



# ACADEMIC PUBLIC HEALTH'S PRIORITIES FOR AMERICA

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Advancing Public Health Education, Science and Practice  
as the Basis of Improving Population Health

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## ASPPH's Priorities: Advancing Public Health Education, Science and Practice as the Basis of Improving Population Health

In the second inaugural address and at the end of the 45th President's first term, which of the following accomplishments will the President describe?

- The Nation has reduced infant mortality by more than half, putting the U.S. ahead of a majority of developed countries for the first time in history.
- The Nation's life expectancy has increased overall and in all population subgroups.
- The latest emerging infection was stopped in its tracks by a reinvigorated public health system now prepared to deal with the unexpected.
- The Nation's public health system has been rebuilt and is staffed by adequate numbers of well-trained professionals and the Nation is prepared for public health emergencies from pandemics to weather disasters. As a result, the American public is more secure than ever.
- With an intense focus on cancer prevention, the Cancer Moonshot has achieved the goal of accomplishing in five years what would have taken ten years in the past – and preventing thousands of deaths from smoking-related diseases.
- All agency and policy decisions, in fields ranging from agriculture to education to urban planning, consider health impacts in decision-making. This focus on upstream and social determinants of health is helping to eliminate health inequities, reduce health care costs, and improve the health and quality of life of all Americans.

The leaders of the Nation's public health schools and programs believe that the President can cite all of these accomplishments by supporting strategic investments that strengthen the Nation's public health infrastructure and global health security, advance prevention science research, train the next generation, and establish policies and systems built on evidence of what supports the best health and that advances a culture of health.

Health is of preeminent importance to all – individuals, families, and communities. It is a critical pathway to well-being and productivity, on both a personal and a societal level, and an engine of current and future economic strength. Ill health, by contrast, drains the public coffers, causes personal and family suffering, weakens communities, reduces productivity, and is a major contributor to social disillusionment.

Public health is *"the science and art of preventing disease, prolonging life and promoting health through organized efforts and informed choices of society, organizations, public and private, communities and individuals."*<sup>1</sup> Prevention is central to public health. Public health primarily operates at the scale of entire communities or populations, an approach that is highly effective, safe, and cost-efficient. Public health is advanced primarily through “upstream” actions such as reducing poverty, assuring high quality education and housing, and protecting the environment. Public health also functions with and through the medical care system, by identifying clinical preventive strategies and studying the effect of medical treatments. The [Association of Schools and Programs of Public Health \(ASPPH\)](#), representing more than 100 [Council on Education for Public Health \(CEPH\)](#)-accredited schools and programs of public health across the U.S., calls on the new Administration to make public health a national priority and advance the research, training, and action necessary to protect and promote health for all our citizens.

### **The Opportunity and the Challenge:**

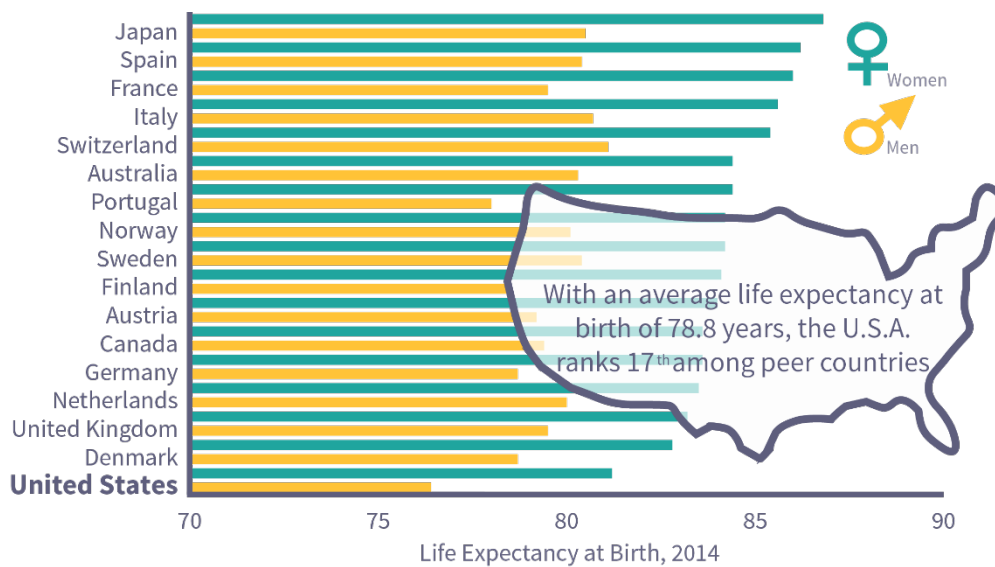
While the lifespan of the American people has increased markedly over the past century, and we have made great strides in clinical care, overall health in the U.S. ranks significantly behind many other developed countries.<sup>2</sup> Moreover, the U.S. population faces growing health challenges: the challenges of obesity, diabetes and other chronic illnesses, mental health, infectious diseases, and the diseases of aging, including Alzheimer’s disease. Large-scale upstream factors, from rising income inequality to climate change, also threaten the public’s health.

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<sup>1</sup> Winslow, Charles-Edward Amory. 1920. "The Untilled Field of Public Health". *Modern Medicine* 2: 183–191. DOI:[10.1126/science.51.1306.23](https://doi.org/10.1126/science.51.1306.23) (Accessed September 1, 2016).

<sup>2</sup> Woolf, SH and Aron, L (editors), *U.S. Health in International Perspective: Shorter Lives, Poorer Health*, Washington: National Research Council (US); Institute of Medicine (US). 2013. Available from URL: [http://www.nap.edu/catalog.php?record\\_id=13497](http://www.nap.edu/catalog.php?record_id=13497) (Accessed September 1, 2016).

Widening disparities in health among Americans contribute to our Nation’s dismal performance in comparison with other high-income countries, where life expectancy and a healthy life span have risen faster. In 1980, the U.S. was in the middle of the pack of 25 peer nations in probability of surviving to age 50. The most recent data indicate that we now have the lowest expectation of reaching age 50 among peer countries—an astonishing fact for a country that sees itself as the greatest country in the world. Our child mortality rate is higher than those of our peers and many middle-income countries. In under 5 mortality, the U.S. ranks 43 among all countries with 7 deaths per 1,000, far worse than countries such as Slovenia, Cyprus, and Cuba, according to UN data. If the health of our people were an Olympic competition, the U.S. would bring home not a single medal.



We achieve these poor results despite spending significantly more dollars per capita on medical care, and a higher proportion of Gross Domestic Product, than any other nation in the world.

America’s poor performance should come as no surprise given

Source: OECD, *Health Statistics 2016*

the Nation’s failure to provide sustained investments in public health and prevention. Because we do not have a sustained commitment to public health, we too often are faced with preventable “public health emergencies” – for example Ebola, opioid abuse, and antimicrobial resistance. Many of these emergencies would be completely avoidable if we had adequate levels of ongoing and steady support for public health efforts. Another cost of our failure to invest in strong prevention programs are the epidemics of chronic diseases – obesity, heart disease, diabetes, and cancer – that are causing health care costs to skyrocket. Yet, the effective budget of the Centers for Disease Control and Prevention has steadily eroded. The FY 2008 appropriation for the CDC was \$6.2 billion and in FY 2016 it was \$6.3 billion (including funds from the Prevention and Public Health Fund)—a substantial decline in real dollar terms. Given inflation and the myriad new challenges facing the CDC, the agency’s budget is woefully inadequate. And given that 53 percent of state health department budgets come from Federal funds, there is no chance that state and local funds can make up for the shortfall. Moreover, a

2015 survey<sup>3</sup> by the National Association of County and City Health Officials (NACCHO) found that 25 percent of local health departments had their budgets cut in the past year alone. Due to budget cuts, since 2008, state and local health departments have collectively lost 51,700 jobs.

By many measures, health in the United States has improved considerably over the past 100 years. The longer lives Americans now live are largely the result of public health achievements such as: high rates of vaccination, control of infectious diseases, reduced smoking, decline in deaths from coronary heart disease and stroke, safer and healthier foods, healthier mothers and babies, increased use of family planning, motor vehicle safety, and safer workplaces. Public health research was fundamental to developing each of these interventions, and to validating their effectiveness once they were implemented. But there is no doubt that our current underinvestment in public health is resulting in lost opportunities to continue this legacy of accomplishment, and reversing some hard-won gains.

Identifying and employing effective public health strategies to confront both familiar and emerging health issues are the most effective, safe, and cost-efficient ways to improve population health while reducing the growing costs of health care. The return on investments in public health is highly favorable, at least four-fold by one estimate.<sup>4</sup> But without a much more ambitious investment in public health science, we will be unable to continue generating that kind of return. While resources are critical, improving the public's health also requires wise public policies that can make an immediate difference in improving the health and quality of the public's lives.

### Public Health Research:

Health research can focus on the individual, as medical research does, or on broader populations, which are the primary target of public health research. These scientific approaches complement and often overlap each other.

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<sup>3</sup> Newman SJ, Ye J, Leep CJ, Hasbrouck L, Zometa C. *Assessment of Staffing, Services, and Partnerships of Local Health Departments — United States, 2015*. MMWR Morb Mortal Wkly Rep 2016;65:646–649. DOI: <http://dx.doi.org/10.15585/mmwr.mm6525a2> (Accessed September 1, 2016).

<sup>4</sup> Trust for America's Health, *Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities*, 2009. Available from URL: <http://healthyamericans.org/reports/prevention08/Prevention08.pdf> (Accessed September 1, 2016).

Public health research goes beyond identifying what makes us sick; it also includes the discovery of factors that promote wellness. It tests interventions to see which solutions work best in specific subpopulations, in entire communities, and across the nation. Public health research tracks health trends (including disease outbreaks) to identify the need for action and to employ data and evidence to help guide resource allocations. Public health research may focus on a number of levels: individual and family behavior, organizations, social or community settings, the environment, as well as the clinical setting. It includes the scientific study of the organized societal response to diseases and risk factors. In short, public health science is in essence translational research that includes a number of disciplines and is focused on bringing scientific discoveries from the bench to communities, with the goal of promoting better health for all.

Taken together, the many dimensions of public health science point the way to new policies, health system approaches, and community-based and clinical strategies that improve health, often very cost-effectively.

### **The Vital Interrelationship of Public Health Research, Practice and Education:**

The National Academy of Medicine recommends investing both in next-stage public health science and in opportunities to translate new knowledge into practice.<sup>5</sup> The new generation of trained researchers who will drive us forward will emerge from the Nation's public health schools and programs. Academic public health was created a century ago with the mission to train scientists and practitioners in "hygiene, preventive medicine and public health, the advancement of these subjects," and to further "the whole body of knowledge and its application relating to the preservation and improvement of health of individuals and of the community and to the prevention of disease." Building on this visionary call, the science of prevention and preserving health was developed under the leadership of academic public health.

Fast forward to the 21st century, when we urgently need academic public health to advance our scientific capabilities, from basic biological knowledge about the mechanisms of disease to understanding what keeps populations healthy. Schools and programs of public health are essential to working with national and local partners to translate research into practice, to training a nimble workforce prepared to both meet emerging public health challenges and to advance public health science discoveries into meaningful policy.

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<sup>5</sup> Institute of Medicine, *For the Public's Health: Investing in a Healthier Future*, Washington: National Academy Press, 2011. Available from URL: [http://www.nap.edu/catalog.php?record\\_id=13268](http://www.nap.edu/catalog.php?record_id=13268) (Accessed September 1, 2016).

## ASPPH's Specific Priorities for the New Administration

The new Administration will have an unparalleled opportunity to create a strong public health system built on a shared vision and of mechanisms for collaboration among local, state, tribal, territorial and Federal governmental agencies, as well as academic, community, corporate and private partners. All of these players should be engaged in the priority areas identified by ASPPH to protect and promote health at the population level.

### **Priority One: Ensure every American has the opportunity for a healthy life through initiatives that promote health, including mental health, and that:**

- **Prevent disease, injury, and disability.**
- **Integrate affordable, quality medical care with public health.**
- **Eliminate health inequities and promote social justice.**

Prevent disease, injury, and disability, focusing on evidence-based interventions: ASPPH believes that much higher priority should be given to prevention research and practice. The root causes of much disease, injury, and disability lie with social and environmental determinants within communities that need to be addressed. The Federal government needs to provide leadership by identifying key metrics that should be the target for health improvements in the U.S. These should include metrics of health, such as infant mortality, obesity rates, and injury rates, as well as metrics reflecting upstream factors critical to health, such as socioeconomic status and environmental quality. Appropriate investments targeted to areas with significant opportunities for health improvement will decrease health care costs and improve health outcomes without compromising the availability of high-quality, compassionate care for those who need it. Specific initiatives supported by ASPPH include:

- Developing, evaluating and implementing improved metrics and new evidence-based interventions at the individual, organizational, and community levels, including in schools and workplaces, to address social and environmental determinants of health.
- Integrating disease prevention and health promotion into all policies, in sectors such as housing, transportation, and agriculture. This will necessarily include collaborative Federal, state, tribal, territorial, and local efforts.

Integrate affordable, quality medical care with public health: ASPPH urges the new Administration and Congress to make health care reform and expansion a continuing priority, with an eye toward ensuring that all Americans are covered by insurance. Some needed reforms

are economic, such as payment reform and managing the increasing unaffordability of many lifesaving interventions. Other needed reforms relate to clinical practice, such as reducing medical errors and practices that promote antibiotic resistance. Beyond these, prevention and public health must become national investment priorities to create healthy communities and be integrated more effectively with health care delivery—prioritizing cost-efficient primary care, preventive care, and health promotion. Currently, many clinical preventive services are underutilized (e.g. immunization, hypertension screening and control, HIV/AIDS treatment). Moreover, many healthcare providers are insufficiently aware of social and environmental determinants of health among their patient populations, and how to address them. Addressing these in combination with clinical care would yield considerable benefits in health and well-being.

Eliminate health disparities and promote social justice. We urge the new Administration to lead society’s battle against poverty, racism, inadequate education, and unwholesome environments, all of which are major contributors to disease and disability. We urge the Administration to view all government actions through the lens of health equity: will the regulatory or policy change help to reduce or will it exacerbate health inequities?

Significant health disparities exist across ethnic and racial groups. People living in poor and underserved communities carry a disproportionate burden of disease, disability, and early death. ASPPH is committed to eliminating such disparities. To meet this goal, ASPPH supports:

- Engaging government agencies at all levels in collaborative efforts in health, education, economic opportunity, housing, and environmental protection to address the social and environmental determinants of health.
- Intensifying research into the root causes of health disparities, and to discover ways to translate findings into practice and policy.
- Expanding population health efforts and working to align financial incentives to encourage clinical providers and others to collaborate with public health efforts to advance population health.
- Scholarships and training programs that enable students from underrepresented backgrounds to enter public health and other health professions, so the health workforce reflects the diversity of the U.S. population.
- Emphasis in educational programs on the needs of underserved and at-risk communities, equipping health professionals to effectively address health needs in these communities.



## **Priority Two: Educate the next generation of skilled, highly competent public health professionals.**

A workforce prepared to provide leadership and prevent and respond to public health emergencies is the foundation of a strong public health system. The necessary personnel include, but are not limited to, public health nurses and doctors, epidemiologists, biostatisticians, health administrators and educators, policy experts, informaticians, and occupational and environmental health specialists. In addition, professionals in other fields—engineers, architects, business leaders, and many others—need grounding in public health principles, since their efforts can contribute significantly to public health.

Potential Federal investments supported by the ASPPH include:

- Legislation that supports educational loan repayment for students pursuing a degree in public health in exchange for service.
- More effective training of health care professionals – including, for example, nurses, physicians, pharmacists, dentists, physician assistants and veterinarians – in public health principles and practice through curricular revision and the promotion of dual degree training.
- Educational initiatives that introduce the concepts of public health in grade school and continue at every educational level. These initiatives will invariably lead to a higher level of health literacy throughout the country.
- Expanding the cadre of educators available in CEPH-accredited schools and programs of public health to train the next generation of educators and public health research scientists.

## **Priority Three: Increase investment in public health research by:**

- **Rebalancing the research portfolio of the National Institutes of Health to address population-wide health threats and to advance prevention research.**
- **Identifying and expanding the public health research portfolios of the Centers for Disease Control and Prevention and other relevant Federal agencies.**

As the health needs of the American population change and the health care system evolves, we need the science of prevention to address new and ongoing public health challenges, such as obesity and chronic diseases, aging and dementia, emerging and re-emerging infectious diseases, mental illness, substance abuse, asthma and respiratory diseases, and environmental and genetic risk factors for cancer. We need to deploy research tools such as population

genetics, precision prevention, health informatics and big data.

The Nation’s health research portfolio needs to balance continued basic biomedical advances with public health research, focusing on population-level causes and interventions. Current funding emphasizes basic and applied biomedical research. This research is laudable and necessary, but does not meet the need for research in public health. Pressing questions—how to provide healthier food and motivate healthy food choices, how to design healthier communities, how to ensure that our aging population arrives at old age healthier and remains healthy, how to integrate health promotion into workplaces, which antipoverty strategies most effectively promote health, how to reduce violence most effectively, how to anticipate and protect the public from the health impacts of climate change, and more—demand answers. The available data support the conclusion that compared to other Organization for Economic Co-operation and Development (OECD) nations, the US does not adequately resource funding of public health research.

Rebalancing the research portfolio of the National Institutes of Health to address population-wide health threats and to advance prevention research. The mission of the National Institutes of Health “is to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.” The NIH’s budget should be rebalanced, so continued basic biomedical research is complemented by expanded research into root causes of disease, injury, and disability, and into population-level solutions.

Identifying and expanding the public health research portfolios of the Centers for Disease Control and Prevention (CDC) and other relevant Federal agencies. The CDC plays a vital role in protecting America from health, safety and security threats, by fighting disease and supporting communities and citizens to do the same. Research is critical to the CDC’s mission, but has been underfunded and undervalued. We urge the new Administration to expand CDC’s research portfolio to match the challenges being addressed by the Agency.

The new Administration must also focus on broader population health strategies, in such sectors as urban planning, transportation, housing, environmental protection, energy, and agriculture, that promote health and well-being. These strategies are necessarily focused on building healthier communities and not necessarily focused on the individual. The portfolios of almost every Federal agency include programs and initiatives that can potentially advance public health. The corresponding research portfolios of those agencies should be expanded

to address health implications. If opportunities exist for new public health initiatives, dedicated funds should be identified.

Given the rapid explosion of new scientific knowledge and the potential for even more rapid progress, ASPPH believes it is vital that we reinvest in the public health research mission.

ASPPH calls for increased public health research investments including:

- Providing predictable and adequate public health research funding to support both the infrastructure and the investigators necessary to make scientific breakthroughs;
- Assuring that major NIH initiatives, in priority areas such as Alzheimer’s disease and cancer, include robust public health research support;
- Strengthening the representation of public health experts on NIH advisory committees and study sections;
- Supporting training the next generation of public health researchers and enhanced training of current researchers and public health practitioners;
- Expanding our global public health research efforts, given that health threats anywhere can now spread quickly thanks to modern transportation and commerce. Moreover, there are lessons that America can learn from the rest of the world about managing chronic disease and reducing health inequities;
- Supporting implementation science research that can help close the knowledge-action gap;
- Developing and applying methods to evaluate public health policies, programs and interventions;
- Sharing research findings with colleagues and the public at a faster pace; and
- Allocating the Prevention and Public Health Fund created by the Affordable Care Act toward initiatives intended to create evidence for best practices to improve health.

#### **Priority Four: Strengthen U.S. leadership and investment in global public health.**

Recognizing that the health of Americans is inexorably linked to the health of the world in which they live, ASPPH believes this Nation must exercise leadership in global public health. To ensure well-coordinated action and swift exchanges of information, American efforts should promote collaborative partnerships with governments and non-governmental organizations around the world.

To meet these goals, ASPPH calls for the following measures:

- Build global public health, and epidemiological training programs; build and staff collaborative global research programs; and strengthen international health organizations that can predict, detect, and contain infectious diseases at their source.
- America should seek to learn from the rest of the world about managing chronic disease and reducing health inequities. For example, we should aggressively explore why US health outcomes are so poor even though we expend enormous resources on medical care.
- Expand the availability of trained public health personnel worldwide, focusing their skills on prevention, health systems, and program management. The President’s Emergency Program for AIDS Relief (PEPFAR) is an important model of such investment, but more is needed, not only to battle against infectious diseases and promotion of global health security but also to fight emerging epidemics of chronic diseases and injuries worldwide.
- Capitalize on the surge of interest in global health on the Nation’s campuses by expanding undergraduate and graduate programs to educate and train students and provide opportunities for global service. Such programs help to train future leaders in problem-solving and bridging social and cultural divides.

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The members and staff of the Association of Schools and Programs of Public Health (ASPPH) are eager to assist the new Administration in addressing the public health challenges facing America. Please contact Tony Mazzaschi, ASPPH Senior Director, Policy and Research, if we can be of assistance ([tmazzaschi@aspvh.org](mailto:tmazzaschi@aspvh.org) or 202-296-1099, ext. 132).