MODERATOR: Nsikan Akpan, digital science producer, PBS NewsHour

“Over the last eight years, President Obama’s administration has launched a number of initiatives related to research, health and medicine. These programs cover everything from the brain to the microbiome. How much progress do we as a nation, in the scientific community, have to show from these initiatives? And if you had been POTUS, what would you have done differently? Is there an initiative that you would have started, changed, or tweaked?”

► Anthony S. Fauci, M.D., director, National Institute of Allergy and Infectious Diseases, National Institutes of Health

“It’s very difficult to make a balance of initiatives, which are needed, with support for undifferentiated biomedical research—which serves as the incubator for initiatives. I have a bit of a concern when all that we have is initiatives, and we don’t have a situation where there’s enough basic biomedical research to be able to be the incubators for initiatives of the future. So my feeling would be that I think we’ve done as well as we could have done, on the very, very serious budgetary constraints, but looking forward I would like to see that delicate balance between initiatives and the undifferentiated research that is so important to what we do.”

► Donna R. Cryer, JD, president and CEO, Global Liver Institute

“I think in terms of not so much individual initiatives, but how we are going to bake in the new principles and the ways of working that we’ve created over these eight years. Those principals, first and foremost, have been about involving patients and patient advocates, and patient advocacy organizations, in ways where we’re not seen just as the beneficiaries of care, but as the stewards of innovation and as partners and peers in not only entering into clinical trials but designing the trials and of identifying the problems as well as helping find solutions.”

► France A. Córdova, Ph.D., director, National Science Foundation

“The word “partnerships” has taken on a new meaning. It’s not about a superficial just doing the same things, but in different ways among various organizations. It’s more about real true engagement and looking at what are your unique strengths as a private foundation, federal agency or research institute, and what can you contribute to these grand challenges. That’s leveraged what we can do in times of really tight funding.”

► John W. Danaher, M.D., MBA, president, Elsevier Education, Elsevier

“Two areas that we at Elsevier are very, very passionate about: concerns about STEM education and the people going into research and the significant supply and demand and balance between nurses and doctors and health professions and what we need to provide for care; and the other concern is obviously the promise for big data in terms of unlocking and enhancing everything from precision medicine, and that Google and others are doing it. Certainly those of us who have been committed to science and to research throughout our years are really looking to big data to provide unparalleled insights for scientists and researchers.”

► Albert A. Lauritano, M.S., CLP, director, strategic technology partnerships, BD

“We work with a lot of accelerators around the world, and one of our key programs is—what we’re trying to do is take that, bring that start-up model in-house, because there’s so much technology that’s out there. The technology’s happening, at least on the digital space. We just don’t know what to do with it all. It’s really how do you deploy that technology. What are the business models around that technology? Those are really more of the challenging areas for me, working at BD and also being concerned with the overall—providing better health care within our country and the world.”

► Keith R. Yamamoto, Ph.D., vice chancellor for science policy and strategy, vice dean for research, School of Medicine, University of California, San Francisco

“We want not only a dialogue with the American people where scientists and clinicians talk about what they’re doing in a way that will engage the public and so they understand it and will, therefore, support it with their representatives, but also to take ownership of the process, to be involved in it. The only way we’re going to really achieve big data at the scale that it’s needed and at the breadth that it’s needed is to have the public involved and engaged, to feel that they are part of the process—that they own the process. If we can do that, then we can get not just the numbers, but also diversity—addressing the disparities that are hugely problematic in our health care system, whether its research or delivery and measures of social justice that need to be addressed.”
“How do we go about prevention of progression of disease, how do we stem the tide of medical errors, how do we forestall epidemics? And also we will talk about curbing the tide of antimicrobial resistance. And something that’s a little bit of special interest to me as a rheumatologist is the idea of diagnostic accuracy in precision medicine so that we’re not wasting our valuable dollars using medicines that are never going to work in a particular patient and you know how that can sort of feed into the bigger picture of prevention.”

“There’s tremendous opportunities to think about what are the ways that we can improve the diagnostic process itself, how can we bring more intelligence at a time that often a lot of decisions are being made very quickly in emergency departments or other kinds of acute settings. We estimate there could be as many as 12 million diagnostic errors per year in the United States. This is an area where’s there tremendous opportunity with research to start to really make a difference in reducing the amount of harm that comes from making the wrong diagnosis and going down the wrong path.”

“I think there are three major challenges in the U.S. today in terms of health that directly speak to the importance of prevention. One is the exponential cost rise in our expenditures in health care. We spend more almost two—between two and three times more than any other peer country, about 18 percent of our GDP is devoted to health care costs. What’s ironic is that we rate among the lowest in a host of measures of health our peer countries, so that’s number two. And number three really has to do with inequalities and disparities in health by social economic status and race and ethnicity. So this should tell us that we need to take a fresh look, a more upstream look, at how we approach issues of health in this country.”

“One of the issues that concerns me the most in all of this, we’ve spent so much time and effort and our research dollars on understanding the manifestations of a disease and how to treat it. We’re really good, for example, at lowering glucose, we have a million ways to do it and some very good drugs, but we have very few ways of getting to the cause and interrupting the process that causes Type II Diabetes or Type I Diabetes. There’s tremendous opportunity because no one wants to get a disease and when everyone does they’re always surprised. This is an area that deserves input and public attention because the payoff is going to be massive.”

“It’s unfortunate, but prevention is just not sexy. It’s extraordinary what prevention does and we really just forget about it. For the past 20 years of vaccinating children, we’ve prevented 300 million illnesses, and saved 1.4 trillion dollars. But what you hear about is the concerns about the side effects of vaccines and whether we really need all those shots. So as we are clamoring for a vaccine against Zika, you know we have a lot of good vaccines we’re not using enough. And I think it really takes a challenge to our imaginations to learn how to talk about prevention, how to count up prevention, how to catalyze prevention in ways that will gain congressional support and public support.”

“The role of a lack of hope has a lot to with why we take up smoking and are resistant to quitting or why alcohol and substance abuse play in it, and why there’s a disinclination toward prevention or maintenance of health. I think that educators—certainly that has to be part of the solution, and one of the best ways probably to prevent hospital-based medical errors is to prevent hospitalizations. One way to prevent hospitalizations is to prevent inappropriate emergency department use. Because if you visit an emergency department all other things being equal rather than a primary care setting you’re more likely to get hospitalized.”

“If you have frequent bad headaches, first and foremost what’s the appropriate, correct treatment that will not aggravate the situation and prevention is the way to go. What do I mean by prevention? There are 36 million Americans with migraine. Proper diet, exercise, yoga; they will prevent episodic, recurring, chronic migraine. If the headaches become more frequent, appropriate preventive medicine will work. There are 2 million Americans, 2% of the population of the U.S., has headaches every day and the majority of them are over using a painkiller. We should get away from saying don’t treat your pain, we should say treat your pain appropriately and help these patients.”

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**PANEL 3**

**FUTURE FORWARD**

**MODERATOR:** Geneva Overholser, senior fellow and consultant, Democracy Fund, former syndicated columnist and editor for *The Washington Post, The New York Times* and *Des Moines Register*

“We’re going to be concentrating on the Food and Drug Administration largely, and it’s facing its own challenges and opportunities and much under discussion in that splendid dome or under it, but I would like to begin to set a baseline. [Dr. Califf], you have been clear about your priorities, and I’m eager to hear you brief us on what you have set forth as your priorities and the status of them, if you would. And I wonder if we could go down and each of you give us a sense of what you would emphasize on [Dr. Califf’s] agenda, what would you put on it that’s not on there, what would you hope wouldn’t be on there, or any other response you’d like to make.”

**Robert M. Califf, M.D.,** commissioner, Food and Drug Administration

“There is tremendous effort, both at the FDA and across the federal government, to take advantage of the resources that are developing in the way of electronic health records, claims data, geospatial information systems and linking these things together so that we can back up many of the assertions that were made, I think, correctly and devise strategies and implement them and measure how we’re doing and then refine. The effort across federal agencies when there’s a public health emergency is profound and amazing to see, but if it’s not funded, you’re essentially going to take away from all the things that everybody else is counting on for their routine, day-to-day activity, and so we’ve got a real problem there that needs to be dealt with.”

**Emil Kakkis, M.D., Ph.D.,** president and founder, EveryLife Foundation for Rare Diseases

“We’re in a real golden age of new drugs being developed, and there’s so many new technologies, new strategies, coming forth with solutions to disease we didn’t think could be solved. That’s creating an enormous strain for the FDA because there’s so many diseases that they may have never seen before. The technology is novel and not well understood, and I think that’s putting a particular strain on the agency and the current structure of it. We have the opportunity to really change care for these patients, and I think it’s important for the FDA to have the resources from the government to make sure we’re able to meet the need and solve these diseases for patients who have no treatments currently.”

**The Honorable Kweisi Mfume,** former U.S. Representative, 1987-1996

“What alarms me is that you have members of the House and Senate, some of whom feel very strongly and are very supportive about the FDA going forward, and then you have others who have no idea other than what they read or heard on the news or someone said to them about what’s really happening with the FDA, why it’s important, why 110 years later we’ve got to adjust our approaches and our support and even our criticism in some instances. And then there’s a whole other group who will take the oath of office in January who never had this come up on the campaign trail at all. Advocates have to be reached in such a way that they become real advocates for the agency.”

**Sudip S. Parikh, Ph.D.,** senior vice president and managing director, DIA Global

“This is not your father’s FDA. I’ve been associated with this process for 20 years now, and when I first got to D.C., FDA was insular, it had no science to speak of. It was not loved by anyone. In 2005, there were worries about not even having enough dollars to pay the workforce they had. That is not the case now. This is an FDA that reaches out. It’s proactive. Dr. Califf and his team are out at every conference I can think of, and they’re proactively engaging with industry in ways that they never did before.”

**Jean-Christophe Tellier, M.D., CEO,** chairman of the Executive Committee, UCB

“We have been in a model which was mainly moving from research to development, then to engage with the agencies to try to understand what would be the framework where our drugs can be used, and then trying to reach the patients. It is an evolving environment. We are able to translate this research into medications, and the way we could be able to have more precise medicine for a more well-defined group of patients requires much more than just a few clinical trials. All of that requires better connections, and so we need to have openness and communication, making sure that we are sharing the data at a very early stage.”

researchamerica.org/forums