

# Public Health 2030: Chronic Disease Driver Forecasts

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## Forecast Summaries

### *Expectable: Chronic disease epidemic continues its upward trajectory*

- Tobacco use and cancer incidence rates drop
- Aging yields higher rates of dementia and prostate and breast cancer
- Highest-risk populations cannot access new treatments for chronic disease
- Behavioral health programs show varied success/failure rates
- Primary prevention efforts are met by various obstacles, including legal and public relations battles
- About 48 percent (171 million) of U.S. residents live with one or more chronic conditions, i.e., 2% or 30 million people more since 2010
- National health spending accounts for 22 percent of GDP (compared to 18 percent in 2010)

### *Challenging: Chronic disease epidemic escalates*

- Improved access to care leads to substantial increase in diagnosed chronic diseases. Widespread provider shortages and inconsistent quality of self-management support fail to effectively control and prevent chronic disease
- A major economic downturn worsens psychological and behavioral health; smoking, obesity, heart disease, cancers, and diabetes become more prevalent among both youth and elders
- Health disparities increase and low-income and minority groups are blamed for their health problems and scapegoated for overburdening the health care system
- Some communities experience successes in improving behavioral and community health, but most struggle to replicate this success
- Over half the U.S. population lives with one or more chronic conditions, and all states have obesity rates above 50 percent
- Cuts in Medicare and Medicaid reduce health spending to 17 percent of GDP as many in the U.S. forego care

### *Aspirational: Widespread conquering and prevention of chronic disease*

- Communities address social determinants of health, prevention, and behavioral health; Community Centered Health Homes are prominent
- Accountable Care Communities (ACCs) expand on the idea of the Accountable Care Organization (ACO) to coordinate across a range of sectors, including employment, housing, transportation, and education
- “My code is your code”: apps are tailored and reworked to engage the public in promoting personal and community wellbeing among neighbors and localities; widespread use of personalized health informatics, games, and digital agents to assess and change behavior
- People and groups increasingly advocate for healthier community environments
- Less than 40 percent of the U.S. population is living with one or more chronic conditions

## Driver Background

At the beginning of the twentieth century, infectious diseases were the leading cause of death in the U.S. Public health organizations, services, and leadership therefore initially concentrated on controlling infectious disease, safety, and improving maternal and child health. As the nation thrived, however, chronic diseases – including cancer, cardiovascular diseases, diabetes, and stroke – rose to become the leading causes of death in the second half of the last century. Public health thus expanded its scope to include surveillance, research, and interventions to prevent and control chronic diseases, including:

- Research and funding for primary prevention of chronic diseases. These include the CDC Community Transformation Grants program; passage of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act and the Healthy, Hunger-Free Kids Act; and establishment of the Prevention and Public Health Fund through the Patient Protection and Affordable Care Act.
- Research, surveillance, education, control, and prevention programs and legislation addressing specific chronic diseases and risk factors. These include the establishment of federal entities and services such as the National Cancer Institute and the National Heart, Lung and Blood Institute's National High Blood Pressure Education Program, and the CDC Behavioral Risk Factor Surveillance System; comprehensive campaigns to reduce poor individual health behaviors through counter-advertising, legislation, and increased taxation of unhealthy products (e.g., launch of the First Lady's Let's Move Campaign, release of guidelines for physical activity and nutrition); funding streams; and technical development assistance.
- Health care programs and services helping people manage their chronic conditions. These include the passage of the Patient Protection and Affordable Care Act, which includes newly covered preventive care services and incentives for improved chronic care management.

Despite major progress in reducing chronic diseases and their risk factors during the past decades, demand will grow for the prevention, management, and reduction of chronic disease. The number of Americans with one or more chronic conditions has been forecast to increase by 37 percent by 2030, an increase of 46 million people since 2000. If present trends continue, as many as 10 million people may be living in the U.S. with Alzheimer's disease by 2030, up from 5.4 million in 2012<sup>1</sup>; over 215 million would be obese, up from about 30 percent in 2010<sup>2</sup>; and more than 53 million would be living with diagnosed or undiagnosed diabetes, up from 32 million in 2010<sup>3</sup>. Prevalence trends may likewise continue to rise for arthritis, asthma, cancer, and cardiovascular disease. National health spending

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<sup>1</sup> Executive Summary Progress Report 2006–2011: The CDC Healthy Brain Initiative. [http://www.cdc.gov/aging/pdf/hbisummary\\_508.pdf](http://www.cdc.gov/aging/pdf/hbisummary_508.pdf).

<sup>2</sup> Finkelstein EA, Khavjou OA, Thompson H, Trogon JG, Pan L, Sherry B, Dietz W. Obesity and severe obesity forecasts through 2030. *Am J Prev Med* 2012;42(6):563-70. doi: 10.1016/j.amepre.2011.10.026. <http://www.ncbi.nlm.nih.gov/pubmed/22608371> and [http://www.medpagetoday.com/upload/2012/5/7/AMEPRE\\_33853-stamped2.pdf](http://www.medpagetoday.com/upload/2012/5/7/AMEPRE_33853-stamped2.pdf).

<sup>3</sup> Extrapolation to 2030 based on IAF Diabetes 2025 forecasts. [www.altfutures.org/diabetes2025](http://www.altfutures.org/diabetes2025).

accounted for 18 percent of GDP in 2010 and 85 percent of the nation’s health care dollars are spent on people with chronic conditions.<sup>4,5</sup>

Below we provide three forecasts that differ in how the chronic disease epidemic plays out over the years to 2030. The Alpha forecast represents the expectable or “most likely” future, the Beta forecast envisions challenging possibilities (e.g., what could go wrong), and the Delta forecast represents a visionary or surprisingly successful future.

## Forecast

### *Expectable Forecast*

Over the years to 2030, the prevalence of chronic diseases, complications, and risk factors continued to climb. Following health care reform over the 2010s, improved access and newly covered prevention services, as well as healthy eating and active living initiatives and generally improving economic conditions, contributed to better health for many. Tobacco use continued to drop, as did cancer incidence rates. However, the aging population made breast and prostate cancers more prevalent, as well as dementia. New treatments delayed the onset and slowed the progression of chronic disease, including Alzheimer’s and many cancers. While this enabled better treatment at lower cost, it did not reach populations at highest risk for disease. The success of programs that focused on individual behavioral risk factors contributing to chronic disease also varied among populations, communities, and states. Primary prevention efforts such as removing soda-vending machines from worksites and schools, and placing excise taxes on unhealthy products, often struggled with legal and public relations battles, limited funding and resources, and coordination across multi-sector partners. Yet a string of cities and states reported modest declines in several disease rates by 2025, including childhood obesity. However, the declines were concentrated among higher income, mostly white populations, and did not benefit many minority children.

In 2030, about 48 percent or 171 million residents are living with one or more chronic conditions. This includes 10 million people living with Alzheimer’s disease, more than 60 million living with diagnosed or undiagnosed diabetes, and more than 40 percent of the population considered obese. Over the years to 2030, the growing number of people with chronic diseases and risk factors seeking insured care and the

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<sup>4</sup> Extrapolation to 2030 based on Table 1, National Health Expenditures and Selected Economic Indicators, Levels and Annual Percent Change: Calendar Years 2006-2021. National Health Expenditure Projections 2011-2021. Available at <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/Proj2011PDF.pdf>.

<sup>5</sup> Anderson, Gerard F. Chronic care: making the case for ongoing care. Robert Wood Johnson Foundation, 2010. <http://www.rwjf.org/content/rwjf/en/research-publications/find-rwjf-research/2010/01/chronic-care.html>

aging cohort of Baby Boomers also combined to drive up total health spending, straining state and local chronic disease resources. In 2030, national health spending accounts for 22% of GDP.

### *Challenging Forecast*

Over the years to 2030, the prevalence of chronic diseases, complications and risk factors escalated. The changes brought about by the Patient Protection and Affordable Care Act did little to improve the health of the nation. In fact, improved care and access – in addition to an aging population – led to a substantial increase in the prevalence of diagnosed chronic diseases. Furthermore, widespread provider shortages and varying quality of self-management programs left many patients struggling with preventive care and management of their particular constellation of multiple chronic conditions. A major economic downturn in the early 2020s further exacerbated the chronic disease epidemic as psychological and behavioral health worsened. Smoking, heart disease, cancers, and diabetes all became more prevalent, with incidence rates increasing for youth as well as for elders.

Although remarkable advances in science offered new treatments that could decisively address many chronic diseases, the high cost of these technologies fueled the growing gulf between the “haves” and the “have-nots.” In fact, poor and minority populations with the highest rates of risk factors and chronic diseases were often blamed for their own ill health. Sensationalistic media and misleading measures of community risk fed into an “us versus them” narrative that stigmatized the sick and thus further marginalized poor and minority populations. Some ethnic populations were scapegoated for overburdening the health system.

Despite the aggregate national decline in health, however, some successes were found in communities that had been explicitly working on changing the environmental cues or “default choices” to routinely prompt healthier choices and shift population health. However, many continued to have a long way to go. Most communities struggled with implementing and maintaining similar initiatives, policies, and research-tested programs in a different setting, political circumstances, or population.

In 2030, the combination of aging and disease is an accepted norm for many older Americans. Childhood obesity has cut several years off the lifespan of the average child. More than 50 percent of the U.S. population is living with one or more chronic conditions. The obesity rate is above 50 percent nationally and in all states. Over the last two decades, national health spending dropped to 17 percent of GDP, only because of cuts in Medicare and Medicaid payment levels and because many Americans decided to forgo care or to find care overseas. Thus in 2030, despite its past successes the field of public health is broadly viewed as a failure.

### *Aspirational Forecast*

In the years following 2014, improved care and access to preventive services slowed down the escalation of complications and improved health for many. By 2020, however, pilots and programs germinating all over the country throughout the 2010s demonstrated that health care providers who went upstream (i.e., tackle sickness at its source) and communities that coordinated care and prevention across a range of sectors including employment, housing, transportation and education were considerably more successful at bending the trajectory of chronic diseases and further reducing local medical costs. Fiscal pressures on employers and state and local governments, brought on by the chronic disease epidemic, prompted most of them by the early 2020s to follow the example of these pilot communities by prioritizing policies that promoted physical activity and improved nutrition, and investing in partnerships for primary prevention. In fact, people voted with their feet for communities that were successfully reducing and preventing chronic diseases. In the face of such population influx, successful communities struggled with maintaining the overall health gains made. It was not, however, until the end-of-life care crisis of a huge Baby Boomer generation – and frequent news accounts of its physical, emotional, and financial tolls on both patients and their caregivers – that public demand grew for nationwide action and investments in healthy aging and primary prevention.

Thus, over the 2020s, better linkages between community systems and health care providers increasingly helped people of all ages who had chronic illnesses receive easy access to networks of evidence-based chronic disease care and healthy aging programs. Community benefit dollars were leveraged as start-up capital for community-owned businesses, building thriving local economies. More and more employers paid their staff to cut commutes and adopted other company policies that promoted physical activity and better nutrition. Cities discovered that farmers' markets and vegetable patches were more than a source of fresh produce and a prevention strategy for obesity. They also alleviated blight, strengthened property values, cultivated a sense of community, promoted entrepreneurship, generated tax revenue, enhanced quality of life and—perhaps most important—shaped people's expectations about eating. In the education sector, most communities adopted improved nutrition and physical exercise guidelines, incorporated health information into the curriculum to improve health literacy, and made schools into community centers by opening playing fields and playgrounds to community use through joint use agreements. Charter schools adopted educational models that combined health and wellness with academic rigor in a peaceful environment. In health care, Patient-Centered Medical Homes evolved to Community-Centered Health Homes that deployed broader primary care teams that coordinated care for the individual, while also analyzing community conditions and health patterns and worked with the communities to improve them. Accountable Care Communities (ACCs) expanded on the idea of the Accountable Care Organization to coordinate across a range of sectors, including employment, housing, transportation, and education.

Fiscal pressures led to the creation of a high-growth market for innovative products and services to improve health and avoid disease. Over the 2020s, more and more people assessed and reflected on

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their risk behaviors and changed them with the help of personalized health informatics, games, and digital agents that drew on clouds of personal and public health data. Cities reworked and tailored apps that engaged the public in promoting personal and community wellbeing. Individuals, families, organizations, and faith groups increasingly advocated for healthier community environments in interactions with legislators, government executives, and the private sector.

In 2030, many states reported substantially lower rates for several chronic diseases than had been projected previously. Although 10 million people are living with Alzheimer's disease, less than 57 million are living with diagnosed or undiagnosed diabetes and less than 40 percent of the population is obese. In all, less than 45 percent of the U.S. population is living with a chronic disease. National health spending has dropped to 15 percent of GDP as more and more people were living in healthy communities. In 2030, most Americans feel a shared responsibility for assuring that people can be healthy where they live, play, work and pray.

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Learn more about the Public Health 2030 project by the Institute for Alternative Futures at [www.altfutures.org/publichealth2030](http://www.altfutures.org/publichealth2030).