"A Call to Action from Scientific and Political Thought Leaders"
caBIG® Podcast Network

Moderator:

Welcome to the caBIG® Podcast Network. In this podcast, we showcase insights from three distinguished leaders who addressed the more than one thousand attendees of the 2009 caBIG® Annual Meeting.

In opening this plenary session on the Transformation of Biomedicine in the 21st Century, Dr. Ken Buetow, Director of the Center for Biomedical Informatics and Information Technology, challenged each speaker to issue a call to action to the caBIG® community. He asked each of them to explain what he sees as the most critical thing that can be done to drive the future of biomedicine.

Dr. Stephen Friend— the President and CEO of Sage Bionetworks—responded with his vision of creating a fully integrated bionetwork that leverages an open access platform for human disease models.

Dr. Stephen Friend:

If you look at the realities in drug discovery, everything heads in the wrong direction. The discovery and development costs: going in the wrong direction. Efficiencies (sadly, this is really ironically also) are still going in the wrong direction. With all this technology, it's not getting better.

Pharma and biotech are headed towards extinction as we know it. Now, the good news is actually, there is a world coming behind it.

What I'm going to talk about is, what happens when you actually free up everyone to be working with everyone else, in a way where actually you don't need decisions as to who is going to do what, because you make it so flat that people actually get to a real contributor network. Biologists cannot do that until we develop disease models on which we can reflect our linear data. Those individual things—the clinical data that you gather, the genomic information, will not make it. In fact, you can't share linear files, I'm going to argue, in terms of how you really build models.

So, starting about five years ago, we began to ask, how big does a relational database have to be in order to be informative at an individual level.

The question is how can you build up a knowledge of those networks so that you have a sense of what's going on? So, for that type of work, I'm saying linear files, even if curated and shared, will not allow the knowledge of the data needed.

Could you build models of disease that said if I push here on the system, this is what's going to happen?

The vision was to create a commons where integrative bionetworks evolve by contributor scientists accelerate the elimination of human disease. If you look at what Ken showed as the vision for caBIG®, what you'll notice is the emphasis on two things: contributor networks and the use of integrative bionetworks, instead of linking various pieces of linear data together. So it's that model building.

It's all about how do you get the big databases, the integration, and the tools. Those are things that you've been working on, and the things that we're going to need to actually pull this off are actually the infrastructure and things that have been already done.
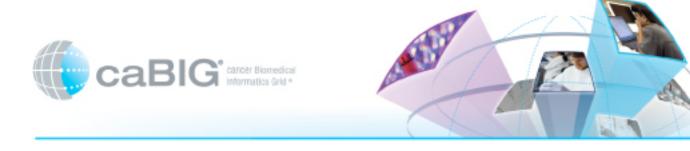
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Greg Simon, Senior Vice President of Worldwide Policy at Pfizer, focused on how programs such as caBIG® increase the overall value of health.

Greg Simon:

If we are able to bring those technologies into the major drug development centers in this country which are biotech companies, pharma companies and many emerging institutes around the country, then we can not only shorten the time to development but we can be so much smarter in what we develop.

You've heard the estimates of the cost of health care and never do you hear the value of health care. If we save a life from cancer, heart disease, diabetes, does that life add value to society? It seems to go without saying, and yet it also goes without notice.

We don't know the future so well that we can say, that because a drug only does one thing today that it won't be able to do more tomorrow, as doctors use it, as patients become aware, as new adjuvants and chemotherapies and biomarkers become developed. So it is not about saving lives for three months. It is about getting started on the road to saving lives.

If we're investing five billion dollars a year in cancer research and programs like caBIG®, why are we choking on the cost of the cancer medicines that come out of it?

Actually spending money on disease management programs that work and that the private sector knows works because they have been doing them for a long time. We are going to have to put health back into it. Find something in the current bill that helps your mother's healthcare. If that's not in there, it won't succeed and if it is in there, then the work that you're doing will rise to the top because the work you're doing is going to save lives, at a cost, but with far greater value.

Moderator:

Aneesh Chopra, the United States Chief Technology Officer appointed by President Obama, explained what this administration would like to see result from initiatives such as caBIG®.

Aneesh Chopra:

Around the entire American economy, in fact the global economy, we're seeing this rapid adoption of technologies.

And the question the President has asked is: "Have we embraced these principles in the areas that are important to our nation? Have we embraced these capabilities to their fullest extent to deliver the kind of societal value we expect out of these areas?" And the humble answer is, "We have room for improvement."

Category one: how do we bring game changing innovation to the president's key priorities?

Every day, countless Americans visit either a National Cancer Institute-designated cancer center or one of the outpatient centers that are largely in our community today. And every single day, they visit with doctors, and they experience an outcome.

What would it take for us to come together as a community to find a mechanism, hopefully and preferably leveraging the phenomenal work here at the caBIG®, to capture this information in a manner that could then be made accessible to the doctors themselves, to families who are interested, to non-profit groups, to deliver the kind of network capacity and the tools to engage the physician community and the care centers, to help us understand.

Two: how do we build sufficient, secure, and smart infrastructure? What does it mean for us to have ubiquitous access?

Clearly the issue of security and broadband will be an important question for us as we grow. How will we accept information from more and more locations? How will we expand the breadth of data that we collect in a way that's ensuring security and privacy?

And then last but not least, the President has a great deal of interest in openness, transparency, and the transformative power of engaging the American people to solve our problems.

How do we know that we're making the right investments from a public policy standpoint at the intersection of research? How do we make sure that it supports and enhances the great work we've done within the caBIG® and perhaps in other capacities? We need to hear from you.

Which leads me to my final observation about this notion of why we're doing this, a more fundamental question. How do we deliver the best quality healthcare at the most affordable cost for all Americans?

What is it that we're going to work on together? Forget all the fluff, and the big issues, and the billion dollars, and the money and whatever. What is it that we can do right now, over the next three to six months, that will make the experience of our cancer researchers and our loved ones who are suffering from cancer, a little bit better, a little bit more impactful. We have it in our capacity, we have the infrastructure, we just have to find a way to come together and make it work.

Moderator:

Thank you for joining us for this podcast featuring highlights and calls to action from scientific and policy thought leaders at the 2009 caBIG® Annual Meeting.

Full-length presentations and videos for each of these speakers, as well as more information on caBIG®, can be found online by visiting us at caBIG.cancer.gov.