

SAGE CROSSROADS
Interview with Gregory Downing
Personalized Medicine

KYLE JENSEN: Welcome to SAGE Crossroads, the premier online forum on the issues of human aging. These podcasts feature lively discussion with the experts on the ethical, political, economic, scientific, and societal implications of aging related science. Thank you for listening.

I'm joined now with Dr. Gregory Downing. Dr. Downing is the program director of the Personalized Health Care Initiative of the US Department of Health and Human Services in Bethesda, Maryland.

Dr. Downing, can you briefly describe the goal of the Personalized Health Care Initiative?

GREGORY DOWNING: Thank you for the invitation. We are here representing Secretary Leavitt's Personalized Health Care Initiative. And, simply put, this is really understanding bringing the science, medicine, and health care practices together to offer what is the best opportunity for the best medicines for the right patient at the right time with the right conditions. Our goals, fairly high-level that reach across the agencies, essentially are bridging the clinical information, the descriptive aspects of patients symptoms and disease and health status, with genetic information. That's an overarching aspect that bridges many of the agencies within the Department of Health and Human Services. This new wealth of genetic information requires being particularly responsible about how to use that information. Developing the knowledge and utilizing the information in new ways but with privacy and confidentiality is important.

KYLE JENSEN: So with the Personalized Health Care Initiative and the policy besides personalized medicine in general, who do you see aside from yourself as being the key policy makers on the hill in making this a priority in happening?

GREGORY DOWNING: Well within the department, each of the agency heads themselves has made this an important priority, and this is with the Secretary's leadership from the top down. From the aspects of the management of organization, whether it's health care, health services, or medical review and reimbursement areas, there are key people throughout the departments, too numerous to count on, that have elements of this in the prowess of their daily activities. But clearly from the leadership perspectives, Dr. Zirhouni at NIH, Dr. Clancy at the Agency for Health Care Quality and Research, Dr. Gerber Ding at CDC, our acting commissioner for the Center for Medicare and Medicaid Services Carrie Weems, and certainly from the FDA regulations aspects of this, Dr. Von Eschenbach, these are on their daily dockets. On the Hill, there are pieces of this in certain aspects of both parties really. We see this in both houses. There are specific elements of privacy, specific elements of health IT, medical product review, the recent food and drug acts in terms of the amendments deal with many pieces of this, so it's

coming in many different pieces that apply to each agency and not as a whole. Certainly the administration's efforts behind this have been key.

KYLE JENSEN: So are there any changes on the policy front people should be anticipating in the next 5 years especially with a change in administration in 2009?

GREGORY DOWNING: Well that's very difficult to predict where we will be. The landscape has changed in the last several years in terms of the priorities of issues as they relate to components of personalized health care. Health IT being one, reimbursement issues in health care financing, the FDA review aspects, genetic information, privacy issues overall I think are prominent in a lot of different aspects in legislative authorities. In terms of the elections next year, I really can't speak to from specific policy aspects, but health care remains a very prominent issue for all Americans, and I think it's likely that these elements of individualized approaches to health care, particularly for chronic disease management and health care financing, that this will be a very important part of that equation.

KYLE JENSEN: Personalized medicine, in general, is almost always referred to as a "disruptive science." From your policy perspective, which industries do you think will be disrupted most from personalized health care?

GREGORY DOWNING: This is an interesting term. There is a scientific application of disruptive, and we sometimes use the word more in jargon, but when there are technologies or approaches that come into day-to-day practice that really changes the framework of how we do our jobs, we use the term disruptive. I was recently reading Dr. Allan Greenspan's book in terms of economies, and he does make some references to health care overall about this. The notion of creative destructionism is that new approaches and new knowledges and new technologies come into play, there are opportunities to tear down walls and rebuild components of it. We've seen that in many aspects of our economies, frankly in manufacturing, telecommunications, and others, so there are examples one can point to in the big picture and high levels where this has occurred. I think the key drivers are going to be in the aspects right now in the immediate term—implementation of health information technology and electronic records. Some aspects of consumer interests and consumers themselves drive the demand for health information on an individual level. I think from the industry's perspective there is great opportunity in this space for both pharmaceutical, biotechnology, diagnostic, and device areas. I see two key factors—one is the convergence of many technologies together to provide new knowledge and information. Aside from the new technology and test results, it's got to be about the knowledge that we develop around that and how we frame a medical system to adapt to that. The second aspect that I've seen that's truly American in this element is what I've seen in how communities work together. We've seen this all across America now how the payers, the educators, technology developers, health care systems, and consumer groups in regional geographic locations are taking different approaches to that. That's culturally, sociologically one of the things that I find most fascinating about this is the true innovations aspects we find in communities, and I'd like to learn more about that.

KYLE JENSEN: The audience of SAGE Crossroads is made up of scientists, policy makers, and curious consumers. If there is one statement that you could make to them regarding personalized medicine, what would it be?

GREGORY DOWNING: I think communications and common understanding of goals and objectives is the key here. So much of what we label as intentions or aspirations are often wrong. I think the mileposts going forward here in personalized healthcare are going to be in large part how effective we are in developing and taking the time to communicate with our colleagues about what those are and how they can be applied. Almost universally in the things I've looked at in the many years of technology and development, is that how you dream it up at the start often doesn't turn out the way it's going to be, and you are going to need the insights and the knowledge from other communities and collaborators on the way. That is a key component. Even though this is about individuals, it won't happen without teams. That's probably my advice is to find partners, and at this very early stage of this and how it unfolds, it's very difficult to predict where we are going to end up.

KYLE JENSEN: Thank you for your time. On behalf of SAGE Crossroads, I'm Kyle Jensen.