

Chronic Disease Prevention: The Key to Improving Life and Healthcare

A White Paper Prepared by The National Association of Chronic Disease Directors

We hear much discussion about healthcare coverage and costs associated with insurance, pharmaceuticals, surgical interventions, and related issues. All of these are important, but leave out perhaps the most important topic – prevention.

Think about this for a minute – does it make more sense to pay for regular oil changes on your vehicle (\$50-\$75) every few thousand miles – or pay to replace your engine (\$2,500-\$4,500).¹ There is a growing desperate need to understand this comparison and public health chronic disease prevention programs are in place to be sure these messages are understood.²

Some Facts to Consider

The urgency of addressing chronic disease can't be stressed enough – these conditions account for over 86% of our healthcare costs, and much of this is preventable.³ If invested in properly, we could spend \$240 now on prevention instead of \$1,000 in the future on reactive healthcare costs for chronic disease. Healthcare costs are only the tip of the iceberg. Absenteeism (time taken off work due to illness or other reasons) and presenteeism (attending work despite an illness that prevents full functioning) in school and at work take a significant toll on family life, the ability to plan for the future, and our global economic competitiveness.⁴

Almost every American family is adversely affected by chronic diseases in one way or another through the death of a loved one or due to family members with lifelong illness, disability, or compromised quality of life. These burdens affect society on both the personal and community level, not just in the physical disease, but also in the financial burden that comes with the cost of chronic disease.⁵

At a time when our investments in housing, education, and medical care have outstripped inflation, our investment in prevention has lagged far behind. Today, we fund prevention efforts at approximately the same amount we did in 2001, effectively a funding cut of 22.92% when inflation is considered.

To summarize and focus – let's consider a reality check:

- As of 2014, 60% of American adults had at least one chronic condition, and 42% had more than one chronic condition.⁶
- Chronic diseases such as [heart disease](#), [cancer](#), and [diabetes](#) are the leading causes of death and disability in the United States. Seven in 10 leading causes of death in 2017 were due to chronic diseases, totaling about 1.75 million American deaths.^{7,8}

- More than 86% of the nation's healthcare costs relate to chronic diseases, and most of those costs are preventable.^{9,10}
- The projected prevalence of any cardiovascular disease in the United States will increase to over 45% by the year 2035.¹¹
- Risk factors such as poor diet, lack of activity, alcohol abuse, and ignoring medical advice all contribute disproportionately to this crisis.¹²
- 27% of young adults are too overweight to serve in the military.¹³

The Answer is Clear: Change is Overdue

We have created a culture where the healthy choice often is the hardest choice at every stage of our lives. We know we need to eat better, be more active, and avoid tobacco – but we're cutting back on recess and physical education, cutting back on the ability to be active in our everyday lives, and tobacco is still widely available, especially to children.^{14,15,16,17,18}

The CDC estimates that modifying three risk factors – poor diet, lack of physical activity, and smoking – can prevent 80% of heart disease and stroke, 80% of type 2 diabetes, and 40% of cancer. Good, healthy food options are more available today – but not everywhere – and not for everyone. If we are serious about improving the lives of Americans, having an impact on healthcare costs, reforming our system, and reducing disparities, we need to invest in a meaningful way in prevention.^{19,20,21}

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Bringing Chronic Disease Prevention Up to Scale

Today, only a fraction of 1% of federal healthcare investment goes to prevention – this is a crime when we know better. Even with this limited funding, states are implementing diverse, cost-effective strategies that work for: early detection of cancer, prevention and control of diabetes, reduction of heart disease and stroke, reduction of the disability associated with all these conditions, and arthritis as well (chronicdisease.org). To continue this work, there needs to be a substantial investment in CDC's National Center for Chronic Disease Prevention and Health Promotion.

State Chronic Disease Directors and the State Health Agencies where they work have a unique role in coordinating activity and steering resources to communities most in need and in creating linkages across systems with healthcare providers, insurers, educators, community organizations, and others.

States effectively maximize federal investments and ensure the most efficient mobilization of local organizations, while at the same time avoiding any duplication.

The minimal investment in chronic disease prevention and control through CDC, CDC-supported state and community-based programs, and states, individually, has resulted in developing an extensive portfolio of strategies that work. These programs are not scalable across the nation with current financial resources. This is the largest barrier we are facing with regard to preventing expensive chronic diseases.

The federal investment needs to be such that **every state** has a cadre of evidence-based programs to fight chronic disease including:

- Early Detection of Cancer and Cancer Survivorship Services
- Diabetes Prevention and Control (including prevention of related kidney disease)
- Heart Disease and Stroke Prevention
- Healthy Community Programs (REACH, others)
- Tobacco Prevention and Control
- Alzheimer's Disease Program (Healthy Brain Initiative)
- Arthritis Prevention and Control
- School Health and Oral Health Programs

Chronic Disease Prevention and Control Programs Save Lives and Money

Some examples:

OBESITY

Illinois

The Illinois Department of Public Health worked with five Illinois counties in suburban Chicago to improve healthy eating behaviors through implementation and adoption of food service guidelines at worksites. The tailored nutrition standards impacted more than 1,800 local health department employees and community members attending local health department-sponsored events.

Pennsylvania

The [Pennsylvania Department of Health](#) partnered with The Food Trust to train community partners how to work with store owners to stock and promote healthier food and beverages. As a result, more than 150 stores serving 890,000 residents in 10 of the most populated cities in Pennsylvania now offer healthier food and beverage options.

DIABETES

Kentucky

From 2013-2018, the Kentucky Department for Public Health expanded the National Diabetes Prevention Program (National DPP) by: 1) increasing the number of CDC-recognized program delivery organizations in the state from two to 54; 2) increasing geographic coverage from two metropolitan counties to an additional 86 rural counties; 3) increasing access to in-person programs for 87% of the population compared to only 24% in 2012; and 4) increasing the number of employers offering the National DPP lifestyle change program as a covered health benefit for their employees from zero to 33. All public employees and adult dependents now are covered.

Montana

The Eastern Montana Telemedicine Network launched a Diabetes Self-Management Education and Support (DSMES) initiative that included a telehealth component in five rural clinics where certified diabetes educators served on a team of health professionals to deliver both DSMES and clinical care. Amongst participants, the practice of checking blood glucose correctly for six months improved from 31% at baseline to 61% after the intervention, and healthy diet improved from 8% to 29%. Additionally, 97% of the group stated that telehealth was a useful tool for delivering DSMES. The number of DSMES sites across the state increased to 36, with 10 programs offering a telehealth option.

Michigan

Michigan has implemented systems and practices to improve care and enhance prevention of risk factors like high blood pressure for tens of thousands of people. The Michigan Department of Health and Human Services partnered with a primary care association and others to improve the quality of heart care. In four years the state reported:

- All patients served by federally qualified health centers (FQHCs) are covered by electronic health records that include criteria for treating and improving care of high blood pressure.
- 87% of FQHCs were covered by policies promoting team-based care to treat high blood pressure, up from 40% in just four years.
- A project targeting the African-American community in Muskegon Heights saw 2,500 clients initiate a blood pressure self-management plan and referred nearly 4,000 adults with high blood pressure to community resources for treatment.

Wisconsin

The Wisconsin Primary Healthcare Association partnered with the Chronic Disease Quality Improvement Project and the Wisconsin Collaborative for Healthcare Quality to implement new health information technology systems that improve workflows for the identification and care of patients with undiagnosed high blood pressure. These three key partners saw a collective 6% increase in patients with controlled blood pressure from 2013–2018. Additional CDC-supported activities have generated significant benefits for Wisconsin residents.

- In 2017, 94.5% of reporting healthcare systems used electronic health records appropriate for treating high blood pressure. This represents a nearly 10.4% increase during the course of the project and surpasses the prior benchmark.
- By 2017, 71% of health systems had policies to encourage multidisciplinary team-based approaches, up from 52% earlier.

CANCER

New York

New York state provided administrative support and tailored education on quality improvement, cancer screening, and data improvement to eight primary care practices serving low-income, uninsured, racial and ethnic minority, and geographically isolated women. This was done to address system-level barriers to increase breast, cervical, and colorectal cancer screening rates. After five years, the practices increased their screening rates by more than 10%. The most successful practices were those that implemented patient and provider reminder systems, policy changes, pre-office visit planning, provider education, and mobile mammography van services.

West Virginia

Wheeling Health Right raised its colorectal cancer screening rate by 58 percentage points in two years. The CDC-funded West Virginia Program to Increase Colorectal Cancer Screening made the following changes: 1) changing to a more patient-friendly screening method; 2) reviewing and updating patient charts with screening data; and 3) reaching out with patient reminders. These changes raised the clinic's screening rate from 9% to 53% in 2017, and then to more than 67% in 2018.

ALZHEIMER'S

Colorado

To develop a dementia-competent workforce, the Colorado Department of Health and the Environment partnered with the Alzheimer's Association Colorado Chapter to deliver its *Approaching Alzheimer's: First Responder Training Program*. The free, in-person program reached all 11 of Colorado's Regional Emergency and Trauma Advisory Councils. The training helps first responders serve people with Alzheimer's in situations involving wandering, disasters or other emergency situations, abuse or neglect, "shoplifting" because they forgot to pay, and driving.

Utah

A collaboration involving five Utah health organizations—one of which surveyed Utah's healthcare providers—resulted in two validated cognitive assessment tools physicians currently are using during Medicare wellness visits. The assessment tools are the Mini-Cog, followed by the Montreal Cognitive Assessment tool. The Utah project deepened the understanding of some challenges physicians face in assessing cognition, including uncertainty about which validated tool to use.

The Time is Now

America is on the precipice of great challenges and great opportunities; we need to invest in a meaningful way in prevention now, before it is too late and we become too ill to invest. The place to start is at CDC, with the state-based programs mentioned above. An additional investment is needed this year with an eye toward an additional \$1.5 billion in the coming years that would allow the programs listed above to have a presence in every state and for states to support activity in many communities.

Trust for America's Health estimates that an investment of \$10 per person per year in community-based programs tackling physical inactivity, poor nutrition, and smoking could yield more than \$16 billion in medical cost savings annually within five years. This savings represents a remarkable return of \$5.60 for every dollar spent, without considering the additional gains in worker productivity, reduced absenteeism at work and school, and enhanced quality of life.²¹

Public health programs improve care, prevent disease, and prevent complications of disease. An investment in chronic disease prevention and control programs saves lives, improves quality of life, and saves healthcare dollars.

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