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Commentary on Chronic Disease Prevention in the US in 2022

David Hoffman[1-4]*

[1]Associate Professor, Maria College, USA
[2]Clinical Professor, UAlbany School of Public Health, USA
[3]Adjunct Assistant Professor, Albany Medical College, Alden March Bioethics Institute, USA
[4]Adjunct Associate Professor, Albany College of Pharmacy and Health Sciences, USA

***Corresponding author:** David P Hoffman, DPS, CCE, Clinical Professor, UAlbany School of Public Health, USA, Tel: 5183667544; Email: dhoffman@albany.edu

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Abbreviations: DPP: Diabetes Prevention Program; MCC: multiple chronic conditions; CDC: Control and Prevention.

Commentary

We live in a time when our knowledge and our actions don't always match up. In this case, the knowledge of the value of preventing disease and disability far surpasses our investment in public education, provider incentives, and public health infrastructure that could support our taking advantage of that knowledge. There is some good news on this front. This year the federal government approved funding for the Preventive Health and Health Services Block Grant and a new program for Public Health Infrastructure.

The COVID-19 pandemic exposed the inadequacies of the current public health system and demonstrated that flexible, sustainable investments in public health are critical. State, local, territorial, and federal public health partners need long-term strategies and investments, beginning at the Centers for Disease Control and Prevention (CDC).

Annual funding is needed to turn the tide on the nation's public health infrastructure by providing a stable source of risk factor and disease prevention funding so that the nation's state, local, territorial, and federal public health agencies are better equipped to coordinate together to save lives.

Chronic Disease Workforce: Human and Economic Costs

Chronic disease affects health and quality of life. Still, it also is a significant driver of healthcare costs and has a related impact on business, such as absenteeism and presenteeism. Nearly 60% of adult Americans have at least one chronic disease. Chronic conditions like diabetes, cancer, and cardiovascular disease are the leading causes of death in the United States. More than two-thirds of all deaths are caused by one or more of five chronic diseases: heart disease, cancer, stroke, chronic obstructive pulmonary disease, and diabetes.

According to the CDC, 90% of the nation's $3.8 trillion per year healthcare costs can be attributed to people with chronic diseases and mental health conditions [1]. A recent Partnership to Fight Chronic Disease publication determined that treatment of the seven most common chronic diseases, coupled with productivity losses, will cost the U.S. economy $2 trillion dollars annually - $8,600 per person - by 2030. The same analysis estimates that reductions in unhealthy behaviors could save 1,100,000 lives per year [2].

In terms of public insurance, treatment of chronic disease constitutes a significant proportion of spending and improving prevention would result in significant cost savings. For example, increasing the colorectal cancer screening rate to 70% could reduce Medicare spending by $14 billion in 2050 [3].

Chronic diseases also impact the affordability of private healthcare coverage. Since 2000, health insurance premiums for employer-sponsored family coverage have increased by 87%. Healthcare costs for people with a chronic condition average $6,032 annually-five times higher than those without such a condition [4].

About 40% of American adults have multiple chronic conditions (MCC), and evidence is growing that one chronic illness has a negative impact on the risk of developing others, particularly as people age. The nation's aging population coupled with existing risk factors (e.g., tobacco use, poor nutrition, and lack of physical activity) led us to the conclusion that these problems will grow if they are not effectively addressed now [1].

Much of Chronic Disease, Complications of Chronic Disease, and Related Costs are Preventable

As the American population ages and more people are categorized as "high risk" for multiple chronic diseases, it is essential to recognize that an individual's choices have an impact. Yet, where an individual lives, attends school, and works impacts health too. Risky behaviors such as poor diet, lack of physical activity, tobacco use, and ignoring known risks like family history result in a dramatic increase in chronic conditions. Many routinely miss or ignore their body's warnings about the onset of a serious chronic disease or are unable to receive preventive care due to social or economic barriers. The result is poor collective health quality in the country that spends much more on healthcare than anywhere else. We also know there are strategies and interventions that can make a difference.
The following are some examples of what has been proven to work:

Diabetes [5]

- Healthcare costs for a person with diabetes are 2.3 times higher when compared to someone without the disease.
- Total costs of diagnosed diabetes in the United States equaled $327 billion in 2017. This includes $237 billion in direct medical costs and $90 billion in lost economic productivity.
- With a focus on pre-diabetes and risk factors, the Diabetes Prevention Program (DPP) provides education for improved diabetes management and has been proven to improve well-being and reduce costs.
- State Public Health Diabetes Prevention and Control Programs are essential elements in implementing and disseminating these strategies.

Heart Disease and Stroke [6]

- Almost half of all American adults have high blood pressure.
- Cardiovascular disease is responsible for one in three deaths - 859,000 people - in the
- United States.
- Heart disease and stroke are responsible for $216 billion in healthcare system costs and $147 billion in lost job productivity.
- State Public Health Heart Disease and Stroke Prevention Programs provide a critical link between population-based efforts to reduce risk, community prevention efforts, and clinical care.

Cancer [8]

- Colon cancer stage 4 treatments are three times more expensive than stage 1 treatment costs.7
- Public health early detection programs for breast and cervical cancer have been responsible for identifying thousands of cancers in the early stages when treatment is more effective and less expensive.
- State Public Health Breast and Cervical Cancer
- Screening and Education efforts have been proven to increase screening rates for at-risk populations and often the entire population. The program has increased breast and cervical cancer screening by serving more than five million women with a focus on the medically underserved especially Black, Latinx, and American Indian communities [8].

Alzheimer's disease [9]

- Early detection, planning, and comprehensive caregiver support have been shown to delay institutional placement for people with Alzheimer's disease by 1.5 years –while maintaining dignity, safety, and caregiver well-being.
- The cost differential for families and home and community-based care systems vs. nursing home placement varies from state to state but is substantial everywhere.
- The Lancet Commission, echoed by the U.S. National Plan, now points out that up to
- 40% of the risk for Alzheimer's and other dementias are preventable or can be delayed. We need to make this common knowledge [10].
- The National Action Plan to Address Alzheimer's Disease and accompanying recommendations call for a state-led agency to assure coordination of evidence-based high-quality services for people with dementia and their caregivers. This is consistent with the National Association of Chronic Disease Directors' Healthy Aging Council recommendations. There are clear examples of strategies that improve quality of life and reduce system costs. Resources should back up the proposal for state coordination of these efforts to implement and disseminate proven strategies.

Multiple Chronic Conditions [11]

- Those with MCC have worse health, use more health services, and spend more on healthcare. These trends have been stable since 2008.
- Individuals with MCC have greater difficulties with

activities of daily life and other functions that are important for maintaining independence.

- State Public Health Chronic Disease Prevention and Control Programs, especially those that focus on common risk factors such as nutrition and physical activity, tobacco use, and related behaviors are a vital link to improving our nation's health. Programs focusing on age groups (e.g., childhood obesity prevention, youth tobacco prevention, and senior physical activity programs) are needed to serve as an adjunct to clinical medicine. These programs provide the venues and opportunities to help make the healthy choice the easy choice and reinforce healthy messages provided during clinical care where people live, go to school, and work. Imagine the difference between hearing "you should eat better and get more exercise" from one's doctor once a year versus being in communities where healthy foods and opportunities for physical activity are the norm and part of one's daily life.
- Health Affairs has noted that a 10% increase in public health spending would yield a reduced mortality rate across all causes, and a higher reduction in heart disease, diabetes, and cancer [12].

The Growing Health Debt

One of the most troubling and significant aspects of the current pandemic is the presence of growing health debt. The health debt is the accumulated impact of changes in health behaviors during the pandemic that will have long-term negative effects on health [13].

These changes in health behaviors, including missed preventive screenings, delayed treatment of existing diseases, forgone chronic disease management activities, and changes in health behaviors that have a negative impact on health (for example, increased alcohol consumption and reduced physical activity) have created growing health debt that will come due soon, especially in those with multiple chronic conditions.

This debt likely will be paid most dearly by those who can least afford the outcome: the uninsured, and those who have lacked access to healthcare and personal resources for prevention (safe places to exercise, healthy foods, time for attention to health habits).

Bringing Resources up to Scale

Today, only a tiny fraction of the United States' healthcare investment supports prevention and health promotion. 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, and arthritis as well. Substantial investment in the CDC, State Health Departments, and HHS agencies must be made for a real impact.

Two primary examples are in the beginning of this commentary the Preventive Health and Health Services Block Grant and Public Health Infrastructure Supplemental Funding. Investment needs to be such that every state in America has a full complement of evidence-based programs to promote health and fight chronic disease and the necessary resources to coordinate these programs with related activities (Medicaid, CHIP, exchanges, etc.) [14].

These programs must include resources for every state to address:

- Public Health Infrastructure for critical aspects like public awareness, education and screening/intervention programs, and epidemiology
- Physical Activity and Nutrition public health programs to improve care, prevent disease, and prevent complications (currently in only 16 states)
- Early Detection of Cancer and Cancer Survivorship Services
- Diabetes Prevention and Control (including prevention of kidney disease)
- Heart Disease and Stroke Prevention
- Tobacco Prevention and Control
- Arthritis Prevention and Control
- School Health and Oral Health Programs
- Healthy Aging -including Alzheimer's disease
- Healthy Community Programs (ACHIEVE, REACH, others)

Many routinely miss or ignore their body's warnings about the onset of a serious chronic disease or are unable to receive preventive care due to social or economic barriers. The result is poor collective health quality in the country that spends much more on healthcare than anywhere else. We also know there are strategies and interventions that can make a difference.

Implications

An investment in chronic disease prevention and control programs will save lives, improve the quality of life, and save healthcare dollars. These investments are consistent with ethical principles including Beneficence (aiming to do good for all); Non-Maleficence (First doing no harm); Autonomy (individual decision making to a point it doesn't negatively impact others); and Justice (Fairness) especially regarding access. These principles help us to see that we must acknowledge the science and knowledge we've gained; avoid preventable disease and suffering when possible; and share what we know widely to support a healthy population who can live longer, healthier lives.

We are all in this together, and we all benefit when we aim to do good for all. Further, the clarity of purpose with these potential investments shows us that when policymakers make these investments, they reflect the value of prevention and the human price paid when prevention is ignored. Above is a summary of evidence on the opportunities for prevention to reduce the human price paid for chronic diseases.

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