Ohio's Plan to Prevent and Reduce Chronic Disease

2014 - 2018

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American Academy of Pediatrics—Ohio Chapter

American Cancer Society, East Central Division*

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Ohio Child Care Resource and Referral Association

Ohio Community Health Workers Association

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Ohio Department of Mental Health and Addiction Services

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Ohio Chronic Disease Workgroup

** Ohio Chronic Disease Workgroup Steering Committee Members*

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Executive Summary

Chronic diseases, such as heart disease, stroke, diabetes and some cancers, are the leading causes of death and disability in Ohio. Along with their associated risk factors (high blood pressure, obesity, tobacco use, physical inactivity, poor nutrition), treating chronic diseases cost Ohio more than $50 billion every year in both healthcare costs and lost productivity from work. Without significant change, costs could nearly triple in the next two decades. Yet much of this burden is preventable, and even small changes in the health of Ohioans now can contribute to preventing more than 600,000 new cases of cancer, diabetes, heart disease and stroke in the future.

Success in creating a future where Ohio's children have the chance to be healthy, productive members of the workforce and where all families have opportunities to make healthy choices depends on communities coming together to:

- **Ensure everyone has equal access to healthy foods and beverages; safe places to be active; healthy schools and workplaces; and tobacco-free schools, workplaces and housing;**
- **Ensure high-quality preventive healthcare services are available to all members of the community;**
- **Ensure that community resources are appropriately linked to healthcare providers to engage and empower people to maintain good health and successfully manage their chronic disease.**

The causes of chronic disease, like most public health priorities, arise from more than just individual actions and decisions. Social and environmental conditions—such as neighborhood safety, community isolation, poverty, access to employment and education; and ability to find affordable healthy foods—are often the common thread to much of the disease burden. No sector is capable of reducing that burden alone, and because health begins in homes and communities, it takes collaboration and a cross-cutting approach to make change.

Developed to guide communities across the state in achieving this collaborative success, *Ohio's Plan to Prevent and Reduce Chronic Disease: 2014-2018* (Chronic Disease Plan) presents a set of priority-driven objectives tied to long-term outcomes to improve population health. The Chronic Disease Plan represents the collective efforts of experts from public health, health care, business, education, transportation and planning, and state and local government who used national guidelines and state and local data to develop a coordinated approach to chronic disease prevention and health promotion.

The Chronic Disease Plan was developed to achieve one overarching goal: **To prevent and reduce the burden of chronic disease for all Ohioans.** Long-term outcome measures were chosen based on a number of national indicators, including Healthy People 2020 (HP 2020). These outcomes represent where Ohio needs to go—the destination—while the objectives are the roadmap for the next five years that will guide the journey toward achieving them. Although some changes seem minor, the cumulative effects of achieving them will have significant impact on the public health, workforce productivity and economic competitiveness of Ohio.

Chronic Disease Plan 2020 Long-Term Outcomes

Chronic Diseases

Decrease the mortality rate of heart disease by 5 percent

Decrease the prevalence of coronary heart disease among adults (ages 18+) by 5 percent

Decrease the prevalence of stroke among adults (ages 18+) by 5 percent

Decrease the prevalence of diabetes among adults (ages 18+) by 5 percent

Decrease the prevalence of obesity among adults (ages 18+) by 5 percent

Decrease the prevalence of obesity among high school students (grades 9-12) by 5 percent

Decrease the prevalence of multiple chronic diseases (2 or more) among adults (ages 18+) by 5 percent

Screening/Recommended Care

Increase the percent of breast cancer diagnosed at early-stage (ages 50-74) by 5 percent

Increase the percent of cervical cancer diagnosed at early-stage (ages 21-65) by 5 percent

Increase the percent of colorectal cancer diagnosed at early-stage (ages 50-75) by 5 percent

Increase the percent of at-risk adults (ages 18+) with controlled blood pressure (<140/90mmHg) by 5 percent

Decrease the percent of at-risk adults (ages 18+) with high LDL cholesterol (>100 mg/dL) by 5 percent

Decrease the percent of diabetic adults (ages 18-75) with poor hemoglobin A1C control (>9.0 percent) by 5 percent

Risk Factors

Decrease the prevalence of cigarette smoking among adults (ages 18+) by 3.3 percentage points

Decrease the prevalence of current tobacco use among high school students (grades 9-12) by 6.1 percentage points

Decrease the prevalence of current tobacco use among middle school students (grades 6-8) by 4.4 percentage points

Increase the prevalence of adults (ages 18+) consuming 5+ servings of fruits/vegetables per day by 5 percent

Increase the prevalence of students (grades 9-12) consuming 2+ servings of fruits/100% fruit juices per day by 5 percent

Increase the prevalence of students (grades 9-12) consuming 3+ servings of vegetables per day by 5 percent

Increase the prevalence of adults (ages 18+) meeting physical activity guidelines for aerobic activity and muscle strengthening by 5 percent

Increase the prevalence of students (grades 9-12) engaging in 60+ minutes of physical activity per day by 5 percent

Increase the percent of babies breast feeding at six months to 60.6 percent

The Chronic Disease Plan's objectives are summarized below by sector: community organizations, schools and universities, worksites, health care, and government. While some objectives are specific to one sector, many will require cross-sector partnerships to leverage resources and maximize reach into the community.

Community Organizations

- Work with local governments to adopt smoke-free policies in public multi-unit housing complexes
- Work with partners and local government to adopt policies that promote active transportation
- Work with schools and other community organizations to adopt shared use policies and agreements to increase availability of safe places to be physically active
- Adopt healthy eating and active living policies in child care settings
- Increase the number of farmers' markets that accept electronic benefits transfer methods of payment in low-income communities
- Increase the number of small and large food stores offering affordable healthy foods in vulnerable communities
- Work with local partners to develop a Farm to School (F2S) Program to increase local fresh fruit and vegetable access in schools
- Partner with local healthcare systems to connect people with community-based resources to prevent and better manage their chronic disease
- Participate in local health impact assessments to assess the potential health effects of institutional and governmental policies

Schools and Universities

- Adopt 100 percent tobacco-free polices
- Complete and implement comprehensive school travel plans to promote walking and biking to school in a safe way
- Partner with local organizations to adopt a shared use policy or agreement to increase community member access to physical activity resources
- Offer additional physical activity breaks throughout the school day to engage students and staff in being active
- Work with community partners to develop or expand an F2S Program to increase access to local fresh fruits and vegetables

Worksites

- Join the Healthy Ohio Business Council and apply for a Healthy Ohio Healthy Worksite Award
- Offer healthy food options in vending machines, cafeterias and at meetings and events
- Provide and promote physical activity opportunities
- Implement a 100 percent tobacco-free worksite policy
- Provide access to health assessments, screenings, smoking cessation, weight management and other chronic disease prevention and management services

Healthcare Systems

- Adopt policies and procedures to increase exclusive breastfeeding for all babies while in the hospital
- Ensure all patients are counseled to quit or never start using tobacco products
- Ensure all patients are screened according to guidelines for colorectal, breast and cervical cancers
- Ensure that all patients are screened according to guidelines for cholesterol, high blood pressure, obesity and diabetes
- Use the Check It. Change It. Control It. Your Heart Depends On It. Toolkit to improve patients' blood pressure control
- Participate in childhood obesity prevention and management quality improvement initiatives
- Partner with state public health and healthcare system partners to develop recommendations for evidence-based chronic disease and diabetes self-management education programs
- Partner with community organizations and insurance providers to increase access to and use of local diabetes prevention programs
- Partner with state and local agencies to increase the use of community health workers to engage patients in chronic disease prevention and management
- Partner with local public health to use electronic health records and health system data for population-level chronic disease monitoring

Government

- Adopt smoke-free policies in public multi-unit housing complexes
- Increase the cost of other tobacco products to align with cigarette excise taxes
- Adopt policies that increase access to active transportation for all people
- Increase the availability of electronic benefits transfer at farmers' markets in low-income communities
- Support a statewide food council network to coordinate efforts to provide healthy foods to all Ohioans
- Ensure all Ohioans have access to evidence-based tobacco cessation services
- Partner with providers, community organizations and public health to implement, test and evaluate reimbursement strategies for community health workers, chronic disease self-management education programs, and the Diabetes Prevention Program
- Support the collection and dissemination of high-quality chronic disease data
- Continue to advance the inclusion of electronic health data in population health surveillance efforts
- Participate in projects that assess the potential health impact of policies and decisions around transportation, housing, zoning, etc. on vulnerable Ohioans

The Ohio Chronic Disease Collaborative was formed to implement the Chronic Disease Plan. The Collaborative is open to all interested organizations, and members may participate as a stakeholder, objective partner or objective lead with varying responsibilities, as defined by the Collaborative's Articles of Operation. Because opportunities and challenges change over time, the Collaborative will also grow to include new partners as needed and add or modify objectives to reflect emerging opportunities.

Introduction

Ohio is the seventh most populated state in the United States and the 10th most densely populated.[1] With more than 11 million people in 88 counties, Ohio is known for its geographic diversity, including metropolitan, suburban, Appalachian and non-Appalachian rural populations, and for being the national headquarters for businesses in banking, insurance, manufacturing, restaurants, retail and utilities. Ohio is also home to more than 120 local public health districts, some of the most regarded higher education institutions in the country, and several world-renowned healthcare and research facilities.

Yet for all of these assets, Ohioans struggle and suffer more from illness and disability than most Americans. Ohio ranks 37th for health in the country, while spending more per person on health care than all but 16 other states.[2] In fact, Ohio ranks among the worst in the country for overall health outcomes, as well as for rates of diabetes, smoking and obesity.[3]

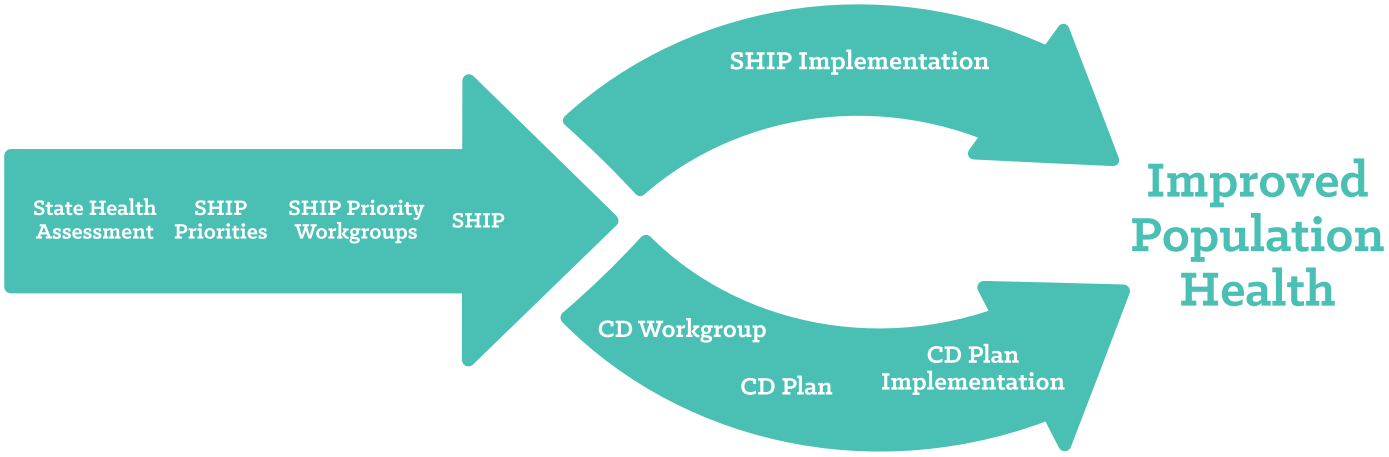
To address these issues, beginning in 2010, a collaborative of state and local public health agencies, advocacy groups, and healthcare representatives joined together to create the *Ohio 2012–2014 State Health Improvement Plan* (SHIP) to guide the state forward in improving population health. Using data from a state health assessment (SHA), a recently conducted public health system performance analysis, and national guidelines (Centers for Disease Control and Prevention [CDC] Winnable Battles, National Prevention Strategy and Healthy People 2020 Leading Health Indicators), the group identified nine SHIP priorities within three categories—Health Improvements, Service Improvements and Operational Improvements, as shown in **Table 1**.

Table 1: Ohio's State Health Improvement Plan Priorities

Health Improvements	Service Improvements	Operational Improvements
• Chronic Disease • Injury • Infectious Diseases • Infant Mortality/Premature Births	• Access to Care • Integration of Physical and Behavioral Healthcare	• Electronic Health Records/ Health Information Exchange • Workforce Development • Public Health Funding

Once the priorities were established, workgroups were formed to develop a set of two-year objectives for each priority. A Chronic Disease Workgroup (CD Workgroup), representing public and private agencies, health care, local and state public health, health advocacy organizations, business, education, transportation, and others, conducted a more in-depth assessment of the state's chronic disease burden and developed a set of cross-cutting objectives and outcomes, while building on the SHIP's intention to create a common vision to promote the health and wellbeing of all Ohioans. The result, *Ohio's Plan to Prevent and Reduce Chronic Disease: 2014-2018* (Chronic Disease Plan), is a five-year, priority-driven guide to prevent and reduce chronic disease in Ohio and ultimately improve overall population health. A diagram showing the progress from the SHA to the Chronic Disease Plan is presented in **Figure 1**.

Figure 1: Chronic Disease Plan Development Process



To lead the CD Workgroup in completing the Chronic Disease Plan, a steering committee was formed with four state health agency subject matter experts and five stakeholder members representing the American Cancer Society (ACS), the Ohio Alliance of YMCAs, Case Western Reserve University School of Medicine, the Delaware General Health District, and the Ohio Department of Aging (ODA). Along with input from the CD Workgroup, the steering committee sought additional expertise as needed from other stakeholders to develop outcomes, prioritize objectives, and identify strategies.

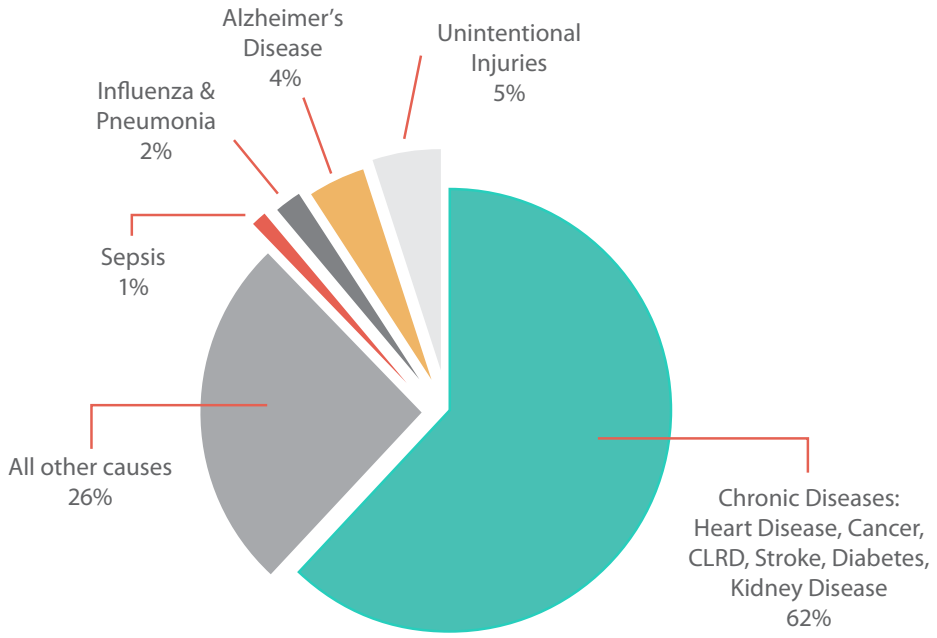
The goal of the plan is to prevent and reduce the death and disability associated with chronic diseases and their associated risk factors among Ohioans. It focuses primarily on the prevention and control of the leading causes of death and disability: heart disease, stroke, diabetes and cancer; however, the objectives and strategies outlined in the plan will also have long-term impact on other chronic diseases, such as chronic lower respiratory disease (CLRD), which includes asthma and chronic obstructive pulmonary disease (COPD), as well as kidney disease and arthritis.

Burden of Chronic Disease in Ohio

Overall Burden

Chronic diseases such as heart disease, stroke, diabetes and many cancers are among the most common, costly and preventable of all health problems in both the United States and Ohio and are associated with reduced quality of life, poor health outcomes, increased healthcare needs, and higher healthcare spending. Death due to chronic disease represents a significant burden among Ohioans. In 2011, six of the 10 leading causes of death in Ohio were attributed to heart disease, cancer, CLRD, stroke, diabetes and kidney disease, accounting for more than three out of five (62 percent) deaths among Ohio residents **(Figure 2)**.[4]

Figure 2. Leading Causes of Death in Ohio, 2011

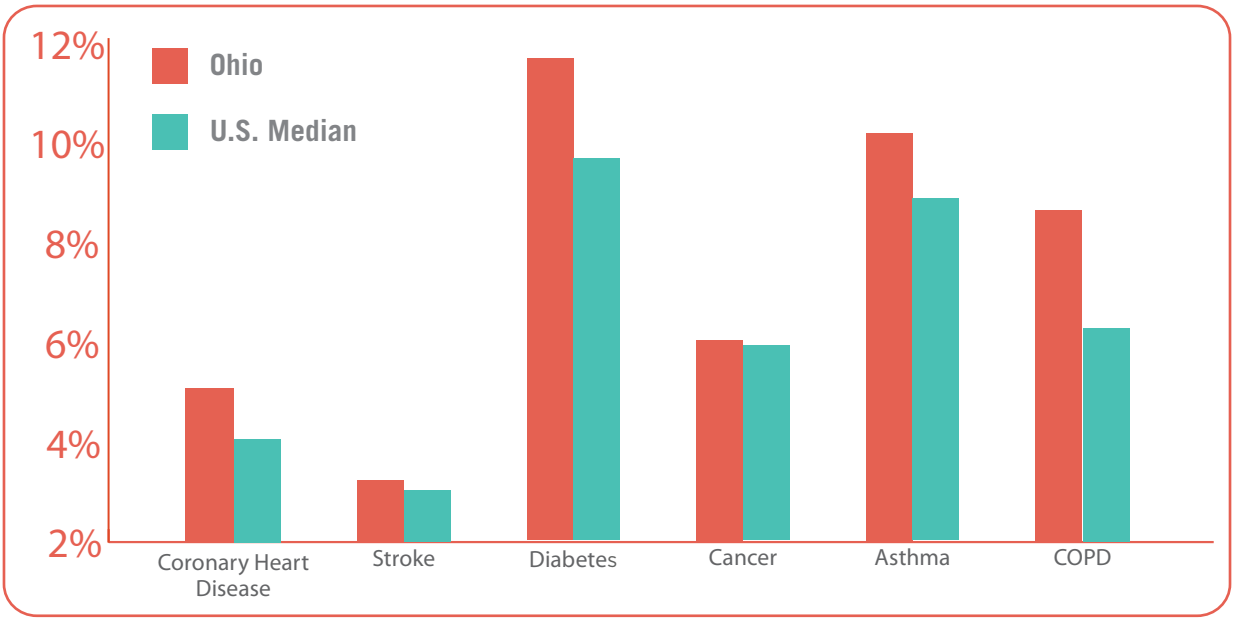


Source: 2011 Ohio Certificates of Death, Ohio Office of Vital Statistics, Ohio Department of Health, 2012.

Heart disease is the leading cause of death in Ohio, with a 2011 mortality rate of 190.9 (per 100,000 Ohioans), accounting for more than 26,000 deaths that year. As is true for many chronic diseases and risk factors, significant disparity exists in different populations. For example, in 2011, the heart disease mortality rate for blacks was 218.8 compared to a rate of 186.8 for whites. Both black males and females have higher rates of heart disease mortality compared to white males and females, with males of all races and ethnicities having a 56 percent higher mortality rate than females.

Ohioans also have more health problems due to chronic disease as compared to the rest of the United States. According to 2012 data from the Ohio Behavioral Risk Factor Surveillance System (BRFSS), Ohioans age 18 and older had a higher prevalence of coronary heart disease (5.4 percent), stroke (3.1 percent), diabetes (11.7 percent), cancer (6.6 percent), asthma (10.5 percent) and COPD (8.6 percent) than adults in the United States **(Figure 3)**.[5,6]

Figure 3. Prevalence of Selected Chronic Diseases Among Adults (Age 18 Years and Older) in Ohio Compared to the U.S. Median, 2012



Source: 2012 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2013; 2012 Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention, 2013.

More than one third (36.7 percent) of Ohio residents have more than one of the following 10 chronic diseases or risk factors: arthritis, asthma, COPD, cancer, kidney disease, diabetes, heart disease, high blood pressure, high cholesterol and stroke.[5,7] Ohioans with lower educational attainment and household income and those age 65 and older are more likely to have four or more chronic diseases or risk factors.[5,7] Aside from the substantial impact on quality of life, care for people with multiple chronic conditions accounts for 66 percent of healthcare spending.[8]

Screening and Clinical Risk Factor Control

Early screening and diagnosis for chronic diseases, and appropriate control of risk factors associated with them, is critical to improve long-term health outcomes. In Ohio in 2012, BRFSS data show that 78.2 percent of women ages 50-74 received a mammogram in the past two years and 84.5 percent of women ages 21-65 received a Pap smear in the past three years.[5] Data from the Ohio Cancer Incidence Surveillance System (OCISS), Ohio's cancer registry, indicate that only 68.3 percent of breast cancers, 43.8 percent of cervical cancers, and 40.3 percent of colon and rectum cancers were diagnosed at an early stage in 2010.[9]

Control of clinical risk factors associated with chronic disease is also paramount to preventing long-term consequences, yet rates of many of these factors are higher among adults in Ohio compared to the United States. Nearly two out of five (38.9 percent) Ohio adults have high cholesterol, and more than three out of 10 (32.7 percent) have high blood pressure.[7] While achieving control of high blood pressure, high cholesterol and hemoglobin A1C, a marker for diabetes control, is essential to prevent

strokes, heart attacks and other heart diseases, data from the 2012 Healthcare Effectiveness Data and Information Set (HEDIS) reveal that only 65.4 percent of Ohio adults with clinically diagnosed hypertension had achieved successful blood pressure control (defined as a blood pressure under 140/90 mmHg); nearly one in four (23.2 percent) at-risk adults had high cholesterol levels (as defined by a low density lipoprotein level of >100 mg/dL); and more than one in four (27.4 percent) diabetic adults were considered to be in poor control of their diabetes (as defined by a hemoglobin A1C level above 9.0 percent).[10]

Behaviors that Lead to Chronic Diseases

Despite the tremendous physical, emotional and financial burden these diseases and risk factors have on individuals and families across the state, much of the illness and early death is preventable. Most often, the high burden results from three changeable health behaviors—smoking and other tobacco use, poor diet, and lack of physical activity—behaviors that often begin early in life.

Nearly one in four (23.3 percent) adults, more than one in four (26.1 percent) high school students and nearly one in 10 (9.4 percent) middle school students are current smokers, according to the most recent data from the BRFSS and the Ohio Youth Tobacco Survey (YTS) for adults and students, respectively.[5,11] Smoking kills more than 18,000 adults in Ohio every year while nearly 1 million kids in Ohio today will become daily smokers, and approximately 300,000 of today's youth in Ohio will die from smoking later in life.[12-14]

Nearly 1 million kids in Ohio today will become daily smokers, and approximately 300,000 of today's youth in Ohio will die from smoking later in life.

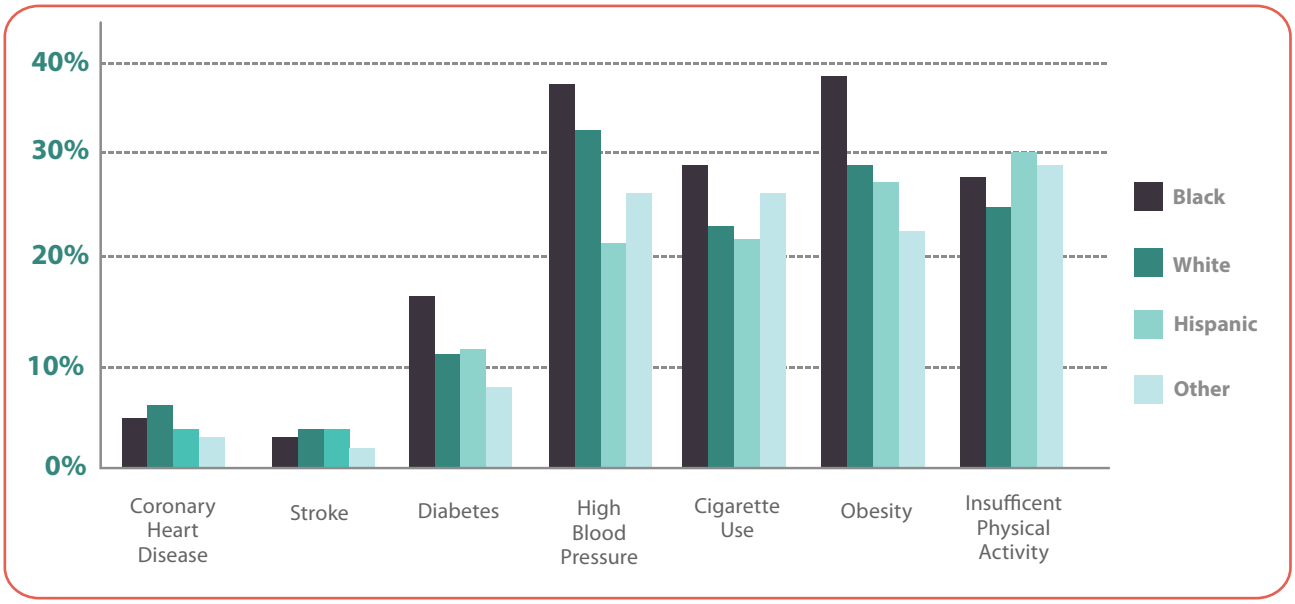
In 2011, more than three-quarters (78.6 percent) of adults in Ohio did not meet guidelines for aerobic and muscle strengthening physical activity, and three in four (74.6 percent) high school students did not engage in at least 60 minutes of physical activity per day.[7,15] Fruit and vegetable consumption as part of a healthy diet is also lacking among Ohioans; only 26.7 percent of high school students eat or drink two or more fruits/fruit juices per day, and only 11.2 percent eat three or more vegetables per day.[16] Lack of physical activity and poor diet are associated with overweight and obesity. In 2012, an estimated 30.1 percent of Ohio adults were obese (defined as a body mass index [BMI] of at least 30 kg/m^2), while in 2011, 14.7 percent of Ohio high school students in grades 9-12 were obese (BMI at or above the 95th percentile for age and sex).[5,16] More than one third (34.7 percent) of Ohio's third graders were overweight (BMI at or above the 85th percentile for age and sex) or obese in 2010, including 12.5 percent of children with a BMI at or above the 97th percentile for age and sex.[16]

Disparity in Chronic Disease Outcomes in Ohio

While all Ohioans are at risk for developing a chronic disease, rates of heart disease, stroke, and diabetes in Ohio are higher among blacks, residents of Appalachian and rural counties, and those with the lowest income and education.[5,7] Similarly, differences in rates of associated risk factors (i.e., high blood pressure, lack of physical activity, insufficient fruit and vegetable consumption, and overweight and obesity) are identified among these same populations.[4,17] Called health disparities, these differences are often due to individual characteristics, such as age, sex and genetics, as well as differences in access to health care and social services, availability of community resources (e.g., safe places to be active, healthy food options), and lack of economic and educational opportunities.

As shown in **Figure 4**, the prevalence of high blood pressure, cigarette use, obesity and insufficient physical activity are all higher in black Ohioans than white Ohioans. Blacks also have a higher prevalence of diabetes, and while blacks are less likely to have coronary heart disease than whites, they are more likely to die from heart disease than whites in Ohio.[18]

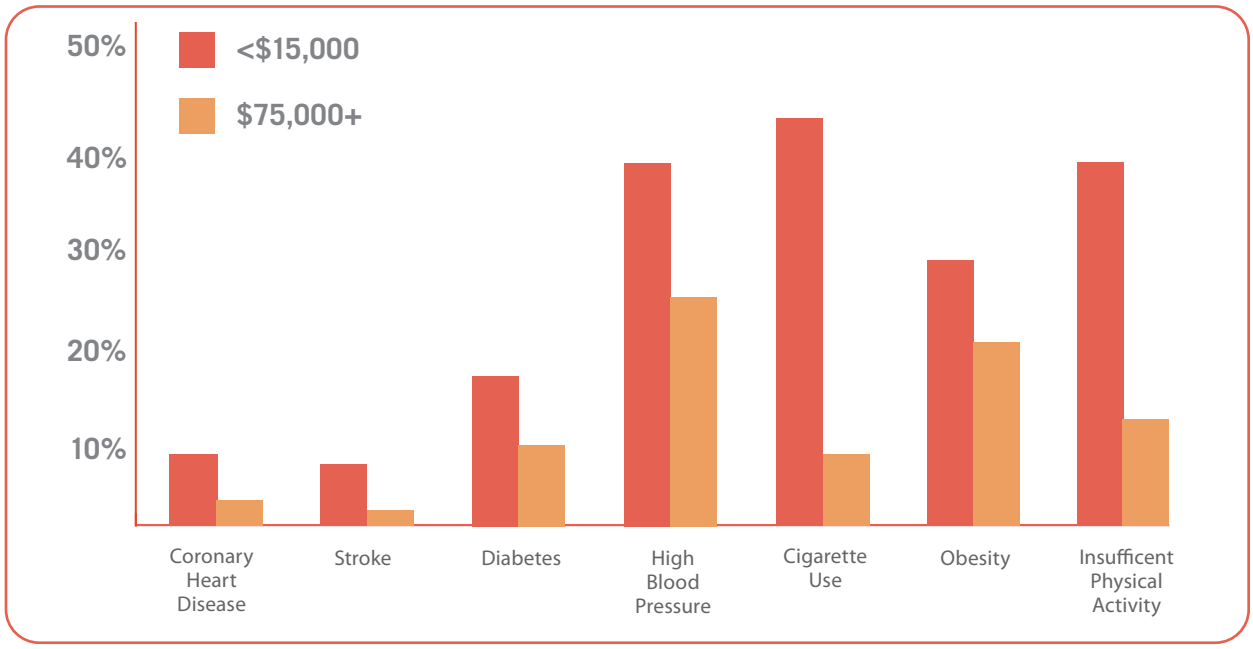
Figure 4: Prevalence of Selected Chronic Diseases and Risk Factors Among Adults (Age 18 Years and Older) by Race/Ethnicity in Ohio, 2011 and 2012



Source: 2011 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2013; 2012 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2013.

In Ohio, annual household income is also a predictor of poor health outcomes. As shown in **Figure 5**, people living in households earning less than $15,000 per year (just below the federal poverty limit for a two-person household) are more likely to have a chronic disease or risk factor when compared to those living in households earning at least $75,000.

Figure 5: Prevalence of Selected Chronic Diseases and Risk Factors Among Adults (Age 18 Years and Older) by Annual Household Income in Ohio, 2011 and 2012

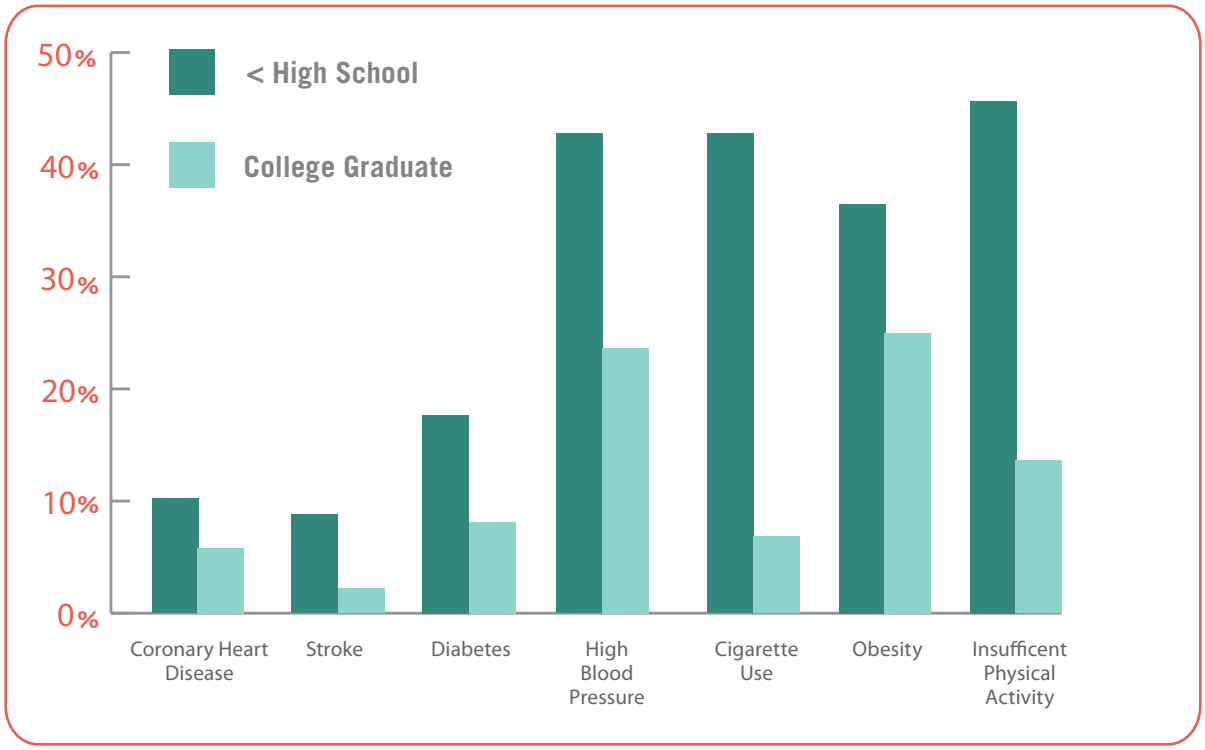


Source: 2011 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2013; 2012 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2013.

Educational attainment is also associated with health and has been reported to be an even stronger predictor of poor health outcomes than income or occupation.[19,20] As is seen in **Figure 6**, Ohioans with a college degree are significantly less likely to have a chronic disease or associated risk factor, including a six-fold difference in cigarette use between those with a college degree and those without a high school diploma or equivalent.

Your health depends more on your zip code than your genetic code.

Figure 6: Prevalence of Selected Chronic Diseases and Risk Factors Among Adults (Age 18 Years and Older) by Education in Ohio, 2011 and 2012

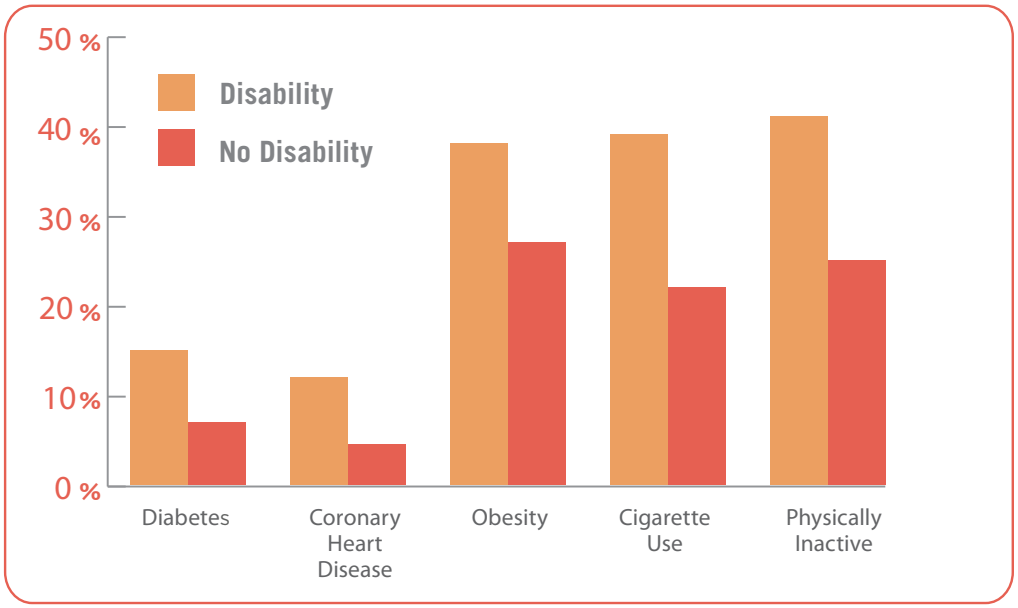


Source: 2011 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2013; 2012 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2013.

Other populations are also unequally affected by chronic diseases. According to Medicaid data from 2008-2009, Ohio adults with severe mental illness (SMI) reported a higher likelihood of high blood pressure, diabetes, heart disease, stroke and obesity. Adults with SMI are more likely to seek care in the emergency room and be hospitalized for their chronic disease or associated risk factors than people without SMI.[21] Additional data show that people with mental health illnesses are less likely to be physically active and more likely to smoke than those without mental health illnesses.[22]

Nearly one in five adults (18 percent) in Ohio in 2012 reported having a disability.[22] People with disabilities, when compared with those without disabilities, have significantly more barriers to quality health care, are more likely to experience a chronic disease, and have higher rates of health risk behaviors such as cigarette use and being physically inactive, as shown in **Figure 7**.[7]

Figure 7: Prevalence of Selected Chronic Diseases and Risk Factors Among Adults (Age 18 Years and Older) by Disability Status in Ohio, 2011



Source: 2011 Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2013.

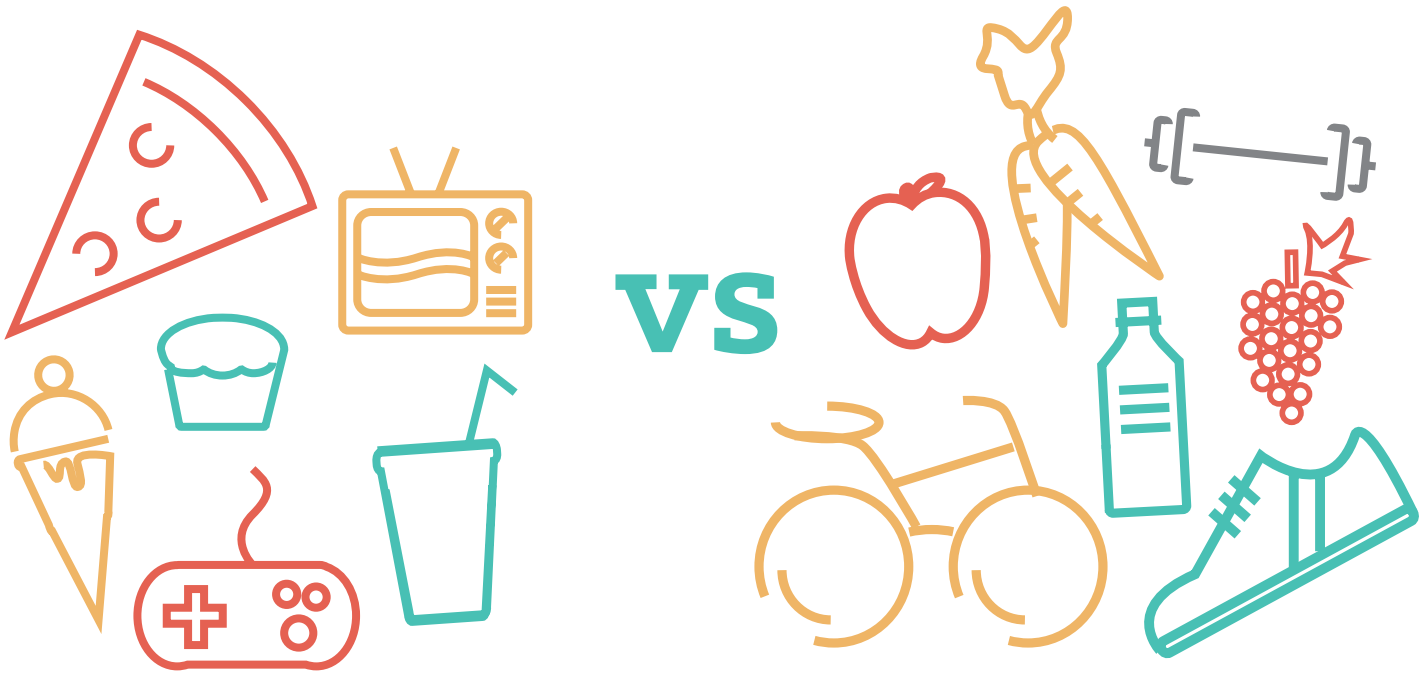
Economic Burden

Chronic diseases present a real threat to Ohio economically, both now and in the future. The estimated annual economic impact of chronic disease in Ohio is nearly $57 billion.[23] Much of the cost comes from the direct healthcare spending for treatment and management of these disease and risk factors. For example, the annual healthcare cost of treating diabetes in Ohio has been estimated at $1.34 billion, $1.37 billion to treat high blood pressure and $3.65 billion to treat heart disease.[23] Smoking alone has been estimated to cost Ohio as much as $4.3 billion per year in healthcare spending.[24] As significant as these numbers are, the costs to Ohio's businesses are far greater—with more than $43 billion of the $57 billion in total costs resulting from lost productivity in the workplace.[23]

Without action, the future looks even worse. One out of every three children born since 2000 will likely develop diabetes in their lifetime, with a subsequent increase in costs to approximately $7,000 per person, per year—2.3 times that of someone without diabetes—and costing employers billions of additional dollars in lost and poor productivity.[25] The total cost of chronic diseases and associated risk factors could cost Ohio as much as $152 billion by 2023.[24]

However, if Ohioans can achieve even a modest goal of 5 percent BMI reduction (roughly 10 pounds for a 6-foot tall, 200-pound adult), the state could save as much as $1.2 billion in health care spending and prevent 650,000 cases of diabetes, heart disease and cancer by 2030.[26] A recent Robert Wood Johnson Foundation report noted that for every dollar spent on strategies to increase physical activity in the community, $3 could be saved in eventual medical expenses, and that some interventions to improve nutrition and physical activity could have a positive return on investment in as little as one year.[27]

Small changes, big results



If Ohioans reduce their BMI by just 5 percent, in 2030 we will have prevented...

342,000
cases of diabetes, saving Ohio
$10 BILLION

293,011
cases of heart disease and stroke, saving Ohio
$12 BILLION

23,000
cases of cancer, saving Ohio
$1 BILLION

Source: Trust for America's Health's F as in Fat 2012 report for Ohio. [Online]. Available: http://healthyamericans.org/reports/obesity2012/?stateid=OH. Last accessed 10/24/2013.

Overarching Goal and Long-Term Outcomes

The Chronic Disease Plan was developed to have a cross-cutting impact across multiple areas to achieve one overarching goal: **to prevent and reduce the burden of chronic disease for all Ohioans.** Long-term outcome measures, presented in **Table 2**, were chosen based on a number of national indicators, including Healthy People 2020. The 2020 outcomes represent where Ohio needs to go—the destination—while the objectives are the roadmap for the next five years that will guide the journey toward achieving them. Although some changes seem minor, the cumulative effects of achieving them will have a significant impact on the health, productivity and economic competitiveness of Ohio.

Table 2: Chronic Disease Plan 2020 Long-Term Outcomes

Measure	Ohio Baseline % (Year)	Ohio 2020 Target %	Data Source
Chronic Diseases			
Decrease the mortality rate of heart disease by 5 percent	190.9 (2011)	181.4	VS
Decrease the prevalence of coronary heart disease among adults (ages 18+) by 5 percent	5.4 (2012)	5.1	BRFSS
Decrease the prevalence of stroke among adults (ages 18+) by 5 percent	3.1 (2012)	3.0	BRFSS
Decrease the prevalence of diabetes among adults (ages 18+) by 5 percent	11.7 (2012)	11.1	BRFSS
Decrease the prevalence of obesity among adults (ages 18+) by 5 percent	30.1 (2012)	28.7	BRFSS
Decrease the prevalence of obesity among high school students (grades 9-12) by 5 percent	14.7 (2011)	14.0	YRBS
Decrease the prevalence of multiple chronic diseases (2 or more) among adults (ages 18+) by 5 percent	36.6 (2012)	34.9	BRFSS
Screening/Recommended Care			
Increase the percent of breast cancer diagnosed at early-stage (ages 50-74) by 5 percent	68.3 (2010)	71.7	OCISS
Increase the percent of cervical cancer diagnosed at early-stage (ages 21-65) by 5 percent	43.8 (2010)	46.0	OCISS
Increase the percent of colorectal cancer diagnosed at early-stage (ages 50-75) by 5 percent	40.3 (2010)	42.3	OCISS
Increase the percent of at-risk adults (ages 18+) with controlled blood pressure (<140/90 mmHg) by 5 percent	65.4 (2012)	68.7	HEDIS
Decrease the percent of at-risk adults (ages 18+) with high LDL cholesterol (>100 mg/dL) by 5 percent	23.2 (2012)	22.1	HEDIS
Decrease the percent of diabetic adults (ages 18-75) with poor hemoglobin A1C control (>9.0 percent) by 5 percent	27.4 (2012)	26.1	HEDIS

Table 2 continued

Measure	Ohio Baseline % (Year)	Ohio 2020 Target %	Data Source
Risk Factors			
Decrease the prevalence of cigarette smoking among adults (ages 18+) by 3.3 percentage points	23.3 (2012)	20.0	BRFSS
Decrease the prevalence of current tobacco use among high school students (grades 9-12) by 6.1 percentage points	26.1 (2010)	20.0	YTS
Decrease the prevalence of current tobacco use among middle school students (grades 6-8) by 4.4 percentage points	9.4 (2010)	5.0	YTS
Increase the prevalence of adults (ages 18+) consuming 5+ servings of fruits/vegetables per day by 5 percent	TBD	↑5.0%	BRFSS
Increase the prevalence of students (grades 9-12) consuming 2+ servings of fruits/100 percent fruit juices per day by 5 percent	26.7 (2011)	28.0	YRBS
Increase the prevalence of students (grades 9-12) consuming 3+ servings of vegetables per day by 5 percent	11.2 (2011)	11.8	YRBS
Increase the prevalence of adults (ages 18+) meeting physical activity guidelines for aerobic activity and muscle strengthening by 5 percent	21.4 (2011)	22.5	BRFSS
Increase the prevalence of students (grades 9-12) engaging in 60+ minutes of physical activity per day by 5 percent	25.4 (2011)	26.7	YRBS
Increase the percent of babies breast feeding at 6 months to 60.6 percent	39.5 (2012)	60.6	BRC

VS = Ohio Vital Statistics; BRFSS = Ohio Behavioral Risk Factor Surveillance System; YRBS = Ohio Youth Risk Behavior Survey; OCISS = Ohio Cancer Incidence Surveillance System; HEDIS = Healthcare Effectiveness Data and Information Set; YTS = Youth Tobacco Survey; BRC = CDC Breastfeeding Report Card

Plan Framework

The framework chosen for the Chronic Disease Plan builds on the CDC's four-domain paradigm for a coordinated approach to chronic disease prevention and health promotion. Listed below, the CDC domains represent the four Core Focus Areas (CFA) of the plan and outline a comprehensive approach to improving population health:

- Making healthy behaviors easier and more convenient for more people
- Improving delivery and use of quality clinical services to prevent disease, detect diseases early and manage risk factors
- Ensuring those with or at high risk for chronic diseases have access to quality community resources to best manage their disease or risk factors
- Providing data to inform, prioritize, deliver and monitor programs and population health

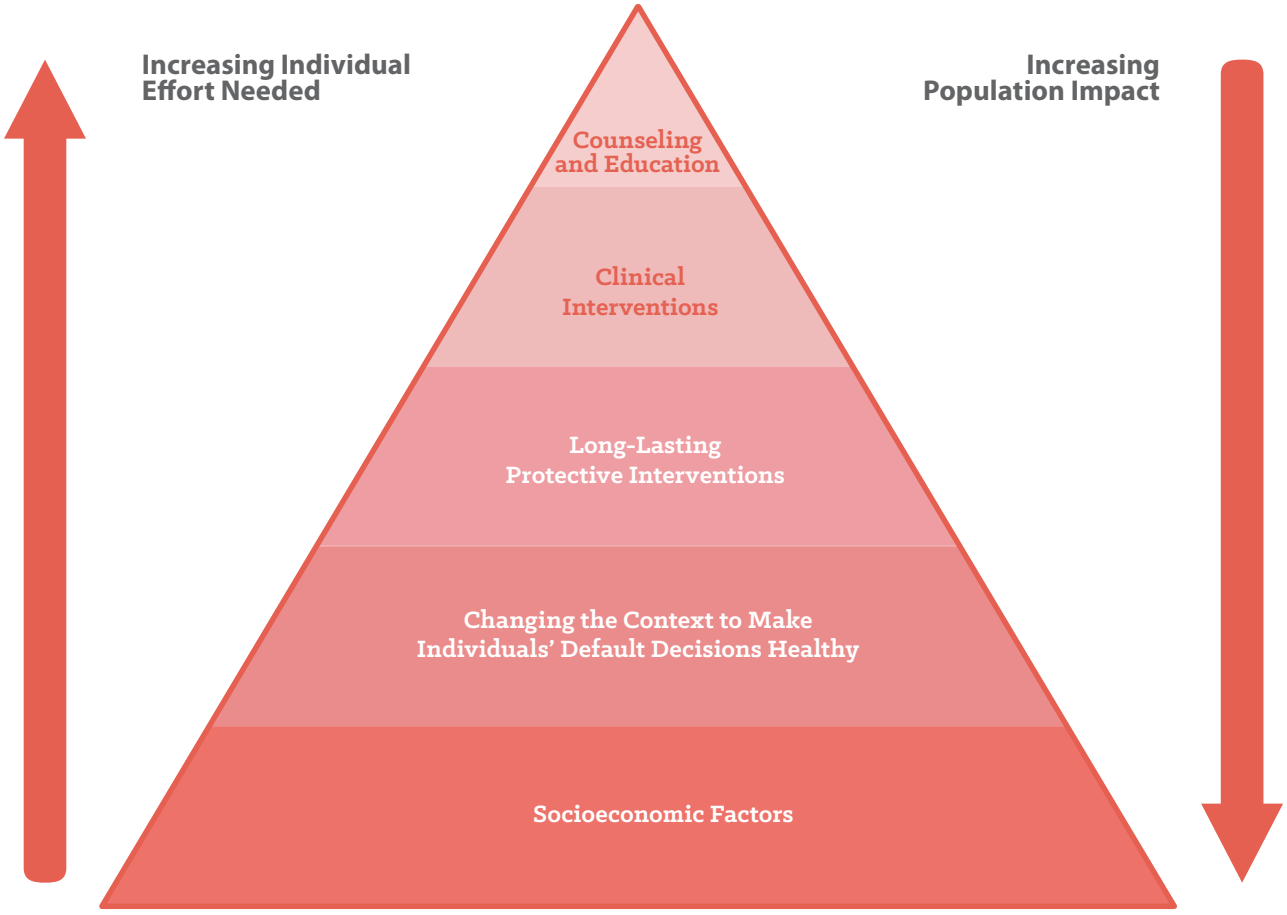
Building from the four domains, the Chronic Disease Plan was also developed using the social ecological model (SEM). As shown in **Figure 8**, the SEM describes how health and health behaviors are influenced by factors within: the individual; social, family and community networks; living, learning and working conditions determined by our organizations, schools and communities; and the broader social, economic, cultural, health, and environmental conditions and policies. The model recognizes that the risk for disease is shared across populations; therefore, changing one person's risk is difficult and does not adequately change the risk within the population.[28] And, because populations often share patterns of disease, addressing the common factors within the population brings benefit to all people, not just the individual. Additionally, only when these surrounding influences are appropriately addressed will individuals be successful in making good choices today that will become healthy behaviors tomorrow.

Figure 8: A Social Ecological Model for the Chronic Disease Plan

Adapted from Phase I Report: Recommendations for the Framework and Format of Healthy People 2020; Available online at http://www.raconline.org/communityhealth/obesity/3/environmental-factors.php; Last accessed: 11/25/13.

The systemic and environmental impact on health is not a new concept. In fact, much of the success of public health in the 20th century came through enacting policies, changing systems, and creating environments that support health.[29] For example, addressing environmental factors such as unsafe roads and poor sanitation have led to improvements in both the injury prevention and infectious disease fields. However, the rising burden of preventable disease is precipitating a renewed effort within public health to approach health promotion by addressing these external influences and their impact on health and health behaviors. To guide public health's ability to affect these influences, the Health Impact Pyramid (HIP) was developed in 2012 and demonstrates the different types of strategies needed to impact population health.[30] Both the CFAs and the corresponding objectives reflect opportunities within each level of the HIP to reach the overarching goal.

Figure 9: The Health Impact Pyramid



Source: Frieden TR. A framework for public health action: the health impact pyramid. *Am J Public Health,* 2010; 100 (4): 590-5.

As shown in **Figure 9**, the HIP provides a framework for public health to implement strategies that have the most potential for long-term population health improvement. While all levels are important, those toward the bottom of the pyramid such as addressing socioeconomic factors and changing the context to encourage healthy decisions are likely to affect more people, show a higher return on investment, and make a larger impact on reducing health disparities.

Achieving Health Equity

Disparities in health outcomes cannot be explained solely by individual or genetic factors (such as age and sex) but also by inequities present within different populations as defined by their socioeconomic status, race, ethnicity, sexual orientation, gender, disability status or geographic location.[31] Collectively known as the social determinants of health, these factors are often shaped by a wider set of forces, including economic, social, organizational and governmental policies. For example, where you are born and live in Ohio often has more influence on your ability to stay healthy than your family history of illness, as shown by the fact that in certain parts of Ohio there is as much as a 24-year difference in life expectancy for people living within 10 miles of each other.[32] This has led experts to declare that zip code is more important than genetic code in determining health and illness.[33]

To achieve health equity in Ohio, the CD Workgroup took a number of steps to ensure that the social determinants of health were addressed throughout the plan. To begin the process, the group set a guiding principle for all components of the Chronic Disease Plan to work toward not just a reduction in overall rates of chronic disease but an elimination of the disparities between health outcomes in different populations. Second, while both long-term outcomes and objective performance measures were developed for the entire state, the CD Workgroup recognized that within nearly every indicator significant disparities exist, and therefore strategies within each objective are prioritized on changing the policies, systems and environments to benefit the most vulnerable populations in Ohio. And finally, both traditional and non-traditional public health partners, such as those in mental health and addiction services, disability, regional planning, and state and local transportation agencies, were included in development of the Chronic Disease Plan's objectives and strategies in an effort to reach more high-risk Ohioans. Because the objectives vary in the populations at highest risk, progress in achieving health equity will be assessed and monitored by each objective individually; and because not all indicators show the same disparities, disparities within chronic disease and risk factor rates will be reported in more depth in periodically released statewide chronic disease burden reports.

Health is shaped by social and economic conditions. For example, chronic diseases are more common and deadly if you are a minority, live in poverty or did not go to college.

Core Focus Areas, Objectives, Performance Measures and Strategies

Specific objectives, performance measures, and strategies were developed using a number of sources, including the *Guide for Community Preventive Services* (Community Guide); the Institute of Medicine's *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*; the University of Wisconsin's What Works for Health database; the CDC; and other national resources.[34-37] To complement these, a statewide assessment of local partners was done to identify levels of activity, gaps and challenges around increasing physical activity and improving nutrition; and crosswalks of multiple evidence-based resources were developed as part of a Community Guide project supported by the Association of State and Territorial Health Officials (ASTHO) and National Network of Public Health Institutes (NNPHI) to select physical activity and nutrition objectives. Objectives were developed using Specific, Measureable, Attainable, Realistic and Time-bound (SMART) criteria and were chosen to align with ongoing national and statewide public health and health care priorities.

The Chronic Disease Plan's intention is not to include every strategy needed to improve all aspects of health. Rather, its strength is that it identifies important and cross-cutting activities that will have significant impact on the systems and environments most influential to chronic disease outcomes and health behavior change.

The purpose of the Chronic Disease Plan is to guide stakeholders within each sector—schools and universities, community organizations, state and local governments, worksites, and healthcare systems and providers (as noted by the icons associated with each objective)—in aligning activities and leveraging resources to build communities that support health. Additionally, as community health assessments are being conducted and community health improvement plans are being developed and implemented across the state, this Chronic Disease Plan will continue to shape and be impacted by these efforts.

Schools and Universities

Government

Community Organizations

Worksites

Healthcare Systems

Core Focus Area 1: Environmental Approaches

Building strong communities to ensure Ohioans of all ages and abilities can live disease free.

"Increasing the price of tobacco products is one of the most effective ways of reducing tobacco use, especially among youth, and is a crucial component of any effective plan to reduce chronic disease."

—Shelly Kiser, Director of Advocacy, American Lung Association in Ohio

Our health and health behaviors are influenced by many factors. Our family and friends, schools and workplaces, community organizations, and local and state policies and systems help determine what opportunities we have to live healthy lives. Having little to no access to healthy foods, being exposed to secondhand smoke, and living in unsafe or isolated communities all play a role in whether we will maintain good health or develop a chronic disease or risk factor. Focusing on tobacco use and exposure, healthy eating, and active living together will help all communities, worksites, hospitals and schools to make the healthy choice the easy choice.

Objective 1.1: By 2018, increase the number of K-12 school districts that are 100 percent tobacco-free.

Partners: Ohio Department of Health (ODH), Tobacco Free Ohio Alliance (TFOA)

Performance Measures:

Baseline: 10

5-year Outcome: 50

Data Source: ODH Tobacco Free-Schools Database (to be completed in 2014)

Strategies:

- Establish and maintain a database of Ohio schools with 100 percent tobacco-free policies
- Update and distribute the "Tobacco-Free School Toolkit"
- Develop and publicize a "Report Card" rating system for school districts
- Support legislation that would amend the Ohio Revised Code regarding tobacco and nicotine use in public schools and at public school-sponsored functions

Objective 1.2: By 2018, increase the number of universities, regional campuses and community colleges in Ohio that are 100 percent tobacco-free.

Partners: ODH, TFOA

Performance Measures:

Baseline: 17

5-year Outcome: 35

Data Source: ODH Tobacco-Free College and University Database (to be completed in 2014)

Strategies:

- Establish and maintain a database of Ohio tobacco-free college campuses
- Maintain quarterly stakeholder conference calls and provide on-going technical assistance
- Develop and maintain a web page with resources for stakeholders working on tobacco-free policies

Objective 1.3: By 2018, increase the number of public multi-unit housing complexes that are smoke-free.

Partners: ODH, TFOA

Performance Measures:

Baseline: Number of complexes with smoke-free policies

5-year Outcome: Increase by 20 the number of complexes with smoke-free policies

Data Source: ODH Smoke-Free Multi-Unit Housing Database (to be completed in 2014)

Strategies:

- Develop, disseminate and promote model laws and policies for smoke-free multi-unit housing complexes
- Convene and maintain quarterly stakeholder conference calls and provide on-going technical assistance
- Develop and maintain a web page with resources for stakeholders working on smoke-free policies
- Publicize smoke free multi-unit housing complexes on ODH website
- Develop and disseminate media materials that promote adoption of smoke-free policies in multi-unit housing complexes

Objective 1.4: By 2018, increase the excise tax on other tobacco products.

Partner: TFOA

Performance Measures:

Baseline: 17 percent excise tax

5-year Outcome: 37 percent excise tax

Data Source: Ohio Department of Taxation

Strategies:

- Engage state and local advocates, including youth, to educate state legislators about the need to raise the tax on other tobacco products, the health and economic benefits from an increase, and why it's important to use the revenue generated to fund tobacco prevention and cessation
- Develop educational materials that describe the burden of tobacco use in communities (e.g., medical costs, lost productivity, etc.) and show the health and economic benefits from an excise tax increase on other tobacco products

Objective 1.5: By 2018, increase the number of schools with completed school travel plans.

Partners: Safe Routes to School Network (SRTS), American Heart Association/American Stroke Association (AHA/ASA)

Performance Measures:

Baseline: 449 individual schools

5-year Outcome: 5% annual increase

Data Source: Ohio Department of Transportation (ODOT)

Strategies:

- Develop and pilot test "Essential Health Considerations Checklist" tool for school districts to use as they develop travel plans
- Develop school travel plans for Ohio's school districts with the greatest disparity and need
- Identify opportunities to sustain the 20 percent match of federal SRTS funding
- Identify Metropolitan Planning Organizations (MPOs) with designated Transportation Alternative Program (TAP) funds to commit a portion of awards to school travel plan/SRTS
- Work with stakeholders and partners, including nontraditional partners, to identify new sources of funding for the implementation of school travel plans

Objective 1.6: By 2018, increase the number of Ohio communities that adopt Complete Streets policies.

Partners: SRTS, AHA/ASA, ODH

Performance Measures:

Baseline: 11 communities

5-year Outcome: 20 communities

Data Source: National Complete Streets Coalition

Strategies:

- Partner with MPOs across the state and other regional planning commissions to confirm baseline for Complete Streets policies in the state
- Work with ODOT and MPOs to develop a statewide Complete Streets policy
- Educate, train and encourage local and regional governments (regional planning commissions, townships, cities, counties, etc.) in all aspects of Complete Streets (adoption and implementation)

Objective 1.7: By 2018, increase the number of Shared-Use Policies and Agreements (SUPAs) between schools, communities, parks and recreation, and other groups to increase physical activity opportunities in the community.

Partners: SRTS, HPIO, AHA/ASA, Ohio Alliance of YMCAs, ODH

Performance Measures:

Baseline: TBD

5-year Outcome: Increase number by 20%

Data Source: Buckeye Association of School Administrators survey

Strategies:

- Conduct survey to establish baseline and repeat annually to assess status of SUPAs in Ohio
- Conduct key informant interviews with school and community representatives to identify barriers, opportunities and technical assistance needs
- Compile and disseminate "Ohio-ized" model of SUPAs from local, state and national sources (ChangeLab Solutions, KaBOOM!, AHA/ASA) with guidance for implementation
- Develop case studies/showcase publications to highlight successful implementation of SUPAs
- Develop or identify an infrastructure for technical assistance and coaching about SUPAs
- Work with other state government offices to promote, publicize and conduct outreach on shared-use policy, specifically with the Ohio Governor's Office (Beyond Boundaries) and the State Auditor's Office (SkinnyOhio Shared Services Idea Center)

Objective 1.8: By 2018, increase the number of public and private worksites in Ohio that meet Healthy Ohio Business Council (HOBC) recognized worksite wellness criteria.

Partner: HOBC

Performance Measures:

Baseline: 40 Healthy Ohio Healthy Worksite Award (HOHWA) winners in 2013

5-year Outcome: 20% annual increase in award winners across all categories

Data Source: HOBC

Strategies:

- Increase HOBC membership and promote the HOHWA to chambers of commerce and employers throughout the state
- Provide mentorship and support to employers related to healthy food/beverage vending, lactation support, healthy beverage choices, physical activity opportunities, and age/gender screenings (including resources such as the CDC National Healthy Worksite Program and Communityguide.org worksite wellness resources)
- Work with wellness vendors to align programs with HOHWA components
- Increase recognition value of the HOHWA with key statewide public and private organizations and agencies

Objective 1.9: By 2018, increase the number of licensed early child and school-aged child care providers that have adopted organizational healthy eating/active living (HEAL) policies.

Partner: Ohio Early Childhood Obesity Prevention Network

Performance Measures:

Baseline:

- Number of early child care providers with HEAL polices in 2014
- Number of school-aged child care providers with HEAL polices in 2014

5-year Outcome:

- Increase number of early child care providers that have adopted recommended HEAL policies by 200%
- Increase number of school-aged child care providers that have adopted recommended HEAL policies by 200%

Data Source: Childcare Wellness Policy Database (to be completed in 2014)

Strategies:

- Identify recommended components of HEAL policies
- Develop and maintain a Childcare Wellness Policy Database to determine baseline and track adoption of HEAL policies
- Identify and remove regulatory barriers faced by early child care providers to fully implement HEAL policies
- Work with state partners to include adoption of HEAL policies as a component of the quality rating and improvement system (Step Up to Quality)
- Work with state partners to establish HEAL-policy adoption as a component of state child care licensure
- Expand the statewide Early Childhood Obesity Prevention Network to align activities and outcomes and increase reach across the state

Objective 1.10: By 2018, increase the number of middle and high schools that provide physical activity breaks throughout the school day outside of physical education.

Partners: ODH, Action for Healthy Kids, Alliance for a Healthier Generation, Ohio Association for Health, Physical Education, Recreation and Dance, and Buckeye Healthy Schools Alliance

Performance Measures:

Baseline: 28% of schools participating in physical activity breaks

5-year Outcome: 40% of schools participating in physical activity breaks

Data Source: ODH School Health Profile Report

Strategies:

- Increase training opportunities to increase capacity for schools to incorporate physical activity throughout the day
- Explore opportunities to assess physical activity levels in elementary schools

Objective: 1.11: By 2018, increase the percent of Ohio farmers' markets that accept nutrition assistance benefits, including electronic benefit transfers (EBT), or vouchers for Supplemental Nutrition Assistance Program (SNAP) and Women, Infants and Children (WIC) Farmers' Market Nutrition Program (WIC FMNP).

Partners: Ohio Department of Job and Family Services, WIC, The Ohio State University Extension (OSU Extension), ODH

Performance Measures:

Baseline:

– 21.5% of farmers' markets accepting SNAP benefits

– 22.6% of farmers' markets accepting WIC FMNP

5-year Outcome:

– 25% of farmers' markets accepting SNAP benefits

– 25% of farmers' markets accepting WIC FMNP

Data Source: CDC State Indicator Report on Fruits and Vegetables, 2013

Strategies:

- Expand regional trainings for farmers' market managers and vendors to accept nutrition assistance benefits
- Provide support for the purchase of additional EBT equipment for high need rural markets
- Increase awareness of available nutrition assistance benefits
- Pilot a statewide double value coupon program for SNAP users

Objective 1.12: By 2018, increase the percentage of census tracts that have at least one healthy retail option located within the tract or within half a mile of tract boundaries.

Partners: ODH, Creating Healthy Communities (CHC) Program-funded counties

Performance Measures:

Baseline: 63.7% of census tracts with at least one healthy retail option

5-year Outcome: 68% of census tracts have at least one healthy retail option

Data Source: CDC State Indicator Report on Fruits and Vegetables

Strategies:

- Work with ChangeLab Solutions to train and provide continuing technical assistance on a healthy retail initiative
- Provide technical assistance to increase WIC certification and EBT redemption at small retail venues
- Develop and implement an Ohio Healthy Retail brand with reproducible materials and model policies
- Implement healthy retail initiatives in all CHC counties
- Expand healthy retail initiative to additional high-need areas of the state by providing training and technical assistance to local food councils (LFC) and hosting corner store business forums

Objective 1.13: By 2018, increase the number of Ohio school districts participating in a comprehensive Farm to School (F2S) Program.

Partner: Ohio F2S Advisory Committee

Performance Measures:

Baseline: 137 school districts participating in F2S

5-year Outcome: 165 school districts participating in F2S (20% increase)

Data Source: National Farm-2 School Census (October 2013)

Strategies

- Work with partners in the Great Lakes F2S Region to collaborate and share best practices
- Partner with Ohio Department of Education, OSU Extension, Ohio Farm Bureau, local health departments, and the Ohio Department of Agriculture to provide regional F2S trainings highlighting the resources specific to each region
- Compile Ohio results of the National F2S Census, analyze by county, and disseminate to local partners
- Enhance online mapping tools to connect more producers and schools through Ohio Market Maker
- Work through the Ohio F2S Advisory Committee to enhance communication around F2S through new promotional materials

Objective 1.14: By 2018, increase the percent of babies who are breastfed while in the hospital.

Partners: ODH, Ohio Breastfeeding Alliance (OBA), Ohio Lactation Consultant Association, American Academy of Pediatrics–Ohio Chapter (O–AAP)

Performance Measures:

Baseline: 67.8% of babies breastfeed while in hospital (2012)

5-year Outcome: 81.9% of babies breastfeed while in hospital

Data Source: Ohio Birth Certificate data

Strategies:

- Develop a resource guide (trainings, technical assistance, funding opportunities, etc.) for Ohio birthing centers to increase evidence-based maternity care practices following Baby-Friendly USA guidelines
- Provide and develop trainings based on components of the Ten Steps to Successful Breastfeeding
- Establish an Ohio-based program to recognize birthing centers that meet all or part of the Ten Steps to Successful Breastfeeding
- Adapt culturally appropriate trainings and tools to increase breastfeeding rates among black and Appalachian mothers and babies
- Work with stakeholders to include reporting of exclusive breastfeeding at discharge on the electronic birth certificate

Objective 1.15: By 2018, establish a statewide food council network to help create a supportive Ohio food system.

Partners: The John Glenn School of Public Affairs at OSU, OSU Extension, ODH

Performance Measures:

Baseline: 0

5-year Outcome: 1 network established

Data Source: N/A

Strategies:

- Work with statewide partners including LFCs and OSU Extension to re-establish a statewide food council network and increase the number of LFCs
- Develop recommendations and provide guidance for LFCs to implement evidence-based interventions to reflect policy goals around fruit and vegetable availability and access
- Work with state agencies to set targets for state-funded institutions to procure Ohio-grown, sustainably produced products

Core Focus Area 2: Health System Interventions

Ensure Ohioans are receiving optimum preventive services to prevent and reduce disease.

"[Participating in the Check It. Change It. Control It. Your Heart Depends On It project] was a good experience. My patients seemed to welcome the materials and the opportunity to dialogue on the topic of hypertension and high cholesterol."

—Physician participant in the Check It. Change It. Control It. Your Heart Depends On It. pilot project

Working with healthcare providers to more effectively deliver quality preventive services is a critical part of reducing death and disability due to chronic disease. High-quality clinical preventive care can delay or prevent many of the health problems associated with chronic diseases, such as complications due to diabetes, strokes and heart attacks. Because not all disease can be prevented, appropriate disease management can also detect new problems earlier and delay disease progression, further improving health outcomes and reducing costs. Connecting primary care providers, especially those practicing advanced primary care through patient-centered medical homes (PCMH) and Federally Qualified Health Centers (FQHC), with public health will benefit not only the millions of Ohioans with existing chronic diseases or risk factors, but it will enable those in good health to stay in good health.

Objective 2.1: By 2018, increase the number of Ohio tobacco users who are eligible to receive telephonic tobacco cessation counseling through the Ohio Tobacco Quit Line.

Partners: ODH, TFOA

Performance Measure:

Baseline: 36% of tobacco users are eligible to receive telephonic tobacco cessation counseling

5-year Outcome: 90% of tobacco users will be eligible to receive telephonic tobacco cessation counseling

Data Source: ODH, Ohio Department of Medicaid (ODM)

Strategies:

- Establish and implement protocols aimed at reaching special populations that might not otherwise be eligible for quit line services
- Develop and disseminate media materials that outline the benefits of health plan coverage for tobacco use cessation services using pharmacological cessation products (promote local programs available throughout the state)
- Recruit new members to the Ohio Tobacco Collaborative, a public-private partnership which provides commercial carriers, employers and third-party administrators with access to tobacco cessation services at rates typically reserved for public health

Objective 2.2: By 2018, increase the percentage of adults who are asked by a health care professional if they smoke.

Partners: ODH, TFOA

Performance Measure:

Baseline: 24.2% of adults are asked by a health care professional if they smoke

5-year Outcome: 35% of adults are asked by a health care professional if they smoke

Data Source: Ohio Adult Tobacco Survey

Strategies:

- Educate providers on the use of evidence-based strategies to address tobacco cessation (i.e., the 5A's)
- Develop and disseminate tools on ODH provider web page to assist providers in counseling for tobacco cessation (i.e., counseling cards, posters, nicotine replacement therapy charts)

Objective 2.3: By 2018, increase the percent of adults screened according to guidelines for breast, colorectal and cervical cancers.

Partners: ACS, Ohio Partners for Cancer Control (OPCC)

Performance Measures:

Baseline:

- Screening for cervical cancer (21-65 years): 84.5%
- Screening for breast cancer (50-74 years): 78.2%
- Screening for colorectal cancer (50-75 years): 63.5%

5-year Outcome:

- Screening for cervical cancer: 88.7%
- Screening for breast cancer: 82.1%
- Screening for colorectal cancer: 66.7%

Data Source: BRFSS

Strategies:

- Establish strategic partnerships with state and local health systems and physician networks to reach age-appropriate individuals who should be screened for breast, colorectal and cervical cancers
- Educate primary care physician practices by a variety of modes on how to create and implement an action plan to increase cancer screening rates in their practices
- Evaluate changes in practice screening rates due to action plan implementation
- Create targeted campaigns to increase public awareness of appropriate cancer screening in high-need communities

Objective 2.4: By 2018, establish use of the Check It. Change It. Control It. Your Heart Depends On It. Toolkit in primary care centers in Ohio.

Partners: Ohio Academy of Family Physicians (OAFP), ODH, Ohio KePRO

Performance Measures:

Baseline: 10 practices with established use of the Toolkit

5-year Outcome: 150 practices with established use of the Toolkit

Data Source: OAFP

Strategies:

- Implement quality improvement collaboratives with family medicine teams across Ohio to establish the Toolkits in practices and measure change in blood pressure control
- Expand existing Toolkit to include African-American females and disseminate to family medicine teams participating in Toolkit quality improvement (QI) projects
- Develop and disseminate blood pressure control tools, including mobile apps, to help providers and patients improve blood pressure control

Objectives 2.5: By 2018, develop an Ohio-based, online, practice engagement platform to expand access to QI tools to family medicine providers to improve prevention, risk factor identification, and management of chronic disease.

Partners: OAFP, ODH

Performance Measures:

Baseline: 0

5-year Outcome: Platform developed and piloted

Data Source: OAFP, ODH

Strategies:

- Identify components, uses and logistics for platform development and maintenance
- Identify sources of funding required
- Identify existing QI modules to pilot the platform
- Identify additional QI modules to add to the platform

Objective 2.6: By 2018, increase the number of high-risk children and youth receiving interventions to prevent and manage obesity through a healthcare provider.

Partners: O-AAP, ODH

Performance Measures:

Baseline: 9,000 children enrolled in Medicaid receiving interventions

5-year Outcome: 30,000 children enrolled in Medicaid receiving interventions

Data Source: O-AAP

Strategies:

- Implement Ounce of Prevention and Pound of Cure learning collaboratives with primary care providers in Ohio
- Develop and disseminate guidelines for the use of evidence-based strategies to prevent and manage obesity in primary care
- Identify additional QI opportunities to increase reach of evidence-based interventions throughout the state
- Promote use of strategies to primary care providers through partnerships with insurers and provider networks

Core Focus Area 3: Community-Clinical Linkages

Ensure Ohioans are connected to the appropriate healthcare and public health services within their communities.

"I tell my [Diabetes Prevention Program] participants that they are a 'ripple in the pond of change' that is impacting the way that the nation addresses diabetes and its prevention."

— Barbara Camfield, Chronic Disease Coordinator and Diabetes Prevention Coach, Hilltop YMCA

Linking people to effective community resources helps ensure that Ohioans with or at risk for chronic diseases have access to the resources they need to prevent, delay or manage these diseases and their associated risk factors. Programs that increase a person's ability to manage their illness or to change their lifestyle to prevent disease are often delivered by peers or other healthcare providers within their own communities. By increasing connections between these programs, PCMHs, FQHCs and other primary care providers; developing innovative payment methods to ensure all people have access; and working to ensure all programs are meeting the needs of people who use them, more Ohioans will be able to take charge of their health.

Objective 3.1: By 2018, develop recommendations for evidence-based chronic disease and diabetes self-management education programs (SMEPs) that include essential program elements, desired outcomes, evaluation methods, quality assurance, cost guidelines, and reimbursement methods.

Partners: Ohio Department of Aging (ODA), ODH, YMCAs

Performance Measures:

Baseline: N/A

5-year Outcome: Recommendations developed

Data Source: N/A

Strategies:

- Establish a workgroup of healthcare providers, PMCHs, insurers, employers, consumers, minority health, mental health and addiction, disability, SMEPs and state government
- Identify and assess existing Ohio chronic disease and diabetes SMEPs to determine if they meet national standards for effectiveness
- Develop a database of chronic disease and diabetes SMEPs in Ohio
- Develop and disseminate the SMEP recommendations to key stakeholders
- Identify opportunities to evaluate reimbursement mechanisms

Objective 3.2: By 2018, increase the percent of people with prediabetes enrolled in CDC-recognized lifestyle change programs.

Partners: YMCAs, ODH, Ohio Department of Mental Health and Addiction Services, Ohio Commission on Minority Health (OCMH), Ohio Disability and Health Program

Performance Measures:

Baseline: TBD

5-year Outcome: TBD

Data Sources: Diabetes Prevention Programs (DPP) enrollment data (2013) and BRFSS

Strategies:

- Connect healthcare providers, PCMHs, insurers, consumers and DPPs to develop strategies to increase utilization of, referral into and access to programs and to develop five-year outcomes
- Increase the number of DPPs seeking CDC Diabetes Prevention Recognition Program recognition
- Expand existing and pilot new reimbursement mechanisms to ensure program sustainability
- Work with relevant partners to ensure DPPs are culturally/ability appropriate
- Utilize social media and other technology to increase awareness of prediabetes and of available DPPs

Objective 3.3: By 2018, increase the number of community health worker (CHW) models being used to address chronic disease prevention and management.

Partners: Ohio Community Health Workers Association (OCHWA), ACS, ODH

Performance Measures:

Baseline: Number of existing CHW models in 2014

5-year Outcome: TBD

Data Source: Landscape assessment (to be completed in 2014)

Strategies:

- Assess the landscape of CHWs, models and resources related to chronic disease
- Connect healthcare providers, PCMHs, FQHCs, insurers, public health, consumers and CHWs to develop strategies to increase capacity, utilization of and access to CHW models to impact chronic disease
- Increase the number of certified CHWs trained in chronic disease prevention and control
- Expand existing and develop new models for reimbursement
- Provide opportunities for collaboration and information sharing between CHW models and SMEPs/DPPs
- Develop and pilot models to integrate CHWs with local public health and PCMHs to develop community health teams to improve management of chronic disease and risk factors

Core Focus Area 4: Data and Surveillance

Effectively use data and information to assess, plan, deliver and evaluate strategies to improve population health.

"Collecting data from multiple population-based data sources is a critical step toward targeting programming and resources to populations most at-risk and impacted by chronic disease, and will ultimately lead to reductions in the overall chronic disease burden."

—Chris Kippes, Director of Epidemiology, Surveillance & Informatics, Cuyahoga County Board of Health

The ability to monitor population health is essential to the success of any state or local public health system. Collecting accurate data allows for the identification of high-risk populations; regions with higher than expected rates of illness or risk; and changes or patterns in risk developing over time. The timely communication of these data is vital for communities and decision makers to understand the impact these diseases and risk factors have on overall health, health system value, and present and future productivity. The effective use of these data is also a key step in effective decision making and requires a focus on how health is impacted by the decisions made at all levels of government. The objectives below reflect Ohio's path to developing a more comprehensive picture of the health status of the state by combining traditional surveillance data with electronic health records and other non-traditional sources of data. Additionally, they include methods to effectively use and communicate data to understand the impact policies and decisions will have on the health of all Ohioans.

Objective 4.1: By 2018, establish one set of comprehensive, high-quality and timely data sources to better assess, monitor and evaluate the burden of chronic disease in Ohio and the success of interventions at the state and local levels.

Partner: ODH

Performance Measures:

Baseline: 0

5-year Outcome: 1 set established

Data Source: N/A

Strategies:

- Assess current data sources (e.g., BRFSS, YRBS, VS, OCISS, etc.) to identify needs and gaps across subgroups of the population (e.g., geography, race/ethnicity, income, disability, mental health)
- Identify partners (public and private agencies, public health and health care, state and local organizations, etc.) to fill needs and gaps, e.g., funding to support data collection, identification of available data sources for smaller geographic and sociodemographic subpopulations
- Engage key partners to establish data sharing agreements to provide and integrate new data with existing sources
- Utilize existing, new and non-traditional (e.g., market research) data sources and methods (e.g., geospatial analysis) to identify high-risk and disparate subpopulations to inform, monitor and evaluate strategies

Objective 4.2: By 2018, establish and maintain at least two publicly accessible data resources for systematic dissemination of chronic disease and risk factor data to multiple audiences.

Partner: ODH

Performance Measures:

Baseline: 0 data resources established

5-year Outcome: 2 data resources established and maintained

Data Source: N/A

Strategies

- Enhance ODH Information Warehouse by adding a full complement of chronic disease and risk factor data (e.g., BRFSS, mortality) for public use
- Develop and implement methods for systematic dissemination of chronic disease and risk factor data, including integrated chronic disease burden reports, fact sheets, comparisons to national benchmarks, etc.

Objective 4.3: By 2018, pilot and disseminate results from at least one project combining electronic health record (EHR) and other health system data with population health surveillance data to identify, assess and monitor populations with high chronic disease burden.

Partner: ODH

Performance Measures:

Baseline: N/A

5-year Outcome: One project piloted and guidance disseminated

Data Source: N/A

Strategies:

- Utilize EHR, health system and public health data to assess and monitor population health in one clinical and public health setting
- Engage key state and local partners to utilize the project results to identify effective methods, key considerations, priority data, and appropriate utilization of EHR and health system data for population-level chronic disease monitoring
- Identify additional opportunities for public health and healthcare partnerships to effectively use both health system and public health data to better assess and monitor population health

Objective 4.4: By 2018, provide/promote 10 trainings to build capacity in the use of data and information for decision making across multiple sectors.

Partners: Human Impact Partners, ODH

Performance Measures:

Baseline: 0

5-year Outcome: 10 trainings

Data Source: N/A

Strategies:

- Provide/promote trainings on Health Impact Assessments (HIA) for state and local public health
- Provide/promote the "Evidence-Based Public Health" course and other evidence-based public health resources
- Engage non-traditional sectors (planning, transportation, education, community development, etc.) to use population health data in planning and decision making
- Build public health evaluation expertise through partnerships between state and local public health practitioners and academic public health experts

Communication and Reporting Progress

Successful implementation of the Chronic Disease Plan will require coordination and the systematic communication of each objective's progress and outcomes to multiple audiences. To achieve this, partner organizations will have the opportunity to feature the plan on their websites, use social media to connect the plan with their networks, host webinars and presentations, and reach out to local, regional and statewide media outlets using consistent messages (talking points, press releases, etc.).

A benchmark report will be developed and disseminated in a coordinated way on an annual basis to report progress and successes. In order to maximize exposure to decision makers and stakeholders at the local, regional and state levels, a number of statewide and local coalitions and networks will be leveraged, including HPIO's Wellness and Prevention Network, a diverse group of prevention organizations working together to communicate the critical importance of supporting prevention and population health. Throughout the implementation period, other communication strategies will emerge to keep existing partners engaged and to secure support and commitment from additional stakeholders.

In addition to the benchmark report, regular releases of chronic disease and associated data will be coordinated by ODH to describe, monitor and evaluate the chronic disease burden in the state. These releases will include reports, fact sheets and burden maps and will describe the inter-relationship between chronic diseases, associated health behaviors and the social, economic and environmental factors that affect health. These publications will incorporate both traditional (e.g., BRFSS) and non-traditional (e.g., market research) data sources to better identify and monitor high-risk and disparate populations. Data for both youth and adults will be integrated to assess both health behaviors and the social determinants of health across the lifespan to identify populations with elevated risk of chronic disease.

A Call to Action

The purpose of developing a priority-driven plan is to engage state, regional and local stakeholders to align around a common set of objectives to achieve greater results than what is possible by working alone. In fact, national and state experience has shown that success comes from building community-based partnerships involving a diverse group of stakeholders (e.g., law enforcement, education, transportation, regional planning, etc.). Therefore, to implement the Chronic Disease Plan and report progress throughout the five-year implementation period, an Ohio Chronic Disease Collaborative was formed. The Collaborative is open to all interested organizations, and members may participate as a stakeholder, objective partner, or objective lead with varying responsibilities, as defined by the Collaborative's Articles of Operation. The Collaborative is led by a steering committee with rotating leadership to ensure that a diverse group of partners is leading implementation throughout the plan period. Because opportunities and challenges change over time, the Collaborative will also grow to include new partners as needed and add or modify objectives.

So how can you use the plan? The plan can be used to identify the evidence-based strategies that best fit your community's specific needs, while aligning with a larger statewide effort. The objectives are meant to reach into many sectors—communities, schools, health care, worksites, funders, government, including public health, and the public at large. The following are questions and suggestions to consider when using this plan:

In the Community

- Is there an existing community-based prevention coalition already working toward increasing opportunities for healthy eating, physical activity and tobacco-free living? If so, how can that coalition contribute to meeting the plan's five-year outcomes?
- Has your community gone through a process to identify needs and prioritize objectives and strategies? Guides such as the *Community Health Assessment aNd Group Evaluation* (CHANGE) tool are helpful in conducting assessments and developing these types of community action plans.
- How can you use the plan to engage other stakeholders that need to be at the table?
- If there isn't an existing coalition, contact your local public health agency or ODH to learn about opportunities to start one.
- If you're a local public health department, how can you use the plan to guide your community health improvement plan process?

In Schools

- Is your school a part of a local prevention coalition? If not, how can you engage students, faculty, staff and parents to become members?
- Is your school's wellness committee using the plan to guide future activities? If not, what is realistic and possible within your school, and how can you move closer to align with appropriate objectives?

In Healthcare Systems

- Does your practice reach out to community resources, including local public health, to identify communities at risk and discuss how to integrate clinical management of disease with population-based prevention?
- Does your practice or hospital utilize community resources to engage patients in the management or prevention of disease?
- How can your electronic health data help identify vulnerable populations and connect them with needed resources and social services?
- As a healthcare provider, are you taking advantage of evidence-based population health strategies such as those in the plan to improve your patients' overall health and wellness and prevent future disease and disability?
- Are you identifying social determinants of health that may prevent your patients from accessing care and engaging in chronic disease self-management and prevention activities?
- Are hospitals in your area partnering with local public health to do community needs assessments and develop community health improvement plans that use this plan?

In Worksites

- Does your worksite belong to the HOBC?
- How can your worksite leverage experiences from other businesses in Ohio to improve the health and productivity of its employees?
- How can your worksite use the strategies in the plan to become more engaged in community efforts to prevent and reduce the burden of chronic disease?
- If your worksite has a successful worksite wellness program, are you mentoring other employers and business associates to join in similar efforts?

For Governments

- How can you ensure agency employees work in healthy and safe environments and support the objectives in the plan?
- Is your agency a member of local and state prevention coalitions implementing strategies in the plan?
- How can you leverage public health efforts and funding to ensure public policies and decisions positively impact health?

For Funders

- How does the plan fit into your organization or agency's strategic plan?
- Are there other local or regional funders that you can join with to leverage impact and reach for your funding?
- Can you align your funding with programs, strategies and activities within the plan? If not, how can your funding help strengthen other efforts to address the social determinants of health?

For Individuals

- Spread the word in your households, schools, worksites, communities and faith-based organizations that health begins where we live, learn, work, play and pray and that everyone deserves opportunities to make healthy choices.
- Become active in your local school wellness council, prevention coalition or other group working to improve health in the community and use the plan to guide efforts to improve health and reduce illness and disability.
- Eat healthy foods and be physically active every day.
- Quit or never use tobacco products.
- Get screened for cancer at recommended intervals.
- Know your blood pressure and cholesterol numbers and work with your healthcare provider to keep them within recommended levels.
- If you have a chronic disease or are at risk for one, participate in lifestyle change or chronic disease self-management programs to prevent or reduce the burden of chronic disease.

This plan cannot be implemented by partners in just one or two sectors—but rather it is a statewide plan for Ohio. Its success will be measured by the collective efforts of many partners in multiple sectors working together. However, all Ohioans can take action to help achieve the long-term outcomes of the Chronic Disease Plan. For example, contact your local food council, school wellness council, Safe Routes to School group or other prevention coalition to find out how you can participate. If your community doesn't have one, contact your local health department to find out how you can get involved. And finally, advocate for healthy opportunities in your schools, workplaces and communities.

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