

## Public Health Leadership Forum

The Public Health Leadership Forum, funded by the Robert Wood Johnson foundation, is an ongoing platform to engage a diverse set of public health leaders and stakeholders in dialogue on current challenges to public health and opportunities for transformation in the field.

The Forum's work to date has included two major tasks:

- Defining and constituting a set of **foundational public health services** (made up of foundational capabilities and areas, building on the IOM's "minimum package" concept) for all governmental public health departments.
- Visioning and articulating what a high achieving governmental health department will be doing differently in the year 2020.

### Foundational Public Health Services

In April of 2013, a group of stakeholders were convened to further explore a recommendation from *For the Public's Health: Investing in a Healthier Future* (IOM 2012), to further define a **minimum package of public health services** including foundational capabilities (FCs) and an array of basic programs no health department can be without, now known as foundational areas (FAs).

Over the course of several meetings, the working group built on efforts in Washington, Ohio, and other states to draft an initial "V1" of a **Foundational Public Health Services (FPHS) model**. The document is intended to be used as a discussion piece within the public health community to continue the development of, support for, and coalescence around the case for *foundational public health services essential to communities everywhere for the health system to work anywhere*. The assumptions outlined in the document are important (see Principles and Considerations for Constitution Foundational Capabilities and Areas beginning on page 4 of "V1"). Clarity and consistency of an overall conceptual framework, including definitions and methodologies for estimating costs is critically important to support a case for sustained funding for Foundational Public Health Services. Also, see detailed descriptions of foundational capabilities and foundational areas beginning on page 7.

### The High Achieving Governmental Health Department in 2020 as the Community Chief Health Strategist

A second workgroup was formed to support, along with the above workgroup, the governmental public health community developing a clear, compelling case for ensuring foundational capabilities and foundational areas necessary to protect the health of every community, along with securing the necessary sustainable funding to support them.

"In 2020, state and local health departments will be more likely to design policies than provide direct services; will be more likely to convene coalitions than work alone; and be more likely to access and have real-time data than await the next annual survey. These new required skills and abilities characterize a new role for health departments as the "*chief health strategist*" for a community.

Health departments as chief health strategists will lead communities' health promotion efforts by catalyzing, conducting, supporting, and sustaining health protection and promotion activities, and in partnership with health care clinicians and leaders in widely diverse sectors, from social services to education to transportation to public safety and community development. As such, health departments will play a vital role in promoting the *reorientation of the health care system towards prevention and wellness*."

“Health departments will also be deeply engaged in addressing the underlying causes driving tomorrow’s health challenges. The emphasis will be on changing policies and taking actions that improve community health and well-being.

While many new practices will be important for high achieving health departments to become chief health strategists of their communities, seven are particularly critical:

**PRACTICE #1:** Adopt and adapt strategies to combat the evolving leading causes of illness, injury and premature death.

**PRACTICE #2:** Develop strategies for promoting health and well-being that work most effectively for communities of today and tomorrow.

**PRACTICE #3:** Become the primary provider of community health information using data from new, big, and real time sources.

**PRACTICE #4:** Build a more integrated, effective health system through collaboration between clinical care and public health.

**PRACTICE #5:** Collaborate with a broad array of allies – including those at the neighborhood-level and the non-health sectors – to build healthier and more vital communities.

**PRACTICE #6:** Replace outdated organizational approaches with state-of-the-art business, accountability, continuous quality improvement, and financing systems.

**PRACTICE #7:** Work with corresponding federal partners – ideally, a federal Chief Health Strategist – to help health departments meet the needs of the community.

The final practice (#7) suggests that the relevant federal agencies must modify and adapt as well, as a virtual federal chief health strategist, both to meet the new health needs and conditions in the nation and to optimize, through unified goals, policies, and funding, the likelihood that local and state health departments will be modernized and well prepared.

These practices, further detailed throughout the full paper, call for rethinking the role of local and state health departments and the role of the chief health strategist, suggesting an increasingly critical set of responsibilities that should be adapted to meet the actual conditions of the future.

To read the entire Executive Summary and/or full document see <http://www.resolve.org/site-healthleadershipforum/hd2020/>.

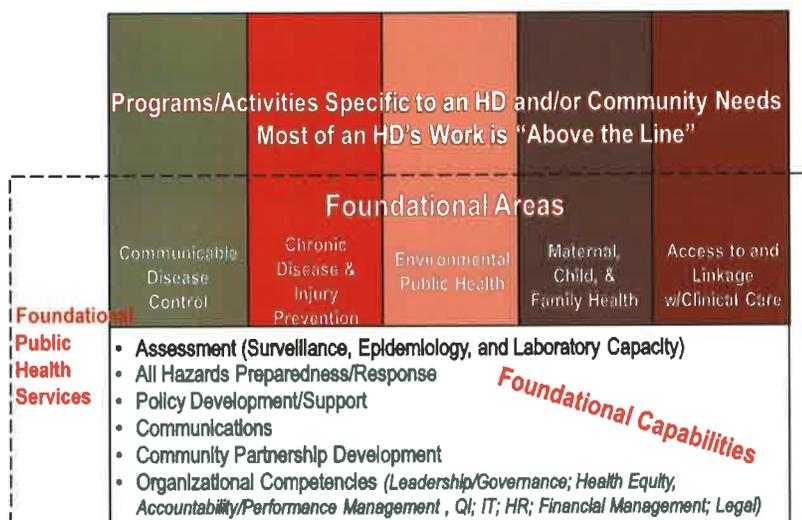
## Foundational Public Health Services (FPHS)

POWERED BY  
**RESOLVE**

In April of 2013, at the encouragement of a number of public health leaders, the **Public Health Leadership Forum (PHLF)**, funded by the **Robert Wood Johnson Foundation (RWJF)**, and organized, managed, and facilitated by **RESOLVE**, convened a group of stakeholders to further explore a recommendation from *For the Public's Health: Investing in a Healthier Future* (IOM 2012), to further define a **minimum package of public health services** including foundational capabilities (FCs) and an array of basic programs no health department can be without, now known as foundational areas (FAs).

Over the course of several meetings, the working group built on efforts in Washington, Ohio, and other states to draft an initial **"V1" of a Foundational Public Health Services (FPHS) model**. The document is intended to be used as a discussion piece within the public health community to continue the development of, support for, and coalescence around the case for *foundational public health services essential to communities everywhere for the health system to work anywhere*. Clarity and consistency of an overall conceptual framework, including definitions and methodologies for estimating costs is critically important to support a case for sustained funding for Foundational Public Health Services.

### Other Services Particular To A Community



**Foundational Capabilities (FCs):** Cross-cutting skills needed in state/local health departments everywhere for health system to work anywhere; essential skills/capacities to support all activities

**Foundational Areas (FAs):** Substantive areas of expertise or program-specific activities in all state/local health departments necessary to protect the community's health

**Programs/Activities Specific to a Health Department or a Community's Needs:** Additional, critical significance to a specific community's health, supported by FAs/FCs; most of a health department's work

**Foundational PH Services (FPHS):** Comprised of the FCs and FAs; a suite of skills, programs/activities that must be available in state/local health departments system-wide

### We'd like your input!

This "V1" is still in development. Stakeholder feedback from the field is crucial. We welcome your input around the foundational services model for governmental public health. You can provide comments and questions via our [web-based feedback form](#) or contact [Erin Bongard via email](#).

Please see link below to learn more about FPHS in person. Slides from presentations will also be archived on this page.

### Resources:

[Articulation of Foundational Capabilities and Foundational Areas.v1](#)

[Frequently Asked Questions](#)

[Working Group Members](#)

[Estimating the Costs of Foundational Public Health Capabilities](#)

### Latest News and Archived Presentations:

[NACCHO Annual Meeting Presentation: Fixing the Broken Public Health Financing System, July 9, 2015](#)

[Foundational Public Health Services Webinar, Oct. 1, 2014](#)

[CDC "Have You Heard?" Sept. 18, 2014](#)

[ASTHO Presentation, Sept. 9, 2014](#)

[NACCHO Annual Meeting Presentation, July 10, 2014](#)

[NNPHI Annual Meeting Presentation, May 20, 2014](#)

# The Burden of Chronic Diseases in Missouri: Progress and Challenges



**Missouri Department of Health and Senior Services**  
June 2013

# Executive Summary

## Burden of Chronic Diseases in Missouri

### *Death and Premature Death with Chronic Diseases as Underlying Causes*

In Missouri, chronic diseases are major causes of death. In 2010, a total of 55,054 Missourians died and about 71 percent of these deaths were due to chronic diseases. Heart disease was the number one killer, accounting for 25.0 percent of all deaths; followed by cancer, 22.8 percent; chronic lower respiratory disease, 6.4 percent; cerebrovascular disease (stroke), 5.4 percent; and diabetes, 2.6 percent. In total, these five causes accounted for 62.2 percent of all deaths in Missouri in 2010.

Chronic diseases are also major causes of premature death in Missouri. In 2010, a total of 14,827 Missourians died prematurely under the age of 65 and more than 59 percent of these deaths were due to chronic diseases. Cancer was the number one cause of premature deaths, accounting for more than 26.2 percent of the premature deaths; followed by heart disease, accounting for about 19.9 percent; chronic lower respiratory disease, 4.0 percent; diabetes, 2.8 percent; cerebrovascular disease, 2.4 percent.

The death rates for heart disease, cancer, stroke, and diabetes declined significantly in the last decade in Missouri overall, and among white men and women and African-American men and women; however, the death rates for these five chronic diseases were higher in Missouri than in the U.S. In Missouri, the death rates of these chronic diseases were higher among African-Americans than among whites, except for chronic lower respiratory diseases in which the rate among African-Americans was lower.

### *Prevalence of Chronic Diseases and Conditions*

A high proportion of Missourians are affected by chronic diseases/conditions and many have multiple chronic diseases/conditions. Among Missouri adults in 2011:

- 30.2 percent were obese
- 34.3 percent had hypertension
- 39.7 percent had high cholesterol
- 10.7 percent had diabetes

- 29.4 percent had arthritis
- 10.2 percent had asthma
- 8.1 percent had chronic lower respiratory disease (COPD)
- 2.6 percent had kidney disease
- 18.5 percent had vision impairment
- 20.6 percent had depressive disorders
- 5.4 percent were heart attack survivors
- 3.8 percent were stroke survivors
- 9.4 percent were cancer survivors.

The percentages of adults with these chronic diseases/conditions were higher in Missouri than the US, except for the prevalence of vision impairment, which was similar to that in the US. In addition, about 3 in 4 Missouri adults (74.4%) had at least one of the above 13 chronic diseases/conditions, more than 1 in 2 (51.7%) had at least two, more than 1 in 3 (34.5%) had at least three, more than 1 in 5 (21.7%) had at least four, more than 1 in 8 (12.9%) had at least five, and about 1 in 14 (7.1%) had at least six of these diseases/conditions.

The percentage of people with chronic diseases/conditions was on the rise in Missouri in the last decade. The prevalence of obesity has increased on average at about one percentage point per year, hypertension 1.8 percentage points, diabetes 0.3 percentage points, and asthma 0.1 percentage points per year. African-Americans had a significantly higher prevalence of obesity, hypertension, diabetes, and asthma than whites, but significantly lower prevalence of high cholesterol.

### ***Emergency Room Visit Data***

When chronic diseases are not well managed and controlled, visits to emergency rooms and hospitalizations are more likely. In 2009, the age-adjusted emergency room visit rate for heart disease was 12.8 per 1,000 population, for COPD 5.6 per 1,000, and for asthma 5.1 per 1,000 in Missouri. During the past decade, the emergency room visit rates increased significantly for heart disease and COPD, and decreased significantly for asthma in Missouri. African-Americans had significantly higher emergency room visit rates for all three diseases than whites.

### ***Hospitalization Data***

In 2009, the age-adjusted hospitalization rate for heart disease was 136.8 per 10,000 population, for cancer 36.2 per 10,000, for osteoarthritis 29.3 per 10,000, for stroke 28.9 per 10,000, for COPD 23.9 per 10,000, for diabetes 17.4 per 10,000, and for asthma 13.5 per 10,000. These diseases led to more than \$6.0 billion in hospital charges, including more than \$3.6 billion in charges to Medicare and \$518 million in charges to Medicaid. From 2000 to 2009, the age-adjusted hospitalization rates for heart disease and stroke have declined significantly among white men and women, but not among African-American men and women. The age-adjusted hospitalization rates for asthma and diabetes have increased significantly among African-American men and women. The rate for osteoarthritis has increased significantly in Missouri for all four racial and gender groups. Obesity is a major risk factor for osteoarthritis and the obesity epidemic is a major contributing factor to this upward trend in osteoarthritis hospitalization. The hospitalization rates among African-Americans were significantly higher than among whites for heart disease, stroke, asthma, and diabetes, but lower than whites for osteoarthritis.

### ***Prevalence of Risk Behaviors***

Chronic diseases share common risk factors-- smoking, lack of physical activity, unhealthy diets and heavy drinking. Among Missouri adults in 2011:

- 23.0 percent were current smokers
- 23.7 percent were physically inactive
- 87.4 percent did not consume fruits and vegetables five or more times per day
- 7.3 percent drank alcohol heavily.

Overall, 88.0 percent of adults had at least one of the four risk factors, 41.8 percent had at least two, and 10.7 percent had at least three. Again, the percentages of adults with these risk behaviors were higher in Missouri than in the US, although the prevalence of tobacco use declined significantly in Missouri in the last decade. The prevalence of physical inactivity was higher among African-Americans than among whites.

### **Screening and Early Detection**

Screening and early detection are important for detecting disease at an early and treatable stage. For cervical cancer and colorectal cancer, screening is also a preventive measure. In 2010, 71.3 percent

of women age 40 or older had a mammogram within the past two years in Missouri, compared to 75.2 percent in the US. About 80.1 percent of Missouri women age 18 or older had a Pap test within the past three years, compared to 81.3 percent in the US. The prevalence of ever having had a sigmoidoscopy or colonoscopy among adults age 50 or older was 65.2 percent in Missouri, the same as the US prevalence.

### **Chronic Diseases Self-management**

When people develop a chronic disease, its self-management is very important for preventing complications and exacerbations, and improving the quality of life. In 2011, among Missouri adults with diabetes, 56.3 percent had ever taken a diabetes self-management class to manage their diabetes, similar to US prevalence of 52.2 percent; 64.4 percent conducted daily self-monitoring of their blood glucose, compared to 63.2 percent in the US. About 10.8 percent of Missouri adults with arthritis had ever taken a class to learn how to manage their arthritis, compared to 12.5 percent in the US.

Among people with chronic diseases, a healthy life-style is important for preventing complications. In 2011, among people with diabetes in Missouri, 19.0 percent were current smokers, 42.4 percent were physically inactive, and 77.3 percent were not consuming fruits and vegetables five or more times per day. Among adults with arthritis, 38.4 percent were physically inactive. The smoking prevalence among adults with asthma was 27.9 percent, among adults who ever had a stroke it was 24.0 percent and among adults who ever had a heart attack smoking prevalence was 26.1 percent.

### **Chronic Diseases Care and Management**

High quality medical care and management are important for people with chronic diseases. In 2011, among Missouri adults with diabetes, 73.5 percent had two or more hemoglobin A1C tests, significantly higher than the US prevalence of 68.7 percent; 75.3 percent had their feet examined by a doctor in the last year, compared to 74.5 percent in the US; 68.8 percent had an annual dilated eye exam, slightly lower than the US prevalence of 70.3 percent; 61.2 percent had seasonal flu vaccination in the last year, significantly higher than the US prevalence of 53.5 percent; and 57.4 percent ever had a pneumococcal vaccination, similar to the 58.2 percent in the US.

## **Social Determinants of Health**

The social determinants of health are the circumstances in which people are born, grow up, live, work, and age, as well as the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.<sup>3</sup> The WHO Commission on Social Determinants of Health concluded in 2008 that the social conditions are the single most important determinant of one's health status.

### ***Income and Education***

There is a positive association between income and health. Individuals in poverty have the worst health indicators, including the prevalence of chronic diseases, conditions, risk behaviors, preventive care practices, health care coverage, and living environments (*Refer to chapter XI of the full report for data*). In 2011, 15.8 percent or 920,118 Missourians lived in a family with a household income below poverty level (e.g. \$22,811 per year for a family of four in 2011).

Education matters for health. In general, individuals with less education have more health problems and shorter life expectancies. In contrast, people with more years of education are likely to live longer, healthier lives. Data from the 2011 Missouri County-level Study showed that a high proportion of Missouri adults with less than a high school education lived in an environment that was unsafe and lacked access to healthy foods. The proportion decreased as the education level increased. A similar pattern was observed for the prevalence of risk behaviors, lack of preventive care, poor general health, and chronic diseases and conditions. In 2012, the proportion of Missouri adults aged 25 or older without a high school diploma was 12.8 percent, compared to 14.2 percent nationally.

Income and education levels vary in different areas in Missouri. Counties in the southeast region, especially those in the Bootheel area, have a higher proportion of population living in poverty and a higher proportion of adults without a high school diploma. Overall, the 2011 poverty rate was more

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<sup>3</sup> World Health Organization. Social Determinants of Health. Available from: [http://www.who.int/social\\_determinants/en/](http://www.who.int/social_determinants/en/)

than twice as high among African-Americans as among whites (39% vs. 15% in Missouri and 35% vs. 13% nationally).

### ***Urbanization***

Using the method developed by the University of Washington's Rural Health Research Center,<sup>4</sup> it was estimated that about 56.1 percent of the Missouri adult population 18 years and older, lived in urban core areas, 13.5 percent in sub-Urban areas, 12.9 percent in large rural towns and 17.5 percent in small rural towns or isolated rural areas in 2010. Communities at different urbanization levels differ in their environmental, demographic, social and economic characteristics, and these characteristics greatly influence the types and magnitude of health problems communities face.<sup>2</sup> The 2011 Missouri County-level Study showed that a higher proportion of Missouri adults living in a small town or isolated rural area lacked access to healthy foods in their neighborhood, had no healthcare coverage, did not meet cancer screening guidelines, engaged in risk behaviors, and had chronic conditions and diseases (arthritis, diabetes, COPD, cancer, and vision impairment), compared to residents living in other areas. In contrast, a higher proportion of adults living in the urban core area currently had asthma, and they also considered their neighborhood to be somewhat unsafe or extremely unsafe, compared to adults living in other areas (*Refer to chapter XI of the full report for data*).

### ***Sexual Orientation***

Lesbian, gay, bisexual, and transgender (LGBT) individuals are becoming more visible and acknowledged in society. Based on the self-reported data in the 2011 Missouri County-level Study, 0.8 percent of Missouri women were lesbian, 1.6 percent of men were gay, 0.7 percent of men and 1.1 percent of women were bisexual, and 0.1 percent were transgender individuals. Studies have found some significant health disparities between heterosexual adults and LGBT adults. In Missouri, LGBT individuals were more likely to smoke (32.1% vs. 23.1%), have a depressive disorder (36.9% vs. 20.1%), consider their neighborhood to be somewhat or extremely unsafe (30.0% vs. 19.2%), and have activity limitations (34.5% vs. 23.1%), compared to non-LGBT individuals.

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<sup>4</sup> Rural Health Research Center. RUCA. Available from: <http://depts.washington.edu/uwruca/ruca-data.php>

## **Progress in the Last Decade**

In the last decade, significant progress has been made in Missouri in the following chronic disease health indicators:

### ***Decreased Burden\****

#### *Mortality Rates*

From 2000 to 2009, the following age-adjusted mortality rates have decreased significantly in Missouri\*:

- Heart disease mortality rate decreased by 30 percent
- All-cancer mortality rate decreased by 10.9 percent among men and decreased by 6.2 percent among women
  - Lung cancer mortality rate among men decreased by 10.1 percent
  - Breast cancer mortality rate among women decreased by 10.8 percent
  - Prostate cancer mortality rate among men decreased by 25.4 percent
  - Colorectal cancer mortality rate decreased by 17.2 percent among men and decreased by 19.9 percent from among women
- Cerebrovascular disease mortality rate decreased by 31.0 percent
- Diabetes mortality rate decreased by 20.3 percent

#### *Hospitalization and Emergency Room Visit Rates*

From 2000 to 2009 the following age-adjusted hospitalization and emergency room visit rates have decreased significantly in Missouri\*:

- Heart disease hospitalization rate decreased by 18.7 percent
- Cerebrovascular disease hospitalization rate decreased by 19.0 percent
- Asthma emergency room visit rate decreased by 5.6 percent

\*Significant trend or changed significantly between the beginning and the end year

### *Cancer Incidence Rates*

From 2000 to 2008, the following age-adjusted cancer incidence rates have decreased significantly in Missouri:

- All-cancer incidence rate decreased by 7.8 percent among men and decreased by 2.0 percent among women
  - Lung cancer incidence rate among men decreased by 11.5 percent
  - Colorectal cancer incidence rate decreased by 22.1 percent among white men, by 22.8 percent among white women, and by 17.6 percent among African-American women
  - Cervical cancer incidence rate decreased by 28.3 percent

### *Prevalence of Chronic Diseases and Conditions*

There has been little to no progress during the last decade in reducing the prevalence of chronic diseases and conditions. In fact the prevalence has increased for most chronic diseases and conditions.

### *Prevalence of Risk Factors*

From 2000-2010

- The prevalence of smoking among adults has decreased by 22.1 percent
- The prevalence of not meeting CDC physical activity recommendation among adults has decreased by 17.2 percent
- The prevalence of heavy drinking among African-American men has decreased by 90.8 percent

From 2001 to 2009

- The prevalence of smoking among high school students has decreased by 37.6 percent

From 2003 to 2011

- The prevalence of smoking among middle school students has decreased by 38.6 percent

### ***Improvement in Cancer Screening and Chronic Disease Care and Self-management***

From 2001 to 2010

- The prevalence of ever having had a sigmoidoscopy or colonoscopy among adults age 50 years or older has increased by 51.6 percent
- The percentage of adults with diabetes who have ever attended a diabetes self-management class increased by 33.0 percent
- The percentage of African-American men with diabetes who had a flu shot in the last year increased by 453.0 percent
- The percentage of African-American men with diabetes who had ever had a pneumococcal vaccination increased by 273.1 percent

### ***Reduced Disparities***

From 2000 to 2009, racial disparity has declined in the following indicators:

- Age-adjusted diabetes mortality rates
- Age-adjusted all-cancer mortality rates
- Age-adjusted lung cancer mortality rates among men
- Age-adjusted breast cancer mortality rates among women
- Age-adjusted lung cancer incidence rates among men
- Age-adjusted cervical cancer incidence rates among women

### **Challenges**

Missouri faces tremendous challenges in chronic disease prevention and control. The burden of chronic diseases in Missouri is likely to grow as the population ages and also because of the increasing prevalence of obesity and associated chronic conditions. In addition, there are substantial racial/ethnic and socioeconomic disparities in Missouri--minorities and people of lower socioeconomic status are disproportionately affected by chronic diseases. Furthermore, funding for chronic disease prevention and control is limited.

### ***Aging Population***

The rapid aging of the population is among the major public health challenges faced in chronic disease prevention and control. Older adults are disproportionately affected by chronic diseases, which are associated with disability, diminished quality of life, and increased costs for health care and long-term care. In Missouri in 2011, about 95 percent of seniors had at least one of the 13 aforementioned chronic diseases or conditions, more than 80 percent had at least two, and about 65 percent had at least three of these chronic diseases and conditions.

The proportion of seniors in Missouri's population was 13.5 percent in 2000 and increased to 14.0 percent in 2010. The first baby boomers turned 65 in 2011, beginning a period that will show an even faster growth of the senior population than experienced in the previous decade. By 2030, Missouri's senior population will increase to 21.0 percent.<sup>5</sup> The proportion of senior population in Missouri has been and will be continuously higher than that in the nation overall.

### ***High and Increasing Burden***

Compared to the US overall, Missouri has a higher burden of *almost all* chronic diseases, conditions, and risk factors. Missouri's prevalence of smoking, physical inactivity, inadequate fruit and vegetable consumption, obesity, hypertension, high cholesterol and diabetes are all higher than that in the US. Furthermore, the prevalence of obesity, hypertension and diabetes are increasing significantly over time in Missouri, and at a faster pace than that in the US. Without a strong chronic disease prevention and control effort, the high prevalence of risk factors and chronic conditions will likely lead to more emergency room visits, hospitalizations, and deaths, or in another angle, there will be more disabilities, decreased quality of life, medical care spending, and lost productivity.

### ***Racial/ethnic and Socioeconomic Disparities***

There are *substantial*, and in certain cases, *increasing* disparities in chronic diseases morbidity and mortality in Missouri. Minorities and people of lower socioeconomic status have a higher burden of

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<sup>5</sup> Office of Administration. Population Projections. Available from: <http://content.oa.mo.gov/budget-planning/demographic-information/population-projections>

*most* chronic diseases, conditions, and risk factors. Currently a relatively limited numbers of evidence-based interventions have been identified to address the social determinants health. However, economic development, political will, and well-coordinated efforts from multiple sectors are crucial elements for reducing health disparities and improving overall population health. Unfortunately, these conditions are hard to attain and many are out of the control of public health professionals.

### ***Funding***

Adequate funding is needed to effectively address the challenges of reducing the burden of chronic diseases among Missouri adults. Currently the majority of funding for chronic disease prevention and health promotion programs in the Department of Health and Senior Services is from federal sources. These sources are disseminated categorically; that is, for specific chronic diseases, conditions or risk factors. This presents challenges for implementing a planned, comprehensive approach for the prevention of chronic diseases. Efforts to better coordinate the funding of programs at the federal level are underway that will enable states to better coordinate chronic diseases prevention and control activities. States, too, must do their part in dedicating funding for prevention of chronic diseases. Evidence has shown that chronic disease prevention is cost effective.<sup>6</sup> Investing in chronic disease prevention is not only the economically smart thing to do, it is the right thing to do.

### **Conclusion**

The health and economic burden of chronic diseases is tremendous in Missouri and it is likely to grow as the population ages and the prevalence of obesity and associated conditions increases.

Adequate funding is needed to effectively address the challenges of reducing the burden and disparities of chronic diseases among Missouri residents.

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<sup>6</sup> Trust for America's Health. Prevention for a healthier America: investments in disease prevention yield significant savings, stronger communities. Available from: [www.healthyamericans.org/reports/prevention08](http://www.healthyamericans.org/reports/prevention08).