Health must begin where we live, work, learn and play. This plan builds upon that intention.



State Characteristics

Table 1 2013 Oklahoma Demographic Characteristics		
Subject	2013 Estimate	Percent
Total Population	3,850,568	
Gender		
% Male	1,906,922	49.5
% Female	1,943,646	50.5
Age		
Under 18 years of age	947,832	24.6
18-64	2,354,809	61.2
65 years and older	547,927	14.2
Race[1]		
White	3,075,284	79.9
Black	343,169	8.9
American Indian & Alaska Native	513,097	13.3
Asian	92,006	2.4
Ethnicity		
Hispanic or Latino	369,656	9.6

[1] Race alone or in combination with one or more other races
ACS Demographic and Housing Estimates
2013 American Community Survey 1-Year Estimate

Table 2 Comparison of Selected Demographic 2010-2013			
Subject	**2013 Estimate**	**2012 Estimate**	**2010 Estimate**
Total Population	3,850,568	3,814,820	3,761,702
% Male	49.5	49.5	49.3
% Female	50.5	50.5	50.7
Age			
%Under 18 years of age	24.6	24.5	24.7
%18-64	61.2	61.4	61.7
%65 years and older	14.2	14.1	13.6
Race			
%White	79.9	80.5	80.7
%Black	8.9	8.9	8.6
%American Indian & Alaska Native	13.3	13.4	13.3
%Asian	2.4	2.3	2.2
Ethnicity			
%Hispanic or Latino	9.6	9.2	8.8

Comparative Demographic Estimates 2013 ACS Estimates

Table 1 shows Oklahoma as a state experiencing growth and demographic change. The estimated population has grown 2.4% from 2010. The racial and ethnic composition has changed as well. The estimated percentage of persons who are white has declined .6 % while Hispanics have grown .8% with Blacks and Asians staying fairly constant. Oklahomans are also growing older. The percentage of persons 65 years and older has grown .6% from 2010 to 2013.

The counties that make up rural Oklahoma represent 40% of the total state population.[3] The rural population in Oklahoma has been steadily declining since the middle of the last century. Most of the population growth in Oklahoma is concentrated around the state's metro areas and expanding suburban communities.[4]

State Health Assessment Findings

As mentioned earlier, Oklahoma has some of the highest rates of death from cancer, heart disease stroke, respiratory disease and unintentional injuries. Contributing to our high mortality rates are personal behaviors that put Oklahomans at higher risk for chronic disease.

- 49th lowest rate of fruit consumption in the nation
- 44th lowest rate of vegetable consumption in the nation
- 44th least physical active state in the nation
- 6th highest rate of obesity in the nation
- 2013 adult smoking rate of 23.7% compared to 19.0% nationally. Smoking is Oklahoma's leading cause of preventable death
- 44th in the nation in the average number of limited activity days per month
- 42nd in the nation in the average number poor mental health days each month
- 42nd in the nation in the average number of poor mental health days for adults each month
- 43rd in 2012 for the number of poor physical health days for adults

Preventative care measures also need to be improved.

- 48th in the nation for the percent of children age 19 to 35 months who are up-to-date on their immunizations[5]

Poor health outcomes, higher rates of disease, and overall higher total mortality are the result of complex interaction of multiple factors.

Personal Behaviors

Behavioral pattern factors explain 40% of why individuals get sick and die prematurely in the United States. Smoking, unhealthy dietary practices, physical inactivity and excessive alcohol consumption are the biggest contributors to premature death and suffering in our nation.[6]

Many factors that contribute to chronic disease are modifiable behaviors; in other words, they reflect individual health choices (e.g. unhealthy lifestyle or modifiable behaviors like tobacco use, sedentary lifestyle, poor diet, and not getting preventive screenings like mammograms or blood cholesterol tests).

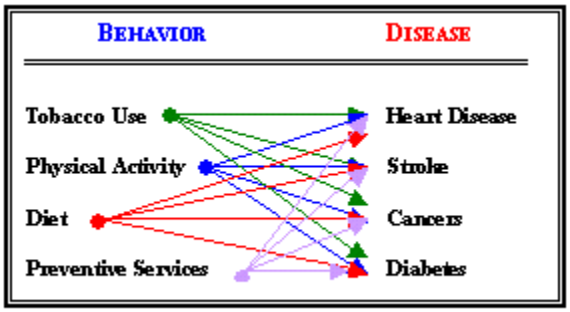


Figure 1. Behavior and Disease

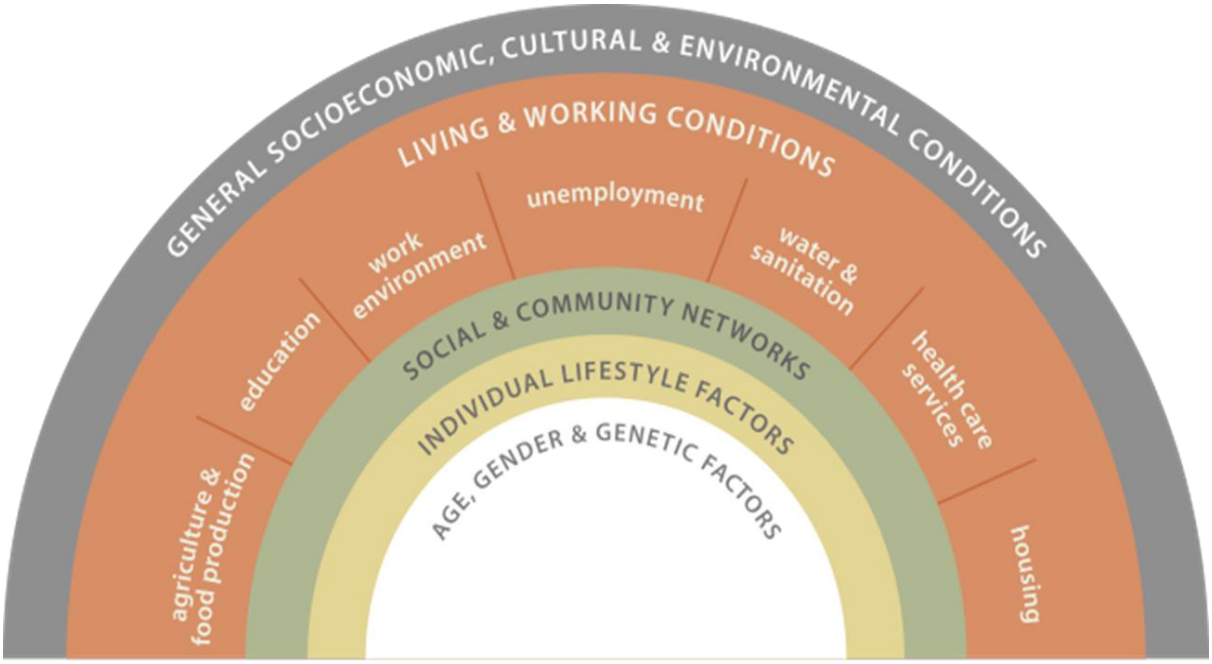
Many of these health behaviors, as identified in Figure 1, are risks for these chronic diseases. **By altering lifestyle behaviors, the risk of developing heart disease, stroke, cancer, and diabetes can be reduced**.

Communities, schools, worksites and healthcare sites can promote healthy choices through policies and practices such as smoke-free workplaces, healthy food options, and promoting physically activity.

Personal behavior provides the single greatest opportunity to improve health and reduce premature deaths. Unhealthy behaviors have been shown to predict premature mortality and quality of life is linked to chronic disease. Research using data from the Robert Wood Johnson Foundation's Prescription for Health initiative shows smoking, an unhealthy diet, and inactivity were associated with more self-reported physical and mental unhealthy days. It reinforces the importance of addressing unhealthy behavior as part of medical care.[7,8]

However, people do not make behavior choices in isolation, but rather in a larger, complex context of their social and physical surroundings. While people have personal responsibility for their choices, they choose based on the people around them, the places they live, the options they have available and practices of their peers.[9]

The socio-ecological model recognizes the connection (**or interrelatedness**) between individuals and their environment. Barriers to healthy behaviors are shared among the community as a whole. As these barriers are lowered or removed, behavior change becomes more achievable and sustainable. It becomes easier to "push the ball up the hill."

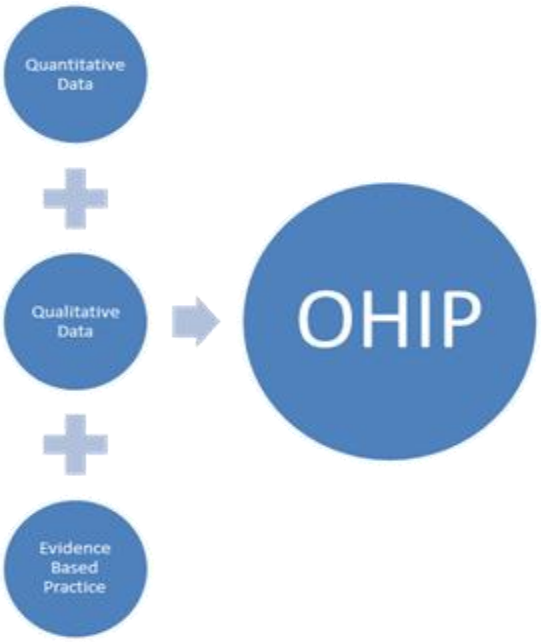


Adapted from the Dahlgren-Whitehead Model[37]

The most effective approach leading to healthy behaviors is a combination of the efforts at all levels—individual, interpersonal, organizational, community, and policy. Working within this multi-level framework, the update to the OHIP plan requires three primary pieces of information:

1. What is causing the most death and illness in our state?
2. Why is this occurring?
3. What is the best way to bring about change in these conditions?

Stated another way, the Oklahoma Health Improvement Plan is a product of quantitative data (the "what"), qualitative data (the "why") and evidence-based practice (what works).



- Quantitative data – This describes the leading causes of death and illness by indicating the burden in number form and is captured in the annual State of the State's Health Report.

- Qualitative data – To help answer the complex question of why we are experiencing our current health challenges, nine community chats and two tribal consultations, and a business survey were conducted to ask local residents and business people what separated their vision of a healthy community from the realities in which they live today and suggestions for bridging that gap. In addition, residents from across the state had the opportunity to provide input by participating in an online survey posted on the Oklahoma State Department of Health website, and by using comment cards distributed at community chats and at local county health departments.

- Evidence based practice – Workgroups of individuals who work in specific areas of health were asked to provide goals and strategies based upon evidence of effectiveness and scientific study.

The process for obtaining community input (the "community chat", tribal consultation and survey process described above) involved the following elements:

- General Community Chat – These were focused on the local communities of Enid, Lawton, McAlester, Oklahoma City and Tulsa.

- African-American Community Chat – These were focused on African-American populations in the Oklahoma City and Tulsa areas with a particular focus toward barriers that separate this population from equal access to health.

- Hispanic Community Chat – These were focused on Hispanic populations and were held in Guymon and Oklahoma. Similar to the African-American chats, these sessions were attentive to challenges and barriers faced by this population group.

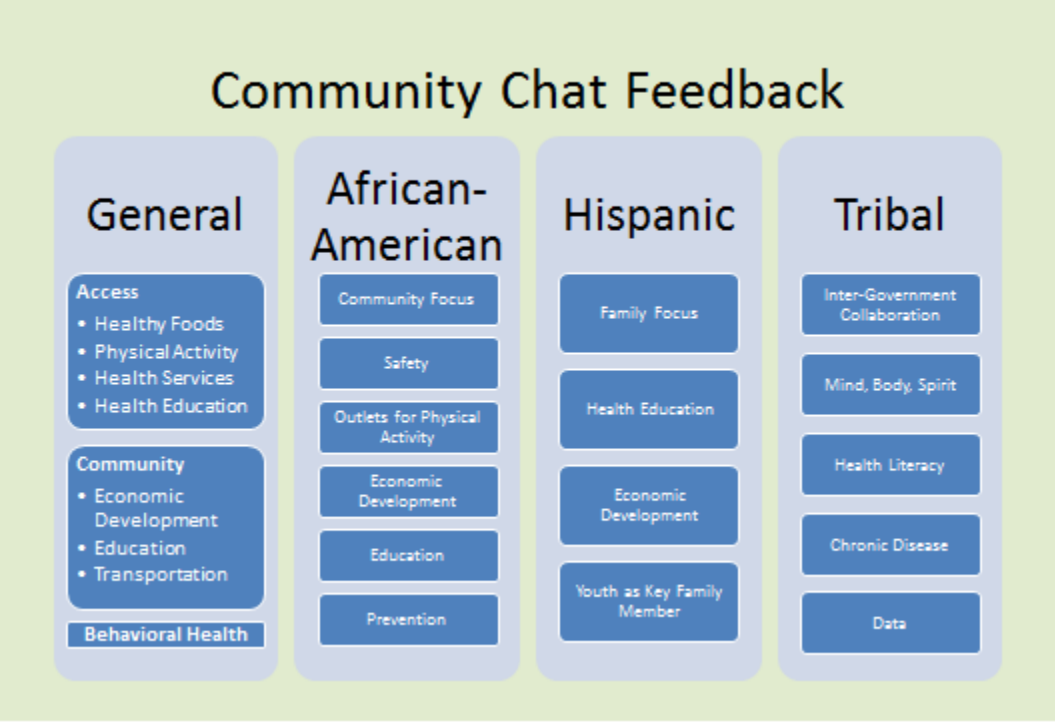
- Tribal Consultations – Indian Tribes located in Oklahoma are sovereign nations, and as such the process for obtaining input took the form of a formal tribal consultation, with leadership from both the Oklahoma State Department of Health and the Tribes coming together to discuss matters related to health improvement.

- Business Survey – The business survey was a conducted online and via phone polling. In addition, in-depth interviews were conducted with employers that invest in employee wellness. In total, more than 750 businesses participated in a survey designed to highlight the impact of poor health outcomes and medical costs on Oklahoma business and benefits of investments in employee wellness.

Though set up differently depending on the population reached, these chats, tribal consultations and surveys each asked the same essential questions:

1. What is your vision for a healthy community?
2. What are the barriers that prevent us from achieving that vision?
3. How can we address those barriers?

In addition to the community chats, these questions were also made available to the public via an online survey located on the Oklahoma State Department of Health website and comment cards distributed across the state. What follows is a summary of the combined feedback from these various sources:



Business Survey Feedback:

- Rising healthcare costs are impacting the bottom line of businesses reducing potential for growth, reducing growth in employee wages, and increasing benefit share for workers.

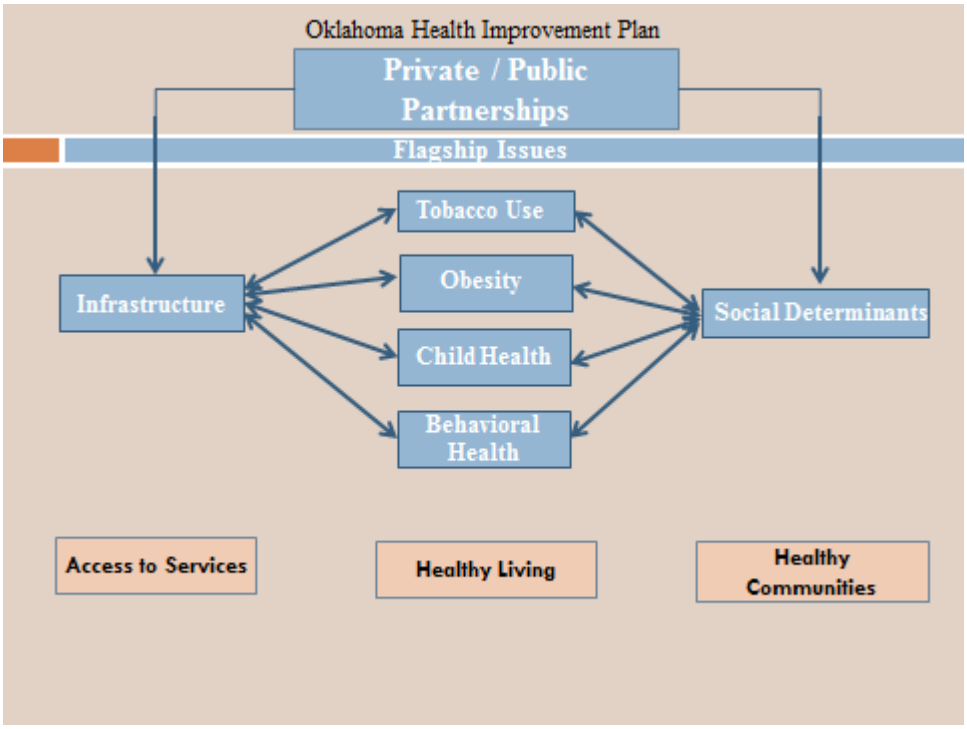
- Half of the businesses surveyed indicated that employee health impacts their business. The top three challenges are the following:
    - Making positive lifestyle choices
    - Losing weight
    - Seeing a doctor for preventive care

- Many business owners want tools and help create a healthy work environment.

- Businesses indicated that key health behaviors should be prioritized and addressed by the state:
  "Oklahoma has some real challenges that make it hard for us to achieve an impact on the health of our employees. For example*, the state is tobacco friendly, and many of our employees use tobacco products."*

- Insure Oklahoma is popular among businesses but enhancements, including creating better access to coverage, were recommended.

The three-step process outlined above and the resulting information yielded the following structure for the updated Oklahoma Health Improvement Plan:



Above all, this plan is driven by private and public partnerships. Crucial to the success of OHIP is a commitment and shared understanding by partners about the importance of the following flagship priorities:

- Tobacco Use – despite significant improvement in recent years, tobacco use remains the leading cause of preventable death in Oklahoma
- Obesity – highly associated with premature death from cardiovascular disease and cancer, it also greatly increases the risk of diabetes and other chronic health conditions
- Child Health – from infant mortality to immunization rates, the preventive steps taken at the earliest stages of life can have a profound impact on future health status
- Behavioral Health – a newly added flagship issue, the interconnection between one's physical and mental health cannot be ignored, as success in one is dependent upon success in the other

These flagship issues reflect the importance of healthy living as a necessary condition for achieving and maintaining good health. Yet an individual's ability to live healthy is influenced by his/her environmental conditions, i.e. *social determinants of health.* Adequate transportation, educational attainment, income, housing, social support and safe neighborhoods are necessary foundations for healthy communities.[10] While the role of individual lifestyle choices cannot be minimized, the social and physical influences of one's surroundings cannot be underestimated. Thus, these social determinants of health are taken into account in the work surrounding the

flagship issues of OHIP and find a specific designation within the model. Equally important to healthy living is an infrastructure, or system, of access to health related services and resources. This includes health care access, which can be improved through increased use of information technology, innovations in healthcare finance, workforce development and improved efficiency.

The following sections outline the flagship goals and strategies over the next five years.

Tobacco Use

Tobacco continues to be the leading preventable cause of death in Oklahoma, causing about 6,000 deaths in our state per year. Smoking kills more Oklahomans than alcohol, auto accidents, AIDS, suicides, murders and illegal drugs combined. Oklahomans spend approximately 1.16 billion per year on smoking related health costs, while the tobacco industry spends an estimated $160.3 million dollars annually to market tobacco products in Oklahoma.

According to the Centers for Disease Control and Prevention (CDC) the smoking prevalence for Oklahoma decreased to 23.7% in 2013, but Oklahoma's rate is still far above the national average of 19%. Approximately one in four Oklahoma adults smoke compared to one in five nationally (2012). Each year about 4,400 Oklahoma children become new daily smokers.[11]

Many people across the state are working tirelessly to improve the health of Oklahomans by decreasing the use and exposure to tobacco. OHIP measures focus on 1) decreasing the incidence of chronic disease caused by or impacted by tobacco use and secondhand smoke exposure and 2) decreasing the proportion of Oklahoma children who become new daily smokers.

Tobacco Use Goals and Objectives	
Goals	Objectives
Protect all Oklahomans from exposure to secondhand smoke	Objective 1: Extend state law to eliminate smoking in all indoor public places and workspaces, except in private residences through a comprehensive state law eliminating exemptions by 2020
	Objective 2: Increase the number of tribal nations that voluntarily adopt laws/policies to eliminate commercial tobacco use in tribally-owned or -operated worksites, entertainment (or enterprise) venues and hotels by 2020
	Objective 3: Increase the number of tribal nations that voluntarily adopt laws/policies to eliminate commercial tobacco abuse in tribally-owned or -operated casinos by 2020
	Objective 4: Increase the proportion of voluntary smoke-free policies by 2020

Prevent initiation of tobacco use by youth and young adults	Objective 1: Enact key public policy measures to increase prices on tobacco products by 2020
	Objective 2: Fully implement evidence-based health communications mass media campaigns according to CDC Best Practices for Comprehensive Tobacco Control Programs by 2020
	Objective 3: Maintain compliance with laws to prevent illegal sales of tobacco to youth
Increase the percentage of Oklahoma adults and youth who successfully quit tobacco use	Objective 1: Increase the number of hospitals and health systems, health care professionals, and community-based clinics that effectively implement the U.S. Public Health Service Clinical Practice Guideline for treating tobacco dependence by January 2018
	Objective 2: Increase tobacco-free properties at all workplaces including private businesses, state agencies, tribal governments, local governments, hospitals, school districts, universities and colleges, career technology centers and faith-based organizations by January 2018
	Objective 3: Increase the percentage of smokers utilizing Oklahoma Tobacco Helpline services (treatment reach) by January 2018
Increase knowledge of emerging products	Objective 1: Develop a tracking system for the sale of electronic cigarettes/electronic devices to youth under the age of 18
	Objective 2: Conduct assessments that highlight the actual usage of emerging products

Obesity

Oklahoma now has the seventh highest adult obesity rate in the nation, according to *The State of Obesity: Better Policies for a Healthier America*, a report from the Trust for America's Health (TFAH) and the Robert Wood Johnson Foundation (RWJF). Oklahoma's adult obesity rate is 32.5%. Disparities exist wherein obesity rates remain higher among Black and Latino communities than among Whites. National findings reveal that significant geographic, income, racial and ethnic disparities persist, with similar disparities found in Oklahoma.

The factors leading to obesity are complex. Public health approaches that affect large numbers of different populations in multiple settings—communities, schools, worksites and health care facilities—are needed.[12] Policy and environmental initiatives that create incentives to make healthy nutrition choices and physical activity opportunities available will prove most effective in combating obesity.[13]

> "A growing number of cities and states have reported decreases in obesity among children, showing that when we make comprehensive changes to policies and community environments, we can build a Culture of Health that makes healthy choices the easy and obvious choices for kids and adults alike." (Lavizzo-Mourey, MD, RWJF president and CEO)

The Oklahoma State Department of Health in conjunction with the Tobacco Settlement Endowment Trust (TSET) has campaigns in place that encourage individuals to eat better and move more through advertising on television radio billboards and through social media to provide practical tips for healthy living. The Oklahoma State Department of Health, through the Certified Healthy Oklahoma program, also promotes comprehensive wellness policies for schools, businesses, communities, congregations, child care providers and institutions of higher education statewide.

Obesity Reduction Goals and Objectives	
Goal: Develop and maintain a scalable Health in All Policies based partnership framework to address obesity through the targeting of contributing social determinants of health and reducing disparities throughout the state of Oklahoma.	Objective 1: Recruit partners that have influence or control over the social determinants of health as relate to obesity
	Objective 2: Build the group's capacity related to evidence based and promising practices connected with addressing obesity and implementing health-in-all policy models/approaches
	Objective 3: Form working subgroups that focus on issues that disproportionately impact at risk populations

Goal: Coordinate the collection of statewide data to facilitate an asset-mapping process to determine obesity efforts currently in place and determine gaps and needs to supplement local obesity efforts.	Objective 1: Utilize current surveillance and evaluation systems to collect readily available data and house in a central database
	Objective 2: Leverage existing and developing networks to identify and located data and information regarding current local and statewide obesity efforts
	Objective 3: Communicate with non-traditional partners to determine applicable work that addresses obesity-related social determinants of health for inclusion in the statewide obesity asset map
Goal: Increase the number of organizations and entities applying for and receiving Certified Healthy Designations	Objective 1: Increase awareness and utilization of tools available to increase policies and practices addressing obesity that are designated by the Certified Healthy Program as a promising or best practice
	Objective 2: Target underserved areas to increase the number of entities creating health promoting environments through policy and environmental strategies
	Objective 3: Facilitate peer-to-peer learning network among Certified Healthy entities to foster distribution of evidence based practices proven effective in Oklahoma

Children's Health

The health and well-being of mothers, infants, children and adolescents are fundamental to our state's future. Of great concern, Oklahoma ranks poorly for many key indicators of maternal and child health which will have long term consequences for our state's health going forward if improvement for this population is not realized. The Children's Health portion of the Oklahoma Health Improvement Plan addresses key life course stages – maternal and infant health and then child and adolescent health – with goals, objectives and performance measures for each.

When examined through the context of a life course model, as proposed by the Maternal and Child Health Bureau, the work of this particular flagship issue can be summarized by Timeline, Timing, Environment and Equity. Today's experiences and exposures influence tomorrow's health (timeline), the path of one's health is particularly affected during critical or sensitive periods (timing), the broader community environment strongly affects the capacity to be healthy (environment) and inequality in health reflects more than genetics and personal choice (equity). If, as a state, we take advantage of these life course opportunities – we will greatly accelerate improvement in our overall health as the next generation arrives equipped to live, work and lead this state with vitality and purpose.

In order to achieve further improvement in birth outcomes, women must practice healthy behaviors and be engaged in primary and preventive health care services throughout their reproductive lives, including before they become pregnant (preconception) and between pregnancies (inter-conception). Making health a priority for children and adolescents ensures the health of future generations. During this time of physical and mental growth, children and adolescents can learn to build a strong foundation for healthy behavior. Research has shown that many medical conditions affecting adults have roots in childhood.

Children's Health Goals and Objectives	
Maternal & Infant – Child & Adolescent	
Goal	Objective
Improve Maternal and Infant Health Outcomes	Objective 1: Reduce Infant Mortality Rate from 6.8 per 1000 live births in 2013 to 6.5 by 2020
	Objective 2: Reduce Maternal Mortality Rate from 29.1 per 100,000 live births in 2012 to 26.2 by 2020
	Objective 3: Reduce the rate of unintended pregnancies (mistimed or unwanted) among mothers who have live births from 46.5% in 2011 to 44.2% by 2020
	Objective 4: Increase the percentage of women who receive prenatal care in the first trimester of pregnancy from 68.5% in 2013 to 71.9% by 2020
	Objective 5: Reduce the rate of preterm births (births less than 37 weeks gestation) from 13.0 in 2012 to 11.8 by 2020
	Objective 6: Reduce the percent of women who smoke during the last three months of pregnancy from 18.0% in 2011 to 16.7% by 2020
	Objective 7: Increase the percent of

	women screened for postpartum depression up to one year after end of pregnancy from 40.6% in 2012 to 43.0% by 2020
	Objective 8: Increase the percent of infants who are placed to sleep on their backs from 69.9% in 2011 to 74.1% by 2020
	Objective 9: Increase the percent of mothers who breastfeed their infants at 6 months of age from 34.8% in 2013 to 36.5% by 2020
	Objective 10: Reduce the number of incidents of abusive head trauma in infants from 18 in 2012 to 15 by 2020
	Objective 11: Reduce the rate of birth (per 1,000) for teenagers aged 15 through 17 years from 20.5 in 2013 to 19.2 by 2020
Improve Child and Adolescent Health Outcomes	Objective 1 Improve the percentage of children who have at least one primary care provider visit for preventive medical care in the past year from 84.4% in 2011 to 86.9% by 2020
	Objective 2: Decrease the rate of deaths from unintentional injuries among infants, children, and youth age 0 – 18 years by 5.2 % to 14.4/100,000 by 2020
	Objective 3: Reduce the number of high school youth grades 9 – 12 who report they were bullied on school property during the 12 months before the survey from 18.6% in 2013 to 18.0% by 2020
	Objective 4: Increase the coverage for the childhood immunization series for children 19 – 35 months from 62.7% to 80% by 2020
	Objective 5: Increase the HPV vaccination coverage among Oklahoma females 13 – 17 years from 35.4% in 2013 to 50% and among Oklahoma males 13 – 17 years from 17.3% in 2013 to 30% by 2020
	Objective 6: Reduce the percentage of dental caries experienced in 3rd grade

	children from 59.7% in SFY 2013 to 57.9% by 2020
	Objective 7: Increase the percentage of Oklahoma population on Community Water Systems (CWS) receiving fluoridated water from 62.6% in October 2014 to 64.5% by 2020
	Objective 8: Increase the percentage of children who are flourishing Definition to measure? age 6 months – 5 years from 75.9% in 2011/2012 to 78.2% and children age 6 – 17 years from 46.4% in 2011/2012 to 47.8% by 2020
	Objective 9: Reduce the percentage of children 0 – 17 years experiencing two or more adverse family experiences from 32.9% to 31.9% by 2020
	Objective 10: Increase the percent of children age 2 – 17 years with emotional, behavioral, or developmental problems requiring counseling who received mental health care or counseling in the previous year from 60.7% in 2011/2012 to 62.5% by 2020
	Objective 11: Reduce the percentage of high school youth grades 9 – 12 who report one or more suicide attempts during the past to year from 6.8% in 2013 to 6.6% by 2020
	Objective 12: Reduce the percentage of high school youth grades 9 – 12 who currently consume alcohol from 33.4% in 2013 to 32.4% by 2020
	Objective 13: Increase the number of families served in evidence-based home visitation programs from 7,517 in SFY 2014 to 7,892 by 2020.
	Objective 14: Expand child welfare community collaboratives focused on child wellbeing, including access to physical and mental health care services from 2 counties in CY 2014 to 15 counties by 2020
	Objective 15: Increase the percent of children with special health care needs age 0 – 17 years with need for mental

	health care or counseling who received all needed care from 75% in 2009/2010 to 77.3% by 2020

Behavioral Health

Mental health and substance abuse issues are among the most pressing concerns facing our state today. In the past year, 22% of adult Oklahomans reported having a mental health issue and 12% experienced a substance abuse issue[14] representing 700,000 to 950,000 Oklahomans living with diseases of the brain. Our state consistently ranks among the highest in the region, and nationally, for rates of mental illness and addiction, as well as prescription drug abuse, underage drinking and suicide. Oklahoma ranks 2nd worst nationally for mental illness among adults, 7th for suicide, 6th for drug overdose deaths, and 10th worst for the number of "poor mental health days."

Divorce, unemployment, child welfare involvement, academic failures, accidents, unwanted pregnancies, homelessness, crime and incarceration are all potential consequences of these illnesses left untreated. These issues have dramatic impact on families and society. Ties to other chronic health issues are also well documented. In fact, mental disorders are the 3rd leading cause of chronic disease in our state – behind only pulmonary conditions and hypertension – and more prevalent than heart disease, diabetes, cancer and stroke. Life expectancy for people with untreated behavioral health diseases is significantly less than the general population, upwards of 25 – 30 years. Dedicated attention and to diseases of the brain is critical to improving the health of our state.

Behavioral Health Goals and Objectives	
Goal	Objective
Goal: Increase the overall health and wellness of Oklahomans.	Objective 1: Develop a system of health homes by which physical disorder identification and care is integrated into behavioral health care
	Objective 2: Assess and incorporate the treatment of behavioral health disorders into primary care clinic practices
Goals : Decrease the prevalence of addiction disorders in Oklahoma	Objective 1 Screening, brief intervention and referral for treatment for addiction door disorders will be the norm for Oklahoma's primary care practices and hospital emergency departments
	Objective 2: Explore and assess all funding strategies for addiction treatment
Goal 3: Decrease the number of Oklahomans with untreated mental illness	Objective 1: Assess and identify efficiency of current behavioral health services

	Objective 2: Explore and assess all funding strategies for treatment of mental health disorders

Systems that Enable Health

Individuals operate within a network of systems that either support or create barriers to good health. Sometimes these systems are directly identified with health, for example health insurance or healthcare systems. Other times they are systems that help people reach their full potential. In fact, people's health is significantly affected by their homes, schools and jobs. Improving systems that support Oklahoman's in attaining optimal health, including educational and economic development organizations, is necessary to realize health improvement in Oklahoma.

Health Transformation

The Commonwealth Fund ranks Oklahoma's state health system performance 49th out of 51 states and jurisdictions.[15] Oklahoma has several initiatives underway that aim to transform the health system into one that bends the health care cost curve, increases health care quality, and improves health outcomes (the Triple Aim). In order to accomplish this, Oklahoma will need to implement innovative and evidence-based strategies that will accelerate and reinforce the health care triple aim and transform Oklahoma's current health system into a more sustainable and value-based model. Recent efforts to address Oklahoma's health system transformation have resulted in the identification of four core areas of work: 1) Health Efficiency and Effectiveness, 2) Health Information Technology (IT), 3) Health Workforce, and 4) Health Finance.

Health Transformation	
Overarching Objective: Oklahoma's ranking on the Commonwealth Fund Scorecard on State Health System Performance will improve from the 4th quartile (bottom quartile) in 2014 to the third quartile by 2020	Strategy 1: Promoting and pursuing value-based health models across systems that will accelerate health improvement and yield a return on investment, including the use of a "health in all policies" approach
	Strategy 2: The State of Oklahoma should lead the health transformation effort by evolving existing investments in health to value-based models, including the use of new healthcare payment models, evidence based public health investments, and pursuing partnerships with private investors that yield long term social and health outcome improvements (i.e., social impact bonds)
Health Efficiency and Effectiveness: Goal – Create a system of outcome driven healthcare that supports patients and health providers in making decisions that prevent disease and excessive use of acute care facilities	
Objective1: Reduce by 20% the rate, per 100,000 Oklahomans, of potentially preventable hospitalizations from 1836.2 in 2012 to 1468.96 by 2020	Strategy 1: Improve the quality and availability of health care via care coordination, especially for individuals with chronic, behavioral health, or specific co-morbid conditions
	Strategy 2: Prioritize outcome-driven care
Objective 2: Reduce by 20% the rate, per 1,000 population, of Hospital Emergency Room Visits from 488 in 2011 to 390 Visits by 2020	Strategy 1: Use of Clinical Preventive Services (CPS) to reduce the need for emergency care
	Strategy 2: Use of Patient-Centered Medical Homes to improve health outcomes
	Strategy 3: Support practice facilitation in order to train providers to achieve National Quality Forum (NQF) Goals.
	Strategy 4: Promote the exchange of electronic health records across the care continuum

Health IT: Goal: Improve quality, safety, effectiveness and efficiency of health services through the use of interoperable health information technology	
Objective: Improve safety, quality, and convenience of care for each Oklahoman by ensuring that treating providers access a multi-sourced comprehensive medical record on 30% of patients they treat who have data available from other sources by 2020	Strategy 1: Facilitate Health Information Exchange (HIE) adoption and implementation
	Strategy 2: Enhance communication among healthcare stakeholders (including patients and families) with respect to the use of health IT
	Strategy 3: Consider state level policies to protect purchasers of EHR and ensure adequate interoperability
	Strategy 4: Establish training programs to increase provider knowledge and abilities in clinical informatics and health IT
Objective: Improve health and reduce costs of care for Oklahomans by ensuring that population-level multi-sourced comprehensive health data is used to support the public health, quality improvement, and value-based payment models for a majority of Oklahomans by 2020	Strategy 1: Increase adoption of Electronic Health Records (EHR), HIE and achievement of Meaningful Use (MU)
	Strategy 2: Extend participation in voluntary multi-payer claims databases
Health Workforce: Goal: Improve access to health services offered through a value based and patient centered health system	
Objective: Statewide health workforce efforts are being coordinated through a single, centralized entity by October 2016	Strategy 1: Coordinate and leverage health workforce initiatives with state workforce investment and planning activities
	Strategy 2: Formalize collaboration by development of detailed, specific memorandums of agreement (MOAs)
Objective: Identify and quantify labor demand and program supply for 20 critical health care occupations through the development of a longitudinal, multi-sourced data set that is available for public use by January 2016	Strategy 1: Develop detailed MOAs to establish and adopt minimum data sets; engage partners for research, data collection and analysis as needs are identified
	Strategy 2: Explore “best practices” in health workforce data collection and develop prioritized health workforce research agenda based on Oklahoma’s specific needs
Objective: Supply gaps for identified 20 critical health occupations are reduced by more than 10% by October 2019	Strategy 1: Identify and recommend new strategies to train, recruit and retain traditional and emerging health professionals, with a specific focus on pre-baccalaureate health professionals i.e. community health

	workers, medical assistants
	Strategy 2: Strengthen and expand existing health workforce training programs, including administrators, practice facilitators
	Strategy 3: Increase opportunities for professional development for health professionals on health system transformation, i.e. telemedicine, EHR and population health, team-based, and patient-centered care
Objective: At least five recommended policies and programs that support and retain an optimized health workforce have been implemented by November 2019	Strategy 1: Assess current barriers to health workforce flexibility and optimization, including those that prevent health care providers from practicing at "top of license"
	Strategy 2: Explore strategies to provide bio-psychosocial support to health care professionals
	Strategy 3: Explore evidence-based policies and programs for the support of team-based care, medical homes, and patient-centered care
	Strategy 4: Resource value-based health models, such as the Patient-Centered Medical Home
Health Finance – Transform healthcare payment models utilizing a multi-payer approach to create a value-based and sustainable healthcare system available for all Oklahomans	

Objective : Decrease the rate of uninsured individuals in Oklahoma from 17% in 2013 to 12% by 2020(2013 Uninsured total estimated by Milliman, Inc. as 645,000)	Strategy 1: Pursue the use of premium assistance programs, such as Insure Oklahoma or tribal sponsored premium coverage programs, with an emphasis on increasing the uptake of minimal essential insurance coverage
	Strategy 2: Explore opportunities to use waivers, demonstration projects (vehicles that states can use to test new or existing ways to deliver and pay for health care services in Medicaid and the Children's Health Insurance Program) and other sources of funding to create sustainable, value driven healthcare models in order to increase access to care, improve quality and reduce costs
Objective: Limit annual state-purchased health care cost growth to 2% less than the projected national health expenditures average annual percentage growth rate as set by Center for Medicare and Medicaid Services (CMS) (Estimated baseline for annual state-purchased health care cost growth: 5.11%)	Strategy 1: Increase the percentage of health care spending in the State that is contracted under value-based payment models that reward providers for quality of care
	Strategy 2: Use payment models that adequately incentivize and support high-quality team-based care focused on the needs and goals of patients and families
	Strategy 3: Align health system incentives, including payer and provider incentives, to better coordinate care, promote health outcomes, and ensure quality measures are achieved which limit health expenditure growth

Private-Public Partnerships (P3)

Creating a thriving economy and vital workforce are critical elements of population health improvement. Likewise, in order to help achieve these economic goals, Oklahoma must attend to the health of its residents. Investing in an education and work ready population will create greater opportunity for economic development and expansion into the future. These investments will return savings or improvements, not just to the healthcare system, but to many sectors that impact the bottom line of our state and our businesses.

In undertaking the OHIP update, a business survey was developed to assess the outcomes of poor health, increasing medical costs and poor access to care in Oklahoma on their business. Of the more than 700 responses received, about half reported that employee health negatively impacts their business. Oklahoma businesses indicated the following as the most common negative impacts due to rising healthcare costs:

- Less profitable for general business growth
- Held off on salary increases for employees
- Increased medical deductible/increase employee share of medical costs
- Held off on hiring new employees

These outcomes of poor health on business create significant limitations for a growing economy, increased job creation and wealth generation in Oklahoma. Thus, they create challenges for many private organizations working toward improvement of the well-being of our residents. Private foundations, congregations, non-profit organizations and associations working toward economic, educational, social and health improvement goals should be concerned with the impacts of poor health outcomes on business.

When asked the leading challenges that businesses face in terms of employee health, results were similar to the challenges identified in community chats and include the following:

- Making positive health lifestyle choices
- Losing weight
- Seeing a doctor for preventive care
- Quitting tobacco
- Reducing stress

Within the range of health improvement initiatives available to tackle these issues everyone has a stake. The OHIP seeks to create robust and diverse private partnerships that identify areas most amenable for joint private and public sector investment, to yield specific value for that investment and leverage the innovation and efficiency of the private sector. The following are the goals, objectives and strategies of the 2020 OHIP plan:

Goal: Increase private-public joint partnerships and investment opportunities (monetary, policy, programs, etc.) to improve population health and yield a return for businesses, government and the citizenry

P3 Partnerships

Objective 1: Create a P3 Action Team comprised of business, faith-based, foundation, non-profit, association and government representatives to undertake the following:

- Communicate the impact and value of health investment to business and the economy

- Accelerate the adoption of evidence-based health programs and policies among the private sector utilizing the Certified Healthy Oklahoma program
- Develop a proposed health investment portfolio by December 31, 2015

Objective 2: Adopt legislation to establish a P3 Trust responsible for administering investment programs between private organizations and government for the benefit of Oklahoma by May 31, 2016

Objective 3: Establish a P3 investment and oversight board to govern the Trust and determine criteria and value of investment no later than July 1, 2017

Objective 4: Award at least one private-public health improvement initiative by January 2019

Strategies:

- Assess current P3 investment opportunities and projects throughout country for application in Oklahoma (for example, social impact bonds)
- Utilize business planning processes to identify health areas with the largest potential to return value and the most impactful investment tool (i.e. policy, program, etc.)
- Utilize transparent processes to determine best value to the state and investors

Future Action and Recommendations

Now is the time for action. Successful implementation will take more than strong knowledge and good programs and policies. It calls for full engagement from individuals and organizations at all levels.

We must work together, community by community, to create the opportunities for good health. Congratulations to the following counties for developing a Community Health Improvement Plan:

Cleveland	McClain
Comanche	Oklahoma
Garfield	Stephens
Jackson	Texas
Logan	Tulsa
Washington	Woods

We are grateful to our Turning Point community partnerships, 73 strong. They continue a long history of developing successful community initiatives ranging from new walking trails, tobacco free schools, and new health clinics.

These community efforts are based on many of the same goals incorporated into the OHIP plan. It ensures connections (or linkages) of statewide strategies to community priorities.

Presentation of the OHIP plan includes short and long-term priorities that will impact all the citizens of our state both young and old. It is a living document that will be monitored on a regular basis to ensure the active engagement of stakeholders in addressing the recommended goals and objectives.

But we must do more. To achieve the goals of this plan we must have active engagement and buy-in by a broad base of stakeholders.[16]

What can you do?

Model some of the recommended behavior changes in your home and get your friends and family involved.

- Join in local efforts to make your community a healthy place to live, work, play and learn.
- Encourage local businesses, schools, communities and congregations to strive for Certified Healthy Oklahoma status.
- Become involved in a local Turning Point or other community partnership with a focus on addressing health and its related social determinants.

Disparities in Health Outcomes and Social Determinants

Health is influenced by many factors. Poor health status, disease risk factors, and limited access to health care are often interrelated and have been reported among persons with social,

economic, and environmental disadvantages. The conditions and social context in which persons live can explain, in part, why certain populations in the United States are healthier than others and why some are not as healthy as they could be.[17]

Social determinants of health are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.[18] There is recognition that social factors are at the root of many of the inequities in health and health care.[19]

Figure 2

Social determinants cover the following dimensions: Economic Stability, Education, Social and Community Context, Health and Health Care and Neighborhood and Built Environment.[20]

What follows is a summary of key social determinants affecting Oklahoma's health

Poverty

Individuals living in poverty are more likely to engage in unhealthy behaviors, be exposed to environmental hazards and have limited access to health care services.[21] 17.2 percent of Oklahomans were below poverty in 2012, higher than the national average of 15.9%. Oklahoma's child poverty rate for children under 18 is 24%.[22, 23] Growing up in poverty is one of the greatest threats to healthy child development. Poverty and financial stress can impede children's cognitive development and their ability to learn. It can also contribute to behavioral, social and emotional problems and poor health.

Employment and income

Another measure of economic stability is income and employment. Employment is often linked with poor physical and mental health. Unemployed persons have higher annual illness rates, lack health insurance and access to health care and have an increased risk for death. Employment status influences a person's health however poor health also affects a person's ability to obtain and retain employment. Poor health predisposes individuals to more uncertain positions in the labor market and thereby increases the risk for unemployment.[24]

Table 3 - 2013 Unemployment Rates and Income Measures Oklahoma and U.S.		
Subject	Oklahoma	US
Unemployment rate	4.2%	6.0%
Median household income	44,891	53,046
Median family income	$56,068	$64,585

(Source: Employment Status American community survey 2013 one year estimates)

Table 3 identifies national and state figures for unemployment, household and family income. Oklahoma's unemployment rate is better than the national figure. However the state's median household income of $44,891 is over fifteen percent lower than national figures. This is also true of the state's median family income at $56,653 which is over thirteen percent lower than the national figure.[25]

Race/Ethnicity

Individuals, families and communities that have systematically experienced social and economic disadvantage face greater obstacles to optimal health. Leading health indicators have demonstrated little improvement in disparities. Significant racial and ethnic health disparities continue to permeate health care, the health care workforce, population health and data collection and research.

Cardiovascular disease is the leading cause of death in the United States. Non-Hispanic black adults are at least 50% more likely to die of heart disease or stroke prematurely (i.e., before age 75 years) than their non-Hispanic white counterparts. For Oklahoma in 2012, heart disease death rates were highest among non-Hispanic Blacks and American Indians. - In 2010 through 2012 in Oklahoma, the percent of premature deaths from heart disease (occurring in individuals under the age of 75) was 38% for non-Hispanic Whites, 58% for non-Hispanic Blacks, 56% for non-Hispanic American Indians, and 59% for Hispanics.

The prevalence of adult diabetes is higher among Hispanics, non-Hispanic blacks, and those of other or mixed races than among Asians and non-Hispanic whites. Prevalence is also higher among adults without college degrees and those with lower household incomes. In Oklahoma Non-Hispanic American Indians reported 33% higher prevalence than non-Hispanic Blacks and 41% higher prevalence than non-Hispanic Whites in 2012.

The infant mortality rate (IMR) for non-Hispanic blacks is more than double the rate for non-Hispanic whites. Rates also vary geographically, with higher rates in the South and Midwest than in other parts of the country. In 2012, the non-Hispanic Black IMR decreased 24% from 2007. Though IMR overall rates improved, the IMR for non-Hispanic Black infants remained higher than other race/ethnic groups.[26]

The Institute of Medicine's (IOM) report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,* identifies lack of insurance as a significant driver of health care disparities. Racial and ethnic minorities are significantly less likely than the rest of the population to have health insurance. Members of racial and ethnic minority groups also have inadequate access to primary care physicians. Minority children are also less likely than non-Hispanic white children to have a usual source of care.

The 2004 IOM report, *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce,* show significant differences in the racial and ethnic composition of health care workforce compared the US population. Diversity in the healthcare workforce is a key element of patient centered care. The ability of the health care workforce to address disparities will depend on cultural competence and diversity. In addition to competencies and diversity there are shortages of physicians and other healthcare professionals in underserved areas and this significantly affects the health of racial and ethnic minorities.
Individuals who live and work in low socioeconomic circumstances which disproportionately includes racial ethnic minorities experience reduced access to healthy lifestyle options and suffer higher rates of morbidity and mortality as compared to higher income counterparts.

Being a minority is strongly associated with increased levels of poverty, decreased educational attainment, an increased incidence of untreated health conditions.[27] Inadequate data on race and ethnicity and language also lowers the likelihood of effective interventions tailored to racial or ethnic differences (health disparities). This issue was reinforced by stakeholders at our tribal consultation.[28] Community acknowledgement of such variation in Oklahoma became apparent in our community chats. For African Americans safety issues, educational attainment, economic development were primary concerns. Participants wanted an increased focus on primary prevention.

At the tribal consultations participants wanted to focus on health literacy, greater collaboration with partners, and a prevention focus for chronic diseases like diabetes. Participants identified promising practices and indicated a cultural strength around the integration of mind, body and spirit in their practice.

In the Hispanic community chat, concerns included adolescent pregnancy, the need for school health and education, economic development and designing services with a family focus that includes an understanding of language differences.

Food Security

Quality nutrition is key to a healthy life. It is estimated 653,820 Oklahomans experienced food insecurity in 2012, including nearly 240,000 children.[29, 30] Food insecurity, as defined by the

USDA, is when a household's economic and social condition results in limited or uncertain access to adequate food.

Research shows that food insecurity is associated with lower scores on physical and mental health exams. Food insecure adults have an increased risk of developing diabetes and a range of chronic diseases.[31] Persons who live in neighborhoods with better access to supermarkets and large grocery stores that typically offer fruits and vegetables and other healthy foods might have healthier diets.[32]

In Oklahoma 43 of 77 counties contain census tracts identified as food deserts where residents have to travel more than 10 miles to reach a full service grocery store in rural areas and more than a mile to a grocery store in urban areas. Food insecurity adversely affects children. Currently more than 62% of children enrolled in Oklahoma public schools are eligible for income-based participation in the national school breakfast and lunch programs.[33, 34]

A Community is Food Secure When….

- There are adequate resources (such as grocery stores or farmers markets) from which people can purchase foods.
- Available resources are accessible to all community members.
- Food available in the community is sufficient in quality, quantity and variety.
- There are adequate food assistance programs to help low income people purchase and prepare nutritious foods.
- Locally produced food is available to community members.
- There is support for local food production.
- Every household is food secure within the community.

Oklahoma Ranks Very High for Having Very Low Food Security

- Over half a million Oklahomans live in households that are food insecure.
- Nearly a quarter million live in households with "very low food security," meaning their eating patterns were disrupted and food intake was reduced because they couldn't afford enough food.
- 1 out of 7 adults and 1 out of 4 children participate in the Supplemental Nutrition Assistance Program, SNAP. Contributing factors include: low median income and high poverty experienced by many Oklahomans;
- Some of the least expensive foods are also the least nutritious; while most healthy foods cost more.

<u>Housing</u>

"Housing has a pervasive impact on nearly all aspects of our lives…. It defines our community and determines our access to jobs, services, stores, and networks of support. The residence is the principal locus of family and personal life, in which our personalities, values, and many of our social roles are defined, shaped, and experienced."[35]

Households with modest means need safe, suitable housing they can afford. When housing is affordable, low- and moderate-income families are able to put nutritious food on the table,

receive necessary medical care, and provide reliable daycare for their children. Research has shown that the stability of an affordable mortgage or rent can have profound effects on childhood development and school performance and can improve health outcomes for families and individuals.[36] Living in a distressed neighborhood exacerbates the effects of family poverty on individual educational achievement, economic prospects, health as well as other indicators of wellbeing.[37]

In Oklahoma, 27% of individuals in a house with a mortgage pay 30% or more of their income on housing. Over 20% of those individuals are paying 35% or more of their income. For renters the data is even more sobering. 47% of Oklahomans pay rent that is 30% or more of their income; 38% have rent that exceeds 35% of their income. This can result in "shelter poverty", a situation where people spend so much money on housing that they have to cut back on other necessities such as food and health care.[38]

Transportation

Nearly 40 million working-age people now live in parts of major American metropolitan areas that lack public transportation, according to an analysis by the Brookings Institution's Metropolitan Policy Program. The consequences of this disconnection fall with particular severity on the poor. One in 10 low-income residents relies on some form of public transportation to get to work.[39]

Oklahomans face a number of chronic health problems due to stress and lack of exercise. One way to counter these problems is by using and investing in public transportation. Public transportation is linked to many aspects of good health – access to food, safety, exercise, lower stress levels, healthcare access and employment. The public transportation system is especially important to households without automobiles, the elderly, and those unable to drive. For these people, transit is the lifeline to medical care, grocery stores, employment, recreation, and everyday activities that others take for granted. Many suffer negative health consequences from lack of access to these basic necessities because public transportation isn't affordable or available. Public transportation also plays an increasing role in the daily lives of many commuters, students, urban dwellers, and even rural residents.

Information from the Oklahoma Health Equity (OHEC) Campaign shows Metro Tulsa and Oklahoma City are only able to provide relatively infrequent transit service when compared with American metropolitan areas of similar size. Transit in suburban and rural areas is no better off, especially for travel between cities.

The Oklahoma Department of Transportation commissioned a state transit system analysis in June, 2012 It called for expanded transportation options in residential, employment, health and other activity locations.[40]

Geography

Health care issues vary by geographic location. It is estimated that 20% of the rural population in America is uninsured and this number is projected to increase to 25% by 2019.[41] There are rural-urban disparities in health conditions associated with particular preventable or chronic diseases and disparities in infrastructure or professional capacity to address health needs. There is ample evidence that some important rural-urban health disparities exist with respect to, for example, shortages of some types of primary care physicians (obstetricians and pediatricians), shortages of specialized mental health providers and oral health providers, prevalence of tobacco use and drinking-and-driving, and delays in screening and diagnosis of cancer.[42] Rural Oklahoma has roughly 40 percent fewer primary care physicians compared to urban Oklahoma and the physician workforce is aging.[43]

Previous studies have illustrated many of the health disparities experienced by rural residents: poorer health status, higher obesity prevalence, more with activity limitations, and higher mortality rates.[44] The difficulty in accessing care is compounded by longer driving distances and lack of reliable transportation. Health information technology is on the rise yet rural residents are less likely than urban residents to have access to high-speed Internet which facilitates use of the computer for these functions.

In rural America there is been a dramatic increase in reported substance abuse cases over the last decade. Native Americans and Alaskan Indians who reside in rural areas have a higher rate of alcohol tobacco and marijuana use compared to other racial and ethnic groups. In 2000 it was reported that rural youth are more likely to become substance abusers than urban youth. As a result rural youth are more likely than urban youth to engage in dangerous behaviors such as binge and heavy drinking and driving under the influence.[45, 46]

Education

Research shows that better educated people have lower death rates and illnesses from common chronic and acute conditions such as heart condition, stroke hypertension, high cholesterol, emphysema, diabetes, asthma and ulcers.. Those with more education are mentally and physically more healthy. They are less likely to report poor health or an experience of anxiety or depression.

Our public education system does not work equally well for everyone. Those with poor academic performance are likely to have lower educational attainment; this in turn decreases upward mobility and affect a person's health status.[47] This upward mobility is usually accompanied by the provision of health insurance thereby providing access to health. Education level and education achievement play a role in determining what sort of job or career one has, one's earning potential which in turn directly affects one's financial or societal status and this "rank" might affect health.[48] It is likely that highly educated people may have "better" jobs that, in addition to paying higher incomes and providing health insurance, offer safe safer work environments.[49]

This combination of events allows persons to get better access to information resources that can promote health. More educated individuals have larger social networks which provide financial, physical and emotional support which may in turn have a causal effect on health.[50]

Individuals 25 years of age or older who have an additional 4 years of education report more positive health behaviors with lower risks in the areas of smoking, excessive drinking, obesity and using illegal drugs.[51] There are spillover effects: Maternal education is strongly associated with infant and child heath. They are also less likely to have low birth weight babies. More educated women were more likely to be married at the time of birth and have fewer children.[52] However, disparities were found irrespective of similar education status. Whites tend to experience more positive benefits on self reports of health than Blacks with the same education level. The impact of additional years of education were greater for those not living in poverty. Children who grow up in poverty fare worse in school than those who are not poor.[53]

87.6% of Oklahomans 25 years and older have a high school degree or higher. 23.9% have attended college. However, completion of a 4 year degree is much lower with 16.3% of these Oklahomans having a bachelor's degree and 7.7% having a graduate or professional degree.[54] Close to 50% (45.9%) of the population over 25 years of age has no college experience.[55]

Forty-three percent (43%) of Oklahomans (more than one million) are unable to perform more than simple, everyday literacy activities.[56] There is a need to look at education early in life. Effective community-based interventions include comprehensive early childhood center-based programs for low income children age three to five which provide early learning opportunities that will prepare them for school. Additional policies need to be directed at improving the quality of schools as well as those that expand college attendance. Schools play a role in promoting health and safety of young people and establishing life-long healthy behaviors. School health programs have been shown to have positive effects on educational outcomes, health risk behaviors and health outcomes. For adolescence, academic success contributes to the overall well-being of youth and is a predictor for positive adult health outcomes.

It is important for people to be knowledgeable about health issues. This is a national priority in the *Healthy People 2020 plan.* Health literacy is defined in *Healthy People 2020* as: "The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions". Health literacy requires a complex group of reading, listening, analytical, and decision-making skills, and the ability to apply these skills to health situations.

The need for a strong education system as well as healthy literacy (knowledge of health issues) was a theme of community chats held throughout the state. The need for health education was emphasized at Hispanic chats and tribal consultations. OHEC has endorsed policy recommendations in the area of education and health.

Health and Health Care Access

Table 4 - Percent of Individuals with no Health Insurance State and National Comparison by Selected Age Groups)			
Subject		National estimate	Oklahoma estimate
Percent with no health insurance	All people	15.6%	16.8
	Under 18	22.2	24.0
	18 years and older	13.9	14.4
	18-64	14.8	15.5
	65+	9.6	9.5

Comparative economic characteristics 2013 American community survey one year estimates

Table 4 illustrates uninsured Oklahomans which is higher than the national average for all age levels except those individuals 65 and older.[57] Although the rate of uninsured adults in Oklahoma dropped from 22% in 2011 to 18% in 2012, it still was 5% higher than the rate in the nation.

The lack of health care coverage is a barrier to accessing medical care. Individuals without health insurance are less likely to receive preventive care and are more likely to delay treatment. Uninsured adults are three to four times less likely to receive routine preventive clinical services. In the US in 2012 almost two out of three uninsured adults indicated they were uninsured due to the high cost or unemployment. Increasing the proportion of persons with medical insurance is a healthy people 2020 objective with the target of 100% coverage.[58] Community chats with the African American communities reiterated the need for better access to health care.

Another measure of access is whether people have a usual source of care. One in four Oklahoma adults reported they did not have a usual source of care. Oklahoma ranked 35th in the nation for the percentage of adults who had a usual source of care. People who have one or more personal healthcare providers are more likely to receive routine preventative health care services.

There are health disparities in specific populations. Half of Oklahoma's Hispanic population and young adults did not have a regular health care provider in 2012. While Oklahoma's overall rate has not changed since 2011, American Indians have experienced a - 10% decline.

Another form of access is the availability of primary care physicians. Oklahoma ranks 48th nationally in the number of primary care doctors per hundred thousand population.[59]

Vulnerable Populations

It is a lofty mission: "To build the capacity of a system to help older persons and persons with disabilities live with dignity and choices in their homes and communities for as long as possible."[60] What follows are conditions for Oklahoma's seniors and persons with disabilities.

Elderly

In Oklahoma, 509, 820 (13.6%) of Oklahomans are 65 years of age or older, exceeding the national ratio of Americans in this age cohort. By the year 2050, this age group is projected to more than double in size. The increasing number of older adults, combined with increasing rates of obesity, diabetes, and other chronic diseases create conditions which may overwhelm our health care system. Seniors are the largest consumers of healthcare as the process of aging brings upon the need for more frequent use. Adults age 65 and older spend nearly twice as much as 45 to 64-year-olds on health care each year and three to five times more than all adults younger than 65. In Oklahoma the number of adults with activities of daily living (ADL) difficulty is expected to increase from 114,000 in 2010 to as many as 162,000 by 2030.[61] The widespread prevalence of chronic disease among older adults leads to increased visits to health professionals, more medications prescribed as well as a decline in overall well-being and quality of life. As seniors age, challenges such as limited mobility, social isolation and the need for long-term care supports becomes increasingly common.

The great majority of older adults have a strong desire to live in their own homes and communities. However unsupportive community design, unaffordable and inaccessible housing and a lack of an adequate transportation system to access needed services can interfere with this goal. A state survey by the American Association of Retired Persons and the National Conference of State Legislatures offers suggestions around affordable housing, changes in street design, pedestrian safety, access in rural areas, coordination of human service transportation systems as well as changes in volunteer drivers' laws to enable older persons to "age in place".[62]

Persons with Disabilities

There are many dimensions when describing individuals with disabilities. In Oklahoma there are 594,147 (15.8 percent) of the non-institutionalized population has a disability.[63]

Table 5 - Economic Characteristics of non-institutionalized working-age (ages 21 to 64) people with disabilities Oklahoma and US 2012

	Oklahoma	United States
Employment	34.2%	33.5%
Median Annual Earnings	31,300	36,400
Median Household Income	33,300	37,300
Living Below Poverty Line	28.9%	28.4%

(Source: 2012 American Community Survey (ACS)).

Table 5 illustrates Oklahoma is faring worse on employment and income measures for persons with disabilities than those nationally. This is in contrast to Oklahoma employment levels for the general population which exceed national rates. The percentage of individuals with disabilities in Oklahoma living below the poverty line is higher than for adults 18-64 whose income in the last 12 month is below poverty level (15.5 percent).[64]

Educational Attainment of non-institutionalized persons aged 21 to 64 years with a disability, in the United States in 2012.				
Location	< than high school	High school diploma or equivalent	Some college or Associate	Bachelor or higher
	Est (%)	Est (%)	Est (%)	Est (%)
US	22.2	34.4	31	12.4
Oklahoma	18.8	36.9	32.5	11.8

In general Oklahoma looks better than the national percentages on educational attainment except for bachelor's level degree or higher.

Adverse Childhood Experiences

Adverse childhood experiences (ACE) are potentially traumatic events that can have lasting effect on health and well-being. A growing body of research has sought to quantify the prevalence of adverse childhood experiences and illustrate their connection with negative behavioral health outcomes such as obesity, alcoholism and depression in life. These areas considered as adverse childhood experiences include: economic hardship, divorce/separation, problem with alcohol or drugs, violence , mental illness, incarceration, death and domestic violence. Oklahoma scored in the highest quartile for the prevalence of reported adverse childhood experiences in all eight of the dimensions.[65]

This extensive summary of social determinants demonstrates the importance of considering these issues when instituting new practices. To remain vigilant about its impact, the state will use a Health Equity Review Planning Tool for planning public health projects or policies.[66]

Looking Ahead

To build upon a point made with the release of the previous Oklahoma Health Improvement Plan, this work represents a living document which will be revisited on a regular basis and aligned with feedback received from communities and from those in the field. Now is the time to connect locally with schools, businesses, faith based institutions, health care providers, neighborhoods and families. Connect as well with a local community partnership and join local efforts around community health improvement. An effort as monumental as that laid out here will only be successful if everyone reading this document or hearing of the Oklahoma Health Improvement Plan will bring their own unique skills, experiences and perspectives – health related or otherwise – to the table of health improvement. It takes all of us.

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