

Testimony of Jonathan E. Fielding, MD, MPH, MBA
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Secretary's Advisory Committee on National Health Promotion & Disease
Prevention Objectives for 2020, Chair

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Chairman Pallone, Ranking Member Deal, Members of the Committee, Ladies and Gentleman:

Thank you very much for granting me the opportunity to speak to you today about evidence-based prevention and why it is critical to improving our nation's health. My name is Jonathan Fielding and I am the Director and Health Officer for the Los Angeles Department of Public Health as well as the Chair of the Task Force on Community Preventive Services and the Chair of the Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020.

In my testimony this morning I would like to make the following three points:

1. Our country will not be able to maintain a high level of economic productivity unless we can maintain a healthy workforce and a healthy population. The greatest opportunities to improve our country's health lie in population-oriented policies and programs.
2. Research and evidence to guide the proper development and implementation of these policies and programs are essential if we are to fully capitalize upon these opportunities for health improvement.
3. We are not starting from scratch. The Task Force on Community Preventive Services already has a process and an organization that can be expanded to meet this need and to actively disseminate the results so they become a part of standard practice. That organization is greatly underfunded, and we now have an opportunity to leverage a small investment to fill in the research base to let us know what works.

It is not news to members of this Committee that health reform is needed to assure everyone has access to quality affordable health care. However, the World Health Organization currently ranks the United States' health system 37th in the world despite the fact that we spend 50% more of our GDP on health than any other country. In 2007 we spent 16.5% of our GDP on health care, a number that the CBO projects will rise to 25% of GDP by 2025 and to 49% in 2082. We spend more than any other nation on health yet we still experience poorer health than most other developed nations and some developing countries. Furthermore, epidemiologic trends show that we will likely be facing large increases in the number of Americans living with diabetes, Alzheimer's, and other debilitating and costly chronic diseases in the near future. In fact, if current obesity and diabetes trends go unchanged, for the first time in modern history our children may be facing a time when their life expectancy is actually shorter than that of their parents. It is evident that the status quo approach is not working. We cannot medicalize our way to becoming one of the world's healthiest nations. For both moral and economic reasons we must ask ourselves if there is a better way to ensure our nation's health.

As you discuss the framework for our future health and health care systems, I urge your committee to remember that *health care* reform is not the same as *health* reform. I recommend that your

Committee take advantage of this historic opportunity to expand the debate beyond insurance coverage and the health care system, and recognize the various ways in which a stronger focus on prevention and other population health strategies can contribute to our nation's health for generations to come. Health reform should lead not only to greater effectiveness and efficiency for our health care system, but to better health outcomes as well. And better health outcomes mean a healthier and, therefore, more productive work force. And a more productive workforce translates into greater competitiveness in the world economy. In the current weakened economy we must carefully consider every chance we have to boost our long-term economic prospects, and therefore we must recognize how improving our country's health is central to improving the well being of our economy as well.

The Value of Population-Based Health Activities

When we look back at the enormous strides that have been made in longevity – we gained 37 years of life expectancy in the last century—most of that gain has occurred as a result of action by the public health community at the population level, much of it in concert with the health care system. Population health interventions range from communicable disease programs like sexually transmitted disease prevention and treatment, influenza immunization, and tuberculosis control, to the development of policies that curtail tobacco use and support the creation of healthy homes and communities. What distinguishes population health approaches from clinical care approaches is that clinical services are intrinsically delivered one service at a time from a provider to a patient – a retail approach if you will. Population health services are those that can be delivered to a group of patients, a community, or within an organization to affect the health of multiple individuals – a wholesale approach. These population-based approaches are an essential complement to the clinical preventive services that target individuals.

Health promotion and disease prevention can reduce both the rate of onset and the severity of disease, allowing people to lead longer, more productive lives. Diabetes disease management, for example, can reduce amputations and hospital admission while use of helmets reduces head injuries. Furthermore, activities that prevent or postpone disease also have the potential to yield major cost savings to our country's health system, yet today we spend less than five cents of each health dollar on interventions designed to keep populations healthy rather than treating individuals once they are sick.

This is not because our job is done. Far from it. Obesity is rampant, our cities and suburbs are poorly designed for physical activity, highly effective clinical preventive services like pneumococcal vaccination are badly underutilized, we confront multi-drug resistant tuberculosis, and pollution occurs at unacceptable levels exacerbating asthma and chronic lung disease and decreasing life expectancy and quality of life. Over one-third of all deaths in the U.S. are caused by tobacco, physical inactivity, poor nutrition, alcohol and substance abuse. These are some of the factors that are driving a wide variety of our nation's leading causes of death such as heart disease, cancer, stroke and diabetes. Reducing these unhealthy behaviors, even modestly, will yield enormous health benefits to the nation. For years our country has been spending the vast majority of our health dollars on medical care that seldom addresses these behavioral causes of death. There is no pill that I can prescribe that will make someone exercise more. The only way to effectively address these actual causes of death and the other environmental factors which contribute to premature death is to find solutions at the population level.

We know that our country has been spending too many dollars on services that do not add value. Thankfully you and your colleagues have recognized the importance of understanding what works to

improve health. The landmark comparative effectiveness legislation will provide the basis for understanding what technologies work for which patients at what time. We require a similar initiative to compare health interventions that operate on the population level. As we embark on this initiative to review comparative effectiveness research, I urge you to recognize the great value that population-based interventions offer to improve our nation's health and to add these interventions to the comparative effectiveness agenda.

Establishing the Evidence Base in Population Health: The Guide to Community Preventive Services

So how do we know what works to improve population health? Fortunately there is already an organization and a process that can help us determine what works. For over a decade the Centers for Disease Control and Prevention has worked with an independent, external task force that I chair to develop the Guide to Community Preventive Services. This Guide has adapted the well-established methods pioneered by the US Preventive Services Task Force for Clinical Preventive Services to analyze community-based interventions. Over 200 reviews have been conducted, with findings and recommendations made for each review. The reviews span areas from vaccine preventable illness to promoting physical activity through behavioral and social as well as environmental and policy approaches. We have touched upon domains as diverse as mental health, housing development, and diabetes management. The reviews address diverse groups from health care systems delivering clinical preventive services, to employers' wellness programs, school physical activity programs, and population health media campaigns. These reviews are not just academic exercises and they have been used to shape the allocation of federal funds. They are intended to inform decision makers and we know that these recommendations make a difference. For example, our recommendation to reduce Blood Alcohol Concentration limits to 0.8 bolstered the evidence base to enable legislation to limit access to transportation funds to states that permitted higher alcohol levels, contributing to safer roads and saving lives.

The recommendations can also guide the deliberations in the Department of Health and Human Services about the best use of the Recovery Act funds. For example, the Guide has shown that social marketing campaigns are some of the most effective interventions we have to prevent smoking and increase cessation. A public-private partnership could rapidly apply the Recovery Act resources into a national tobacco media campaign that could substantially reduce the behavior that causes the greatest number of deaths in the United States.

The Guide's work began in 1996 under the auspices of CDC. An internal staff was recruited, an external Task Force created, and liaisons identified. The independent, external Task Force has 12-15 members who represent the many relevant disciplines, including epidemiology, statistics, and the social sciences. Many are active public health practitioners from state and local health departments as well as academia. Others work with employers, communities, foundations and within the health care system, including managed care plans. The target audiences are people and organizations that deliver population-based services, including employers, schools, governmental public health agencies, health care systems, medical groups, community organizations, and policy decision makers.

Establishing the Evidence Base in Population Health: The Process

The Task Force oversees the work and makes recommendations. It has been responsible for developing a rigorous set of methods to assure a high level of certainty when making recommendations, assure consistency, and avoid conflicts of interest. It has codified the processes for doing this work. The first step has been to identify suitable topics based on potential impact and

need – that means one must assess the importance of the problem in terms of health burden on the population, availability of interventions to impact the problem, and the value to different user groups. The Guide has identified and worked on 18 general topic areas. Some are disease areas, such as cancer, mental health, and diabetes. Some are behaviors, such as alcohol or tobacco use. Still others are preventive services such as immunization. And others cover target areas like worksite or specific populations such as adolescents. One topic, the social environment, has been structured to assure that the underlying socioeconomic determinants of health are addressed as well.

Once a topic has been identified the Task Force creates a conceptual model for each topic to enable it to identify the interventions and select among them. This process identifies possible interventions at multiple levels, from behavior change interventions, to system changes, to intersectoral interventions, or infrastructure changes. For tobacco interventions, for example, we have examined behavior change interventions such as education and media, system changes such as processes to assure that clinicians provide counseling and medication, policy changes such as the impact of taxation or laws restricting access to minors, and infrastructure changes such as the availability of quitlines. Once specific interventions within each topic area are identified they are prioritized and the review process ensues. It is important to note that to date the Guide has only covered a small subset of the potential interventions within each of the broad topic areas, due primarily to budget constraints.

A systematic review of the evidence is conducted for each of the selected interventions. This requires identifying all the relevant studies, assessing their relevance and quality, synthesizing the information from all of those studies, and organizing it in a consistent manner so that it can be interpreted. This work is accomplished by a review team consisting of Task Force Members, CDC staff, and external experts. While a simple topic may be completed within a few months, the process more commonly takes a year or more. The results are reviewed by the entire Task Force and a recommendation is made based on the strength of the evidence. The scientific reviews and recommendations are then published and disseminated.

Throughout the process, a group of over 25 liaisons provides input and also anticipates the release of recommendations that can be used by their organizations. Among the liaisons are representatives of other federal agencies, such as AHRQ, NIH, VA, and DOD; professional organizations, such as the American Academy of Family Practice, the American Academy of Pediatrics, the American Academy of Nurse Practitioners, and American Association of Physician Assistants; state and local health departments, through ASTHO and NACCHO; as well as academic and other not-for-profit organizations. These groups are also critical to the translation of the Guide findings into practice.

It is important to recognize how the Guide complements the work of other organizations. The US Preventive Service Task Force, for example, tells us what works in the clinical realm. They have said that delivering a clinical preventive service like mammography can reduce breast cancer mortality and we expect the clinical care system to deliver that service. What the Guide does is tell us *how* we can better deliver that service to assure that the health care system effectively and efficiently reaches the women who need it. So the Guide assesses the effectiveness of small or large media education efforts, patient reminders, professional reminders, use of financial incentives, and the organization and structure of care. The Guide's recommendations are intended to guide health care systems as well as public health organizations to select interventions that will increase the utilization of these effective services.

To date the Guide has produced 210 recommendations. The staff deserves an enormous amount of credit for accomplishing this work despite scarce and diminishing resources. Important as this work has been, there are many outstanding opportunities upon which we have yet to capitalize.

Establishing the Evidence Base in Population Health: The Challenges

First, while the 210 recommendations we have already completed represent substantial progress, they represent only a small fraction of the high priority topics the Task Force has identified. The gap between identified and completed reviews has developed because core funding has been very scarce. Guide staff has had to be opportunistic and seek funding from programs that had a mission that benefited from evidence-based recommendations and had the funds to support the work. Hence you find great depth in some of topic areas, such as immunization, and little about others, such as substance abuse (other than tobacco). It is unfortunate when users turn to the Guide only to find that it does not address the questions that they have. We have an enormous amount of catch-up work to do to make sure that all major topics and interventions are addressed. The work also needs to be kept current. The recommendations must be updated on a regular basis as well as when major new studies are published, and resources need to be devoted to that task. Among the important topics that deserve a new or more in-depth review are emergency preparedness; the built environment – including the impact of community design and transportation systems on physical activity and exposure to environmental pollutants; substance abuse; mental health; the socio-cultural environment – including interventions to reduce disparities and strengthen communities; public health systems; primary prevention of chronic disease; occupational health; and health care systems—including improving the delivery of clinical preventive services through the use of financial incentives and coverage, quality improvement systems, education, and reminders.

Second, the recommendations are of little value if they are not used. Efforts to disseminate the Guide have been confined to passive dissemination of results through publications, the website, sharing with key partners, and the incorporation of recommendations into some federal grants programs. As a result, awareness of the Guide remains low and the use of recommendations has not become a standard practice in most governmental public health agencies or by other users. What has been done are important steps, but a vigorous proactive program is needed so that there are active processes to help employers, communities, state and local public health departments, and others users actually develop the skills to adopt and implement these recommendations.

Third, the Guide reviews identify the information gaps that need to be filled. The finding of “insufficient evidence to make a recommendation” occurs all too frequently, largely because the needed studies have not been done. One of the major gaps has been the lack of information on how to close health disparities. The research gaps that are part of every review should form the core of a directed research agenda. As for other parts of the research enterprise, studies should be driven more by user needs than researcher interests.

The Guide provides essential information about effectiveness and efficiency. Incorporating population health interventions into the comparative effectiveness initiative will allow us to make better choices both within a topic area as well as across multiple topic areas. We know that multi-component interventions, (interventions that use multiple intervention strategies to address problems), are usually much more effective than individual strategies employed in isolation. However, the most appropriate mix of interventions and policies to address particular health problems remains largely unknown. An example of particular importance in the private sector is health improvement in the workplace. Many employers are deeply committed to the health of their employees and have developed many approaches, including designing insurance plan benefits to

cover clinical preventive services, improving nutritious food availability in their cafeterias, encouraging physical activity, using health risk appraisals, providing counseling for tobacco use, and many more. Recent Guide reviews have begun to show how health risk appraisals alone are of uncertain benefit, but when combined with health education and other approaches, they can reduce smoking, excessive alcohol use, blood pressure, cholesterol, and fat consumption.

Beyond the Guide

We will not become a truly healthy nation unless we address the real underlying determinants of health – the socioeconomic and physical environments. Let's look at education as an example. We know that education and income are primary determinants of health. Improving education positively affects all health conditions and quality of life. When one takes a disease-by-disease approach one can make inroads in each; but the health impact achieved by improving education occurs across the entire spectrum of conditions and improves general well-being. Improved education leads to higher incomes, which also contribute to improved health. Interventions focused on individual conditions like heart disease, cancer, or arthritis in isolation are important but cannot address the underlying reasons for ill health nor the sources of the enormous disparities in health outcomes.

The Guide has assessed some of these intersectoral issues such as street and community-scale planning to shape the physical environment and influence physical activity; early childhood development programs; and the use of tenant-based rental assistance to reduce violence and social disorder. The Guide's reviews have found that many of our most important challenges and opportunities to improve population health lie outside the traditional health sector. Partners in non-health sectors play critical roles in assuring a healthy food supply (e.g., Agriculture), restoration of people to productive lives in society (e.g., Criminal Justice), fairly compensated and available jobs (e.g., Labor), and walkable communities (e.g., Transportation). Working across sectoral boundaries requires expertise from many disciplines that are outside the skill sets of those of us in public health – they include experts in city planning, criminal justice, agricultural policy, and many more subjects. I strongly believe that health consequences need to be considered when decisions are made in these other sectors. The information to inform them, though, has been minimal.

New research tools and methodologies are needed to help policy makers understand how these health determinants in other sectors operate, and how decisions in these other sectors can positively and negatively affect health. One tool to quantify these likely health effects is health impact assessment (HIA). HIA employs a combination of methods to systematically examine the potential health effects of proposed policies, programs, and projects. HIA can be used to inform policy and decision-makers about potential health benefits and harms of a proposed policy or project, as well as alternatives for improving the ratio of benefit to harm. HIA is particularly useful for highlighting the health impacts of policies outside the health sector, where the potential health impacts may be poorly understood or unrecognized. We need to make it easier for people to live healthy lives – to breathe clean air, to eat healthy foods, to stay physically active, and to lead less stressful lives. We must increase the resources dedicated to intersectoral research and the refinement of tools such as HIA to help us understand exactly how we can achieve that goal.

Challenges to Implementing Best Practices at the Local Health Department Level

Let me change hats and talk to you about my role as a user of evidence-based recommendations. The Los Angeles County Department of Public Health serves a diverse population of 10 million people and we need to work effectively and efficiently. I have instructed my 43 program directors to structure their programs around interventions that have a strong evidence base. We have provided training for the staff to learn the principles of evidence-based population health and develop the skills

to apply the principles to their programs. The Guide serves as a primary source of information for them and I hold them accountable for applying evidence-based recommendations. We are, however, unusual in that regard.

At the same time, it is clear that many of the major opportunities to improve the health of Angelenos have not been part of our traditional programs. I have therefore strengthened our chronic disease programs and built greater policy and advocacy capacity within my organization. These staff members are bringing increased attention to the natural and built environments – I have a working group on climate change as well as the socioeconomic environment. These groups are helping set our policy agenda. We rely on CDC and other organizations to provide evidence-based recommendations on what works– to globalize the evidence – that allows me to adapt that evidence to my county – to localize the decisions.

Information from the Guide is critical to this task. But many of the questions I face are not simply does an intervention work, but how does it work in comparison to the alternative strategies I can bring to bear? Should my sexually transmitted disease program emphasize school education, partner notification, counseling, or surveillance? Which ones and at what levels? I must also understand the trade-offs among programs – how should I balance the need to reduce salt in the diets of the residents of Los Angeles compared to perinatal and early childhood activities? This requires information on the relative value of alternative strategies. We need to assure that the comparative effectiveness tools and resources are applied to population health to allow us to make better decisions about these choices.

Recommendations

So what can this Committee do? I have several suggestions.

Full Support for the Community Guide

First and foremost, the Guide to Community Preventive Services needs full financial and personnel support. A one-time infusion of \$50 million would allow us to provide recommendations for all the high-priority topics and interventions needed by communities within three years. We now have enough experience that with those additional resources we can rapidly and efficiently apply what we've learned. I can foresee an expansion of the Task Force to 25 to 30 members as well as a rapid ramp-up in the size of the CDC staff. We have experience in training new members and staff to rapidly bring them up-to-speed. Because of the large number of topics that remain to be addressed, I expect that we would divide up the work by creating three sub-Task Forces each tasked with addressing a third of the remaining topics and interventions. For interventions that are straight-forward to assess, the work can be done solely by each of the sub- Task Forces and brought to the entire Task Force for final review and the final recommendation. For interventions that raise major new methodologic challenges or have many complexities and nuances, the sub-Task Force would work with the whole Task Force throughout the process. For the intermediate category, for example those interventions that raise one or two issues, the sub-Task Force would bring those specific issues to the entire Task Force but would otherwise complete the work independently until final approval of the entire Task Force is required. Once we have reviewed all the high priority topics as part of this intensive short-term effort, we can then maintain the process at a more modest and sustainable level to address new topics and keep current on those topics that have already been reviewed.

The Guide also needs the resources to assure that we proactively disseminate the recommendations so they become standard practice for users in both the public and private sectors. This will require active dissemination, training, materials, and technical assistance developed and implemented in close conjunction with major partners, including health care organizations, governmental public

health agencies, the private sector, foundations, local organizations, and professional groups. Implementation will be greatly facilitated by systems to link local health objectives to high-value evidence-based services and assure their implementation and evaluation. Funding streams should be aligned with evidence-based practice and facilitate local implementation.

The ongoing work of the Task Force will require \$15 million annually on a continuing basis. This very modest investment would produce evidence that would enable us to get much more health impact from the \$2.4 trillion that we currently spend on health.

Fill the Evidence Gaps

Second, the Guide has identified major gaps in our evidence, particularly about the impact of interventions their economic value. Those gaps need to be filled with robust targeted research funding. CDC should be the lead the Agency to assure that those research gaps are filled.

Conduct Health Impact Assessments

Third, we need to use the best science we can to address intersectoral issues, such as global warming, and policy issues not amenable to traditional study designs. We need support particularly for health impact assessments to fill that void.

Evaluation

Fourth, the Guide and these initiatives need evaluation. What we are proposing represents a fundamental change to how decisions are made in the health and health care systems. We need to evaluate this process so we can understand how well it is being implemented, opportunities and challenges to implementation, assessment of the impact on processes and outcomes, and an assessment of the value. Evaluation needs to be built into these plans from an early stage so that impact can be prospectively assessed.

Link Healthy People 2020 and the Community Guide

Finally, as you know, Healthy People 2020 is currently under development and will provide health objectives for the nation. Those objectives need to be fully informed by the recommendations from the Guide so we can set realistic objectives, sub-objectives and targets based on our knowledge of the potential impact of evidence-based programs and policies. By the same token, Guide priorities need to be shaped by our health objectives. These two major initiatives need to be tightly linked to maximize the value of both efforts.

Both the health care and population health systems are critically important to the health of the United States. The demand for one-on-one health care will continue to increase. We must remember, though, that the common good can best be served by renewed emphasis on the health and wellness of the entire population with efficient and effective policies, systems, and programs.

Thank you again for providing me the opportunity to talk with you. If you should have any interest in discussing these issues further, I am available at your convenience.