



Chronic Disease Prevention: An Important Key to Improving Life and Healthcare Systems Today

Hoffman D^{1,2,3*} and Mertzluft J⁴

¹Clinical Professor, UAlbany School of Public Health, USA

²Adjunct Assistant Professor, Albany Medical College, Alden March Bioethics Institute, USA

³Adjunct Associate Professor, Albany College of Pharmacy and Health Sciences, USA

⁴Assistant Director of Fitness and Wellness, University at Albany, jmertzluft@albany.edu

Mini Review

Volume 5 Issue 4

Received Date: December 07, 2022

Published Date: December 20, 2022

DOI: 10.23880/abca-16000248

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

Abstract

News about crisis in healthcare pointing to workforce shortages, ambulance diversion and delays on entry to emergency rooms, closing floors while demand for beds increases, long delays for appointments in primary and specialty care, and shortages of supplies and medications all lead to proposed solutions for each issue. These are all important, but incomplete without addressing the proven opportunities for prevention of chronic conditions and risk factors that lead to them. When we consider what could be gained by preventing many cases of overweight and obesity, reducing stress on our bodies through better diet and more activity, better outcomes through screening for common cancers and other public health strategies, we can see clearly that investing in these efforts on a national basis must be part of the solution.

Introduction

Today we are bombarded with disturbing news about our healthcare system. These include waits of months for an initial appointment with a specialist for newly diagnosed heart disease, diabetes, potential cancers, or mental health issues. They also terrifyingly include waits in hospital parking lots for emergency ambulance patients, sometimes for hours, due to overcrowding and staffing issues. These are system issues that must be addressed, but we would be sorely misled if that was all we corrected. This is absolutely the time to revisit the issue of improving our health generally through better lifestyle choices and enhancing efforts for prevention of chronic conditions that all too often turn critical. If we make these changes we won't eliminate the issues we mentioned, but we can reduce the impact they have on our lives and health in both the short and long terms.

We will revisit and review some of these critical areas and how they impact our decision making and health systems.

We hear much discussion about healthcare coverage and costs associated with workforce shortages, insurance, pharmaceuticals, surgical interventions, and related issues [1]. All of these are important, but leave out perhaps the most important topic - prevention. 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:

- 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]. Chronic Disease Prevention: The Key to Improving Life and Healthcare 2020 [2].
- 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].

We need to face reality - if we don't invest in prevention now many of us will die sooner, after living lives with serious chronic conditions that dramatically alter available lifestyle. 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, specially to children [14-18].

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 [19-23].

Investing in Chronic Disease Prevention Today

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.

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.

Chronic Disease Prevention: The Key to Improving Life and Healthcare [3].

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. Another advantage of these programs is the routine data collection, evaluation and analysis leads to future improvements and better long term outcomes. 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:

- Healthy Nutrition, Increasing Physical Activity and Obesity Prevention
- 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

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 year that would allow the programs listed above to have a presence in every state and for states to support activity in many communities. Primary examples include fully funding the Healthy Nutrition, Increasing Physical Activity and Obesity Prevention Programs -currently partially funded in only 16 states, these should be programs with initiatives in communities across the nation. Expansion of other key programs to reach the entire nation should follow closely behind. 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 [22,23].

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. We are not in any way advocating not addressing key issues related to healthcare access, workforce, capacity, and the other related issues we hear much about regularly – on the contrary these are essential and must be addressed. We are simply pointing out that missing the opportunity to also fully fund prevention programs effectively sentences us to worse health and outcomes, more expensive healthcare, and shorter lives.

The Lens of Bioethics

When we look at this from the perspective of bioethics, focused on “doing the right thing”, it is crystal clear that when we're addressing the multiple related crisis in healthcare, we must invest in the prevention of chronic conditions. This respects a person's right to be fully informed when exercising autonomy, furthers the intent to do good called for by beneficence, avoids untold harm, and increases fairness and just use of resources. This is required for all the practical reasons mentioned above, also, and maybe most importantly because it is the right thing to do.

References

1. Johnson SR (2022) Staff Shortages Choking U.S. Health Care System. Is Anyone Here a Doctor?.
2. Schneider EC, Sarnak DO, Squires D, Shah A, Doty MM (2017) Mirror, Mirror 2017: International Comparison Reflects Flaws and Opportunities for Better U.S. Health Care. The Commonwealth Fund.
3. Health expenditures (2022) Centers for Disease Control and Prevention.
4. NHE fact sheet (2021) Centers for Medicare and Medicaid Services.
5. Barnett JC, Berchick ER (2017) Health Insurance Coverage in the United States: 2016. United States Census Bureau Report Number, pp: 60-260.
6. Buttorff C, Ruder T, Baurman M (2017) Multiple Chronic Conditions in the United States. RAND Corporation, pp: 1-33.
7. CDS. National Center for Chronic Disease Prevention and Health Promotion. About Chronic Diseases.
8. CDC (2022) National Center for Health Statistics. Leading Causes of Death.
9. Chronic disease overview (2017) Centers for Disease Control and Prevention.
10. Chronic disease prevention (2011) Centers for Disease Control and Prevention.
11. Facts and statistics (2017) U.S. Department of Health & Human Services.
12. Shield KD, Parry C, Rehm J (2014) Chronic diseases and conditions related to alcohol use. *Alcohol Res* 35(2): 155-171.

13. CDC's Work to Reduce Childhood Obesity by Connecting Families, Clinics, and Communities (2018) Centers for Disease Control and Prevention.
14. Healthier Students Are Better Learners (2017) Centers for Disease Control and Prevention.
15. Healthy Kids. Successful Students. Stronger Communities (2018) Centers for Disease Control and Prevention, pp: 1-32.
16. US Opioid Crisis Addressing Maternal and Infant Health (2018) Centers for Disease Control and Prevention.
17. Zzzzzz...Sleepy Kids-Most Students Need More Sleep. Centers for Disease Control and Prevention.
18. Centers for Disease Control and Prevention (2018) Talk with Your Teen About E-cigarettes: A Tip Sheet for Parents. Know the Risks E-Cigarettes & Young People pp: 1-4.
19. Making Alzheimer's Our Next Public Health Success Story. Centers for Disease Control and Prevention, pp: 1-2.
20. Hoffman D (2019) Public Health Responding to the Epidemic of Alzheimer's Disease. Ageing Sci 2. Ment Health Stud Volume 3(3): 1-2.
21. Hoffman D (2022) Risk Reduction for Alzheimer's Disease, Setting a Goal for All of Us: The Science and the Time are Right to Incorporate This into Public Awareness, Public Health and Healthcare Practice. Ann Bioethics Clin App 5(4): 000244.
22. The Power of Prevention: Chronic disease . . . the public health challenge of the 21st century (2009) National Center for Chronic Disease Prevention and Health Promotion, pp: 1-18.
23. Hoffman D (2022) Commentary on Chronic Disease Prevention in the US in 2022. Ann Bioethics Clin App 5(2): 000231.

