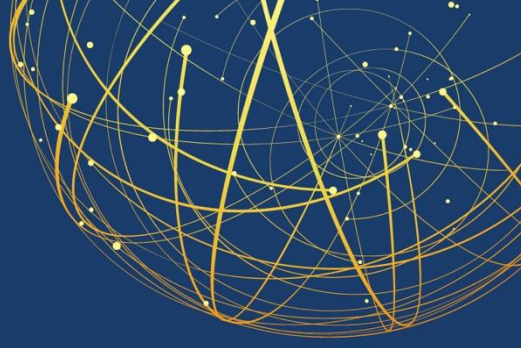

DELIVERING RESULTS IN THE NEXT ERA OF HEALTH

Announcer 00:01

Thank you for joining us. Please welcome the panel to the stage.

Esther Krofah 00:24

Good morning. Morning, everyone. We are thrilled to have this incredible panel to open up the health component of the conference. We'll have so many sessions throughout the next two to three days, and this session will really lay the stage for all that we're facing and seeing in health care. We have incredible representation from across the health ecosystem, from the challenges that we're facing with clinicians, the challenges that we're seeing with older Americans and adults, the challenges that we're seeing in disease conditions like cardiovascular disease, the opportunities for innovation, and the role of biopharma to solve for these problems. Anytime you have these panels, you can talk about all of the sets of challenges and problems that we have to address as a country. And what I really want us to focus on in this panel, which is really about how do we deliver results. It's where are the opportunities for connectivity and connection across the sectors. It's not just about the role of biopharma. It's not just the role of advocacy in very individual disease conditions. We all have to work together to solve the enormous problems that we see from a health care perspective. There is no shortage of innovation. We have an incredible amount of innovation. We'll hear from ARPA-H from that perspective as well. The challenge really is can we deliver results? Are patients getting what we are innovating? And where are we failing patients at every step of the way, and what are the new solutions as we look forward? So as each of these leaders are leading their companies and leading their institutions, what is their perspective of how we start to solve for these incredible challenges that we face in health care? So, what I would like to do first is to start with a question to the panel, and I'll have each of them briefly remark on their perspective with the biggest challenges that they are facing. So, I would like to actually start with you, Dr. Minter-Jordan. You serve as CEO of AARP. You look across a vast majority of older adults, and then the challenges that they're facing. From your perspective, as you're also a new CEO, it's been about a year now—

Myechia Minter-Jordan 02:43

—Over a year.

Esther Krofah 02:44

—Over a year in your role. What is the challenge? What are you trying to address? What are older Americans saying to you that they would like to be solved in health care?

Myechia Minter-Jordan 02:53

Yeah. Thank you for the question, and thank you for the opportunity. So, I'm obviously in this role not only as the CEO of AARP, but also as a physician. And so, I think about three areas that I'd love to touch on, the first being longevity. When we think about where we are as a country, and quite frankly, globally, there are going to be, in this country, more people over the age of 65 than over the age of 18 in four years. So, as we're thinking about system design, part of what we need to think about is the fact that we are an aging demographic and what are all of the implications of that as we think about systems and how we think about health care. And so, we also know that the 50-plus in this country contribute over $8.3 trillion in economic spending. And so, when we think about innovation and how we think about resource allocation, where we need to focus, these are prime areas for investment and for resourcing. The other area that I think about is long-term care. We know that most individuals over the age of 65 will require long-term care in the future, and they can't afford it. So, when we pair together the fact that we are an aging demographic in this country and we have a system of care that is unaffordable for many and is only getting worse, we know that the price of long-term care is only increasing exponentially. We're really at a crisis point. And then I think about our caregivers. We have over 63 million caregivers in our country today. The economic value of the care that they extend is now $1 trillion. They're literally holding up our healthcare system. So, we have an aging demographic, we have a system that's unprepared for it, we have an opportunity to invest in systems for this aging demographic, and we have caregivers. So, when I think about these three dynamics in our country, we are at this crisis point, and there is an urgent need for us to think about the transformation of systems that will allow for us to be able to provide better prevention, to be able to provide greater accessibility to care, and for care to be more affordable. And we can get into all of the ways in which AARP is working with partners around the country and around the world to be able to bring all of these facts to light and to create this case for urgency for action.

Esther Krofah 05:06

Well, what you're saying is that we need to fundamentally redesign the system.

Myechia Minter-Jordan 05:09

That is exactly it.

Esther Krofah 05:10

Because the system is essentially broken for where the population is going.

Myechia Minter-Jordan 05:14

Exactly.

Esther Krofah 05:15

Yeah, absolutely. Nancy, I would love to turn it to you. Nancy Brown, CEO of the American Heart Association. You focus incredibly across the world on new research, new innovation that's focused on cardiovascular disease and bringing clinical guidelines to bear on care. Where do you see the greatest challenge in our health care system today?

Nancy Brown 05:33

Yeah. Well, we live in a remarkable time. Just at this meeting, listening to all of the innovation that's happening and understanding—because we fund some of it and we partner with people who do—just the possibility of what treatments will be available and what procedures will be available to people, and that's at one end of the spectrum. And at the other end of the spectrum is a system that is ill-prepared to accept all of this, whether it's workforce issues or speed to get new treatments to market. And that is a real problem for society, I think. The people who feel that difference between all of the wonderful talk about this great innovation and what's actually happening in a health care system are patients who are struggling with everyday things that matter to them in their lives. And I think we've really got to focus on not only speeding innovation to market, which we take very seriously at the AHA, and it's an area of great focus for us, but we have to design the system to answer the problems that patients have. And that, to me, is the greatest opportunity. We also have—you just talked about caregivers. I was just at a meeting last week, an AHA meeting of our CEO roundtable, where Maria Black, the CEO of ADP, presented their annual report called America at Work. And the only sector in America that is adding jobs, no matter what hype you hear is in-home health care workers. That's it. And how are we equipping the health care workforce to deliver these new innovations? An example of that, just last night at the dinner we were at, we were talking about the dream of every person knowing and having their genes, their genetic profile. We would love that at the AHA. We think it should happen at birth. But think about how many genetic counselors are there in America? And I see Francis. Let's say that happened tomorrow. We can't deliver that for people. We're just not prepared, and I think that's one of the biggest opportunities.

Esther Krofah 07:41

Yeah. Absolutely. Alicia Jackson, welcome. We're happy to have you here. You're leading ARPA-H, a new federal agency that was newly created to make big bets in health care. Like DARPA did for all of us that benefit from the GPS and navigational services that came out of DARPA, you're trying to replicate the same thing at ARPA-H for health care issues. As you think about the major issues that are impacting our health care ecosystem today, where innovation can make a difference, what are those challenges from your perspective?

Alicia Jackson 08:13

Thanks. So, when I came into ARPA-H, I had three major challenges I wanted to address. Number one was winning the biotech race against China. Number two is reversing aging and focusing on longevity, because that is the greatest risk factor for most diseases by hundreds of times. And number three was defeating devastating diseases where we've spent hundreds of millions, if not billions, of dollars trying to address, and yet, we still don't have solutions. I'll focus on the first one, which is this biotech race with China. So, five years ago, had you asked anyone in this room what the biggest risk to US preeminence in biomedical innovation was, you wouldn't have said China. For a long time, they've been a low-cost manufacturer, a supplier of KSMs, APIs. They began to move up the value scale into generics, et cetera. But what we've really seen over the past five years is incredible acceleration in every part of the innovation chain, from discovery all the way to clinical trials. And just last year, we saw nearly 50 percent of novel molecules that were licensed by western pharma come from China. That's stunning. We've seen the ability for China to run clinical trials two to five times faster at half the cost. And so, what they've really done is set up an ecosystem here where it makes more sense for capital to flow into China than to flow into the US. And that should stress everyone out in this room, because we're suddenly in a situation where we're all happy when all nations across the globe get better at health care. That's phenomenal. But when most of our medicines are coming from a competitor—a geopolitical competitor—and we also see a hollowing out of our own innovation system here at home, we have a real problem. We are seeing venture capital—private equity dollars shift to China. There have been VCs who've shut down their US arm, investing only in China. Many early startups are now running their trials in China because startups' lifeblood is cash, essentially, and time. They need to move fast—they need to do it low cost. And so, when we look at this challenge, it takes today, as the commissioner said, about 15-plus years to go from discovery to patient, when looking at a new therapeutic. And so, we have the goal of, where can we leverage technology, along with regulatory reform, which the commissioner is focusing on, really thinking about in silico clinical trials, thinking about really funding platforms such as cell and gene therapies, where we can actually get the entire platform approved at once and then have it individualized to patients, really going towards this N-of-one future. And so, our whole goal is to build this future as fast as possible so we can think about going from discovery to bedside in less than five years.

Esther Krofah 11:07

Yeah. And Bob, from your perspective in biopharma, Bob Bradway, serving as CEO of Amgen, biopharma has a very unique place in the ecosystem. When patients want a cure, they think it happens

serendipitously. But no, it happens because there's been investment, there's been prioritization. You have scientists that are working incredibly hard day in and day out to find those molecules and targets and to commercialize those opportunities and get them into clinic. So, from your perspective and the vantage point that you sit, what is the biggest challenge that you're facing as a developer, but also just trying to close the health care gaps?

Robert Bradway 11:41

Well, maybe I could touch on two things quickly. First, I'm encouraged that your question included reference to the ecosystem in which innovation happens in the United States, and I think it ties nicely with something Alicia has warned us about this morning already, which is the rise of China in the innovative biopharmaceutical context. And I think there's a connection there. This country enjoyed, for decades, a very special ecosystem which included respect for intellectual property, academia, working well with government, working well with industry, and capital markets that were very supportive of that process and willing to invest in the kind of risky innovation that you're asking about when you talk about biopharmaceutical research and development. So, we had a very vibrant ecosystem. I worry that it's not as vibrant now. I think if you take any one of those pieces out of the mix, the result is something that doesn't work as well as it has in the past. And so, at a time when we are an aging society, and we need more innovation, and we need people to have access to that innovation, I worry this is the wrong moment to sit by complacently as that ecosystem erodes. But what I would say to the final question you posed, which is what is the biggest issue? There's a huge amount of innovation, as you said, upstream. So, beginning with the ability to use genomics to discern at birth who's at risk of what disease—that kind of innovation—and then being able to identify the stage at which the disease is progressing and provide therapies that help prevent the consequence of that disease, that's all working well. But what's not working as well is the innovation downstream. So, the ability to say, when we know someone's at risk for a disease, what are the incentives in place to do something about it? And that transaction environment, that environment where we reach out to those that are known to be at risk for something and get them into the health care system and prevent the downstream consequences of whatever it is their risk relates to—that's the piece that's not working. And that's the piece where more innovation is required. And again, in an aging society like the one we live in, if we don't come to grips with that, that's what will bankrupt our system. Not the existence of innovation, but the failure of getting that innovation to the points where it can have most leverage in the health care system.

Esther Krofah 14:05

And we'll get into that conversation because it's really what's that downstream innovation? Everyone is excited about the promise of AI. Can AI help solve for that? But there's so many different handoffs across the entire process. Where do those handoffs start to break down? So, we'll talk about that in a moment. Dipen Parekh, I would like to bring you into the conversation, CEO of the University of Miami Health System. Delighted to have you here. You're a clinician. You see the entire ecosystem. Everything that we talked about ends up at the patient bedside, which you oversee. From your perspective, as you're running a health system, what is the biggest challenge that you're facing?

Dipen Parekh 14:41

Yeah. Thank you, Esther. First of all, I'm not just a clinician, I'm an active clinician. So even while I'm a CEO of a health system and lead the Miller School of Medicine, I still do surgeries, robotic surgeries for prostate, kidney, and bladder cancer. So, I do have a different perspective on all of this. I really don't see any challenges. All I see is opportunities every single place. And the biggest opportunity, the greatest opportunity, is improving patient access. So as an academic health system and a medical school, we have a dual mandate. We have to dream with our eyes wide open and our feet on the ground. So, on one hand, we are trying to improve access for patients. We're not talking about patients for primary care. We're talking about patients with brain tumors. We're talking about patients with retinal detachment, with macular degeneration, with breast cancer, kidney cancer. And we are not talking only about the rural areas. I'm in urban Miami, and believe me, the problem is as acute in urban cities as it is in remote places. So, these are patients, there's a huge demand-supply asymmetry. We don't have the workforce to take care of these acute conditions, even today. We can't send all of them to the emergency room. There's a huge burden. So, I think the biggest opportunity from where I sit is improving patient access. And while we are doing that as a research medical school, we are also then continuously, in parallel, thinking about innovation, thinking about new technologies and prevention, and all those things. But all these have to happen simultaneously. What I'm really invigorated by is the fact that, unlike others who rely on someone like me to execute, I have no other excuse but to execute. And I don't look at ourselves as a victim, but we have a warrior mentality in terms of doing all what we can to do the right things for the patients. And while I cannot change the entire world, that change can belong or can begin within our health system. And I'll just give you an example. If patient access is my greatest opportunity, what did I do? I would talk to about 25 founder CEOs of AI health care companies, and none of them wanted to tackle that because it's a hard problem to tackle. Everyone wanted to go towards ambient dictation, towards the easy problems to tackle. I found two founders who are willing to tackle the hard problems. We went from zero to one in terms of launching an agentic access agent in four weeks, and then in four more weeks, that agent is doing better than our human agent in terms of improving patient access. We just launched a surgical AI agent that covers the entire life cycle of an operating room. Everything. So, every surgery that you do, it is now integrated and linked to all the outcomes. It has huge implications in terms of education, research, high-quality care. High quality is very important because access to high-quality care is even more difficult than access to any quality care. We just launched that agent two or three days back in front of 75 other health systems, and there are other health systems that have been dealing with this for the past two years, but no one could get through IT integration. So, we can be the change that we want the world to be.

Esther Krofah 18:07

We have had His Excellency Mansoori from Abu Dhabi with us at the conference, and we had a conversation with him over dinner, and he talked about the incredible integration within their health system, where they have sequenced every child genetically. Everyone has access to their electronic medical record on their phone. They can track their prescriptions on their phone. They have the ability to communicate with their physicians in real-time. I asked him, “So who is your competitor from that perspective around the world? Who else is innovating beyond what you've accomplished?” He's like, “I don't see another country that's doing what we are doing.” So, as we think about that kind of fully integrated health care ecosystem, Bob, I want to start from you. When you develop a new product, it's cleared by the FDA, you're moving towards commercialization, where do things start to break down in our

system, and what is that opportunity for integration? Can we ever get to this vision of what's happening in the UAE? How are we getting in our own way?

Robert Bradway 19:08

Well, I'm not sure that we'll get to the approach that the UAE is taking, but there are a number of things we can do. I think where the system breaks down is what is causing what Dipen described. The reason that we don't have enough people to care for the acute events that are happening in his hospital or any hospital like it around the country is that the things that we could do to prevent the heart attack from showing up in an emergency room, or to prevent the stroke, or to prevent the woman who's fallen and fractured and broken a hip. The things that could be done to prevent those events from occurring include identifying the patients who are at risk. That's easy to do now, especially with the tools of AI. There are very simple ways to identify post-menopausal women who are at risk of a fracture, yet we have nothing in the health care system to enable us to identify and reach and bring those people in and introduce them to those preventive therapies that can strengthen their skeletons so that when they fall, they don't have an unnecessary fracture. Or even more acutely, as Nancy's organization has shown, the country loses $600 billion a year to heart disease, the leading killer of people in the United States. And yet, a large fraction of that heart disease is predictable and preventable. But we have a health care system that struggles with, what do we do with that? So, we could have all the genetic information, for example. We could know everybody in the room who's at risk of heart attack or a cardiac event because they carry a risk for high levels of lipoprotein A, for example, Lp(a). But without an ability to motivate those individuals and a health care system to do something about it, we will fail, and that patient will wind up in Dipen's emergency room with an emergency revascularization or something like that, that's costly, disruptive to the economy, and needless—pointless, because it could've been prevented in the first place.

Esther Krofah 20:55

What is the lever then to change that? Is it our payment systems? How do we change the payments to account for value-based care where the evidence is driving us? Is that the shift that we need to fundamentally get to this—

Robert Bradway 21:07

—It certainly has to include that. If you wanted to think about a big project for Alicia, for example, you could say, look, the average age of a first heart attack in the United States for a male, 65. Exactly the age where the US government starts picking up the tab. But it's too late when they're 65 to prevent something that you could've prevented if you had intervened a decade earlier. So, the question is: Are we willing to consider something very different? Something to say, “look, we can't afford to pay for heart attacks that didn't need to happen in the first place, or strokes that didn't need to happen in the first place.” Are we prepared to use the tools that are available to us to identify people and provide incentives for them and their caregivers to take steps, to take action, and prevent those downstream consequences?

Esther Krofah 21:50

Dipen, can you respond to that comment from a clinician perspective, which is this question around, how do we prevent—do you have an incentive to do that? You talked about robotic surgery, which sounds amazing, but we're talking about something that's much more upstream. Are you incentivized across your health system to help screen for cardiovascular conditions or bone frailty or any number of topics that matter from a population health perspective?

Dipen Parekh 22:17

So I just came to this event from a previous conference where I got a similar lanyard that I just threw in the garbage can. But when I came to this conference, the first thing I was told was, if I lose this, I would be fined $500 to get this back. So, I really, really made sure that I take good care of it. So, you're right. Incentives matter. *[Laughter]* Alignment of incentives matter. So, if you are going to tell a health system it's going to be a fee for service, people are going to not take that very seriously. As practicing physicians, none of us are doing more or ordering more to make more money. That is not the case. But at the same time, we also don't see any downside. That if we order more, we are not paying the bill. We are not footing the bill. So, I think aligning incentives is very important. I think it's critical to do that. But again, if you want to focus on high quality, that's why quality matters. This is the only country in the world where quality doesn't get any premium. You go to a top athlete, you go to a top lawyer, and there's a huge scale of how they are reimbursed based on their quality and the outcomes. This is the only country where I could be the worst surgeon in the world, and she's the best surgeon in the world, and we perform the same surgery with two completely opposite outcomes, and we get paid the exact same dollar amount. So, we really need to start there.

Esther Krofah 23:47

What I hear from you is that there is no quarterback responsible for the actual outcomes for an individual. No one is responsible. Maybe the patient is feeling responsible, and their family members are feeling responsible. But the health care system itself is not held accountable to the ultimate outcomes on behalf of that patient. We're not incentivized that way. Is that correct?

Dipen Parekh 00:24:04

No, that's not true. Because we—

Esther Krofah 24:06

—That's not true? Okay.

Dipen Parekh 24:07

No, because look, ultimately, outcomes do matter. There are things put in place, the readmission rates, patient satisfaction scores. There are many of these metrics. Now, are they the right metrics? That's what you really want to focus on. There are other metrics that could be put in place that really look at really tangible outcomes. For a cancer patient, getting on the right treatment at the right time, and the right outcomes is far more important than so many of these other metrics. So, I think there's an opportunity to have additional or better metrics that would align incentives and quality.

Esther Krofah 24:44

All right. Nancy, and then Myechia, I know both of you want to comment. Go ahead, Nancy.

Nancy Brown 24:46

Yeah. I would like to say that I agree completely on the issue of financial incentives. Another thing that we've done at the American Heart Association: over 20 years, we have 3,000 US hospitals, including 600 in small communities, that collect data and deliver care based upon our guidelines for heart failure, coronary disease, stroke, etc. And hospitals are recognized if they are delivering guideline-based care. I can give you an example. At the International Stroke Conference, the world's largest conference for stroke professionals, every year, all of the hospitals that have achieved gold status, meaning 95 percent or more of their discharge patients are going home on guideline-based therapy, they come from all over the world to get recognized. So, there's positive ways to recognize as well that I think is important to remember.

Esther Krofah 25:43

Yeah, absolutely. Myechia?

Myechia Minter-Jordan 25:44

Yeah. I just wanted to comment. I completely agree as a physician, everything that's been said, but I also think we need to remember the point that most of the health care outcomes that we're talking about are not happening or are not influenced by what's happening within the hospital system. They're happening outside of that. As we think about the social determinants of health, as we think about communities, as I

mentioned earlier, we have these 63 million caregivers that are delivering $1 trillion worth of care within the homes, and that's not being recognized. So, as we think about systems and we think about system redesign, we really need to focus on what happens outside of the hospital—what happens in the home. How are we integrating the innovation that we are creating to be delivered within the home by the caregivers who are delivering care? And really readjust our thinking as to, we can continue to play the cost and expense game within the hospitals, but if we're really focused on outcome and really focused on prevention, we're really thinking about what's happening in the community and in the home.

Esther Krofah 26:40

Yeah. And one of the things that you've talked about, Myechia, has been this health economy. How do we redesign that health economy to increase the health span, not just the lifespan. So oftentimes when we think about our life expectancy is declining in the US relative to other countries, or it's lower relative to other countries, and prevention is a big part of what we need to do differently if we're going to restore that increasing life expectancy. But that's not the only metric that matters.

Myechia Minter-Jordan 27:07

That's right.

Esther Krofah 27:08

Are you healthy? How long are you healthy as you age? That is a better metric, to the point that Dipen made. How do we redesign to think about the health span rather than just how much longer are you living?

Myechia Minter-Jordan 00:27:08

Yeah. It's a great segue from what I was just saying, in terms of healthspan versus lifespan. It's a 13-year gap. We're living longer, as you stated, perhaps less so than other countries, but in this country, we're living longer, but we're not healthy. And there's a 13-year gap in between that. And so, we really need to focus on, again, what's happening in the community. How are we bringing this innovation into the homes? How are we creating opportunities for older adults to be empowered as they are choosing their care, as they are focused on understanding the impact of chronic disease? How are we providing training and resources to caregivers who are often giving care without any level of training, without any recognition? And that report that we've recently released, "Valuing the Invaluables," where we were able to determine that value of $1 trillion worth of care being delivered without any training. And so, as we think about innovation, and one of the things that we've developed in working with 700 companies around the country is this age tech sector, where we are focused on technology for older adults and bringing that technology into the home. Being able to recognize and manage chronic disease in the home, being able to

empower caregivers to be able to deliver better care in the home. Understanding, again, how do we think about the factors in our communities? And we have something called livable communities, where we have over 1,000 communities that's focused on transportation and housing, and all of the factors that influence our health care as we age, and being able to create these age-friendly communities that they're designated as, based on those factors. And so again, as we think about health care, and as a physician and as an internal medicine physician, one of the things that's really important for me is that we are broadening the way that we think about health care to incorporate the social determinants of care, and to understand that that's what's determining health care outcomes, not what happens in the hospital. By the time we get to the hospital, there are issues that we'd have amazing physicians taking care of us around and helping to manage our health care, but we really want to go much further upstream. And what it takes is for us to be able to deliver that care in the lowest cost setting with people who are closest to, in proximity and to these family ties, the trust that's within community health, the trust that's between family caregivers and their loved ones, to be able to leverage that to be able to truly impact care and improve health care outcomes.

Esther Krofah 29:43

And Alicia, I'd love for you to build from that because what Myechia just laid out is this idea of integration that's happening in the community setting. You're responding to the needs within the community. You're trying to respond to the caregivers who, day in and day out, are really taking care of the vast majority of patients in this country. We need more innovation. We need that innovation to be at home. Longevity is an area of focus for ARPA-H. How are you thinking about ARPA-H's role in developing innovations to tackle the aging population?

Alicia Jackson 30:16

Yeah. Well, I think it's interesting that the top longevity drug today is essentially a GLP-1, which was not developed for longevity. It was developed for diabetes and then weight loss, and now we've discovered numerous other benefits, which are incredibly impactful. But nobody set out to design a longevity drug. That doesn't mean at all it's not possible. One of the major challenges here is that aging isn't a traditional disease, even though it is trying to kill you, which is—if you wanted to run an aging trial, if you wanted to test compounds that could stall aging, reverse biological age, you would need to run them for 30, 40, 50 years because your endpoint is essentially death. One of the things we're doing is we're putting $144 million into running the very first clinical trials, looking at a multitude of different drugs, rapamycin, SGLT2 inhibitors, potent antivirals, things that we've seen across a number of different small animals and large animal studies now that do seem to slow aging. But what we're doing is that we are doing very deep proteomics and other types of biomarker testing to identify, what are those causal biomarkers of aging. Can we develop an intrinsic capacity score here and use that as an endpoint that we can measure in three years, not in 20 years, 30 years, 40 years? And so that's very exciting to run those first trials because there's so much data behind these, but we don't have the human clinical trials today to even think about using these.

Esther Krofah 31:49

Well, critical for all of these topics is evidence. We need to know what works, but we need to know what doesn't work. So, Nancy, I would love for you to comment on this evidence-generation process and how do we translate what happens from an innovation perspective. So, you have a new product, we need to get it into clinical guidelines. From a cardiovascular perspective, oftentimes it takes maybe seven years, eight years, nine years for the latest evidence to make it into clinical guidelines for us to see this. So, you'll have Alicia develop a product, or you'll have Bob at Amgen develop a product, or any other sponsors. What is that process for us to get the best evidence into care?

Nancy Brown 32:29

Yeah. Thank you for that very important question, because it gives me an opportunity to talk about the expansive nature and the responsibility of writing clinical practice guidelines. Thankfully, the evidence is coming fast, whether it's from companies, from the NIH, or other places. So, I'll chunk this into three or four different ways we think about evidence generation. To set the big stage, the American Heart Association, American College of Cardiology together write clinical practice guidelines for cardiovascular disease broadly. That process used to take three, four, five years for a guideline to be updated, down to two and a half. And our North Star now is that every guideline will be reviewed, and if needed, updated every 12 to 14 months. Now, there are 20 guidelines that the ACC and AHA write together. Things from the lipid guidelines that were just released, prevention guidelines, guidelines for surgery, congenital heart disease, all across the spectrum, where experts come together to review the evidence and to make determinations if it's a level one evidence, if it's expert opinion, etc. That's a massive machine and massive undertaking that we have to get just right. So, there's a balance between speed and accuracy that has to happen just right. In addition, at the AHA, we write all the guidelines for stroke in America. So, think about when TPA came out and how that changed clinical practice. Think about the fact that you can now insert a clot in someone's brain and pull a stroke out as it's happening, and people walk out of the hospital the next day with their life intact. You've got to get the guideline just right, no matter how the evidence is coming along. We also write all the guidelines for CPR, which is a global process every five years. Resuscitation across the world—there's an organization that we founded called ILCOR, the International Liaison Committee on Resuscitation. All over the world, there becomes consensus on resuscitation science. And then, in addition to that, at the AHA, we publish 100 scientific statements a year on things like dietary guidance that just came out, ultra-processed foods, all the way to things like use of AI agents in cardiovascular care—a wide spectrum—and this science comes from the almost 40,000 science members of the AHA. As I said, the evidence comes in, it gets adjudicated by our committees for every single guideline statement, and it's all happening all at once. The process that—one of the things we've done to speed things up is concurrent answering of the questions. When you send a document out for peer review, peer reviewers send questions back in. “Did you mean this?” “What about this? Did you consider this in this trial?” Every one of those questions get answered, and depending upon the complexity of the guideline, it could be three, four, 5,000 comments that come in that have to get answered. And so, we're making a lot of improvements, and I think technology, of course, will help us, but it will never replace the expert helping to come to a decision on how something will appear in the guideline.

Esther Krofah 36:04

How would you respond to criticism or feedback that the process is still too slow? And are we appropriately using technology to expedite that process for clinical guideline?

Nancy Brown 36:17

Yes. We hear that, and we understand, and that's why we are focused on continuing to improve and enhance the system. It's also why I deliberately tried to outline the expansive nature of being accountable for writing evidence-based guidelines in America. It's not like we only do one a year. And so, we will continue to the level that we believe it's appropriate to continue to speed up the process. One of the things we've incorporated into our guideline process also is examination of evidence that the FDA has access to from companies that may not yet be published or presented at a meeting, so that we understand what's coming down the road. That's part of our process now. These things take time, and I know that there are some who wish that every moment a trial released a new outcome, that the guideline could instantaneously be approved or updated. Will we ever get to that point? I doubt it, because I think it's important for these things to marinate in the system as well. I—over 19 years of being CEO of the AHA and almost 40 years of working for this great organization—I have sat through so many late-breaking clinical trials that get presented at our meeting and other places, and things are blockbusters, and "oh my God, it's going to change the world". And then it marinates a little bit, and there are problems with it, or things happen. Maybe the study didn't include enough women. We could talk about that. So, the dream of an instantaneous "from presentation and publication to change of the guideline," I don't personally think that that's responsible. And I think it needs to take a little bit of time. We can always do better, and we will always aim to do better. But it may not ever fulfill the dream of what some have.

Esther Krofah 38:14

Yeah. I want to come back to the topic I laid out at the beginning, which is this idea of integration across the health system. So, all of you have done a fantastic job just giving us a little bit more under the hood with the issues in which you face. And Bob, I want you to start and just talk about, if we're going to deliver results—how do you deliver results to patients? What is your priority now for what you can do within your role as biopharma to deliver the results that patients are asking for?

Robert Bradway 38:40

Well, our focus is on innovation for serious diseases where there aren't good alternatives otherwise available today. So, we define serious diseases, for example, as heart disease, the leading killer of people in the United States, and serious diseases also include rare diseases that affect small patient populations. So, our objective is to try to develop medicines that make a meaningful difference for those patients. We're increasingly successful at doing that, and there's nothing more frustrating than being successful in creating and getting a medicine registered and then finding that it's difficult for patients to get access to them or

difficult for societies to figure out the context in which those data should be presented. So, I think what I believe you would find from our industry's perspective at the moment is, the greatest frustration is that disconnect between the availability of innovation and the ability of the prescribers and the system that cares for patients to be able to accommodate that innovation at the right time with the right patients.

Esther Krofah 39:40

And prices are not the issue as we think about the usual criticism for biopharma is that we have unaffordable prices. Is that the issue that we've been able to access to?

Robert Bradway39:49

Well, sure I'm sure there are issues for some patients in some systems related to the price of medicine. But there are other issues as well, and what we're talking about is trying to make sure that innovation gets to the right patients at the right time. Now, if you wanted to talk about problems in the health care system, we wouldn't start with prices for drugs. Drugs are 10 percent of the health care spend. So, 10 percent is probably not the place that you want to start. If you gave away every cancer medicine available in the industry today and just said, “We'll just give them all away for free, and we won't do any more innovation in cancer,” you wouldn't move the needle at all on the health care spend in this country. You'd move a fraction of the total cost of medicine. And you would gut the potential for future innovation in that disease area. So, I think what we would say is, let's look where the dollars are being spent. So, if it's 10 percent of the health care spend in the United States is on medicines, what are some of the other big areas? Well, billing information and records, alone, are 17 to 21 percent, depending on whose estimates you want to look at. So, nearly double what we spend on drugs, we spend on transaction processing. You heard Dr. Makary say earlier, there's nothing more frustrating for a physician than having to click 20 buttons to get a prescription written for a patient. That's insane. And the aggregate cost of that is $500 to $800 billion a year in the United States. $500 to $800 billion a year on that transaction complexity. So, again, we think there's a huge opportunity to disrupt what is giving rise to that problem today, and in so doing, freeing up resources for the health care system to address your question about prices and our concern about access.

Esther Krofah 41:30

Right. And of course, as people say in the US, it's always prices when you think about comparing prices to the rest of the world. And there are strategies on the drug side, but there ought to be other strategies on the hospital side. So, it's not just about drug costs, it's about costs across the entire system.

Robert Bradway 41:46

And allow me, please, just to respond to that.

Esther Krofah 41:48

Yes.

Robert Bradway 41:49

So 93 percent of prescriptions in this country are for generic medicines, medicines that are off patent. Our generic prices are, in many cases, the lowest in the world. So, we have a system in which intellectual property is protected for a defined period of time. After that intellectual property has expired, the prices fall to whatever price the manufacturers are able to make the medicine at. So, you see, for example, 90-plus percent drop in price after patent expiration. Fair enough. But the same thing doesn't exist elsewhere inside the health care system. So again, I think we can talk about drug prices, and we should. We should have the discussion about whether the society, the nation, is getting value for its money when invested in drugs, and I'd be happy to have that conversation. I think it's one where the data are on our side.

Esther Krofah 42:25

Yeah. Excellent. Nancy, how do we deliver results for patients, and should we invest more in prevention? What is it that we're not doing?

Nancy Brown 42:42

Absolutely. Bob said it earlier, 80 percent of cardiovascular disease is preventable, and we're not investing in incentives to help identify that risk earlier. And we've got to inspire people to want to live a healthier life. And there's a lot of things happening all over that ecosystem to help make it happen. But at the end of the day, people have to be inspired to want to be healthy, and they need to have a partnership with their health care provider or community health center so that they understand and see the possibility. We also need people to understand the importance of taking the medications that physicians have prescribed for them. I'm surprised Bob didn't talk about the discontinue rate of prescriptions that are provided for people. There's important work happening within our government right now on things like new food labeling, definition of ultra-processed food, because food and food consumption is a big part of people's risk for cardiovascular disease, and we're proud to be partnering with the administration in those areas. So, there's a lot that needs to be done and a lot that health systems can do to screen people for access to healthy food, creating programs where people know where to go to get the support that they need.

Esther Krofah 44:00

We've talked about prevention for so many years. Are we ever going to be at the point where we actually pay for screening and early diagnosis and—

Nancy Brown 44:09

—I hope so.

Esther Krofah 44:10

Well, how close are we?

Nancy Brown 44:12

I don't think we're close at all. In some of the value-based models, it would be imperative to be paying for prevention and keeping people out of the hospital and not coming back to the doctor. I appreciate, and we admire all of the models that are out there testing these things, and I don't know that we have seen one that is going to make it work. We don't even have great models for helping people with serious diseases like congestive heart failure meet that staying out of the hospital for 30 or 60 days. We have patients who go home, and they're struggling with remembering that they have to weigh themselves every day and watch their fluid intake, and that balance between fluid in and fluid out could take them back to the hospital in a day or two. Caregivers don't know how to manage that, and patients don't have the tools.

Esther Krofah 45:01

Alicia?

Alicia Jackson 45:02

So I just want to build on this, which is, there is a giant gap between what we see in the innovation landscape, AI—you talk to anybody building an AI drug discovery company, they've solved everything. It's going to be fine, right?—and everyone over here. And then you hit reality, going into the hospital. Huge gap. And we exist to bridge that gap however we can, and I specifically want to talk about heart disease. Everything you said is correct. A lot of these things are preventable. AI can help with that, and so that's why we've partnered with academia, giant companies—these will be announced soon—to build the first agentic AI clinician that is FDA authorized, working hand-in-hand with FDA, because there is no regulatory path for this today.

Esther Krofah 45:48

Right. That's right

Alicia Jackson 45:49
And so that's a really unique thing we're able to do, which is partner with FDA, partner with the best minds, the best companies, and see if we can build this clinician that actually could reach every single American—those without a cardiologist in their county, over 50 percent of counties don't have a cardiologist—and prevent these things. And so going back, I think the future's bright, but we have to be very clear about how to bridge that gap and using technology to do that.

Esther Krofah 46:13

Yeah. Myechia, I'm going to come right back to you. But Dipen, I want you to respond to that because everyone tells me that one, AI is here, AI is making a difference, AI is going to solve all of our problems in health care. What I see is a lot of AI used in operational efficiencies, back-end activities. AI is used for automation, right? Ambient listening, for example, revenue cycle management. As a clinician, is AI helping you deliver better care to your patients? Is it there yet?

Dipen Parekh 46:49

Yeah. So, the way you want to answer this question is AI, you want to break it up into three buckets: access, efficiency, outcomes. Access—right patient to the right provider at the right time. Access also means someone who left the hospital and has a problem and doesn't know what to do with that. That's an access piece as well. Prevention, compliance with medication, getting the right medication, all those things fit into the access category. So, we are solving for that through Scope Health, which is helping us with our call center and our agentic access solutions. But that's the access bucket, so that will definitely impact patient care. Efficiency is what you mentioned. Ambient dictation, billing and coding, prior authorization, and that's very important because right now, doctors are spending two to three hours every day doing all these mundane tasks. And so, imagine if you divert those two to three hours into actually taking care of patients. Indirectly, it does help taking care of patients. And the third one is the outcomes, where, that's what all of us in the room really want to see—actually driving patient outcomes. So, we are doing a lot in pathology, in radiology, the surgical AI agent that I mentioned, but it will take time. As Alicia mentioned, it's easy for companies to invest in all these efficiency outcomes because they are verifiable, they're measurable, they're predictable, and they're quick to know right or wrong answer. But many of the interventions that you do on the clinical side, there's a long lead time, there's a long latency period. It can take decades for us to find the answer, but we can have surrogates or surrogate endpoints that can predict those final outcomes that can give us to a conclusion far earlier on. So, we will do that. But coming back to AI, I think as Alicia pointed out, it's something on the left where everyone is going to solve biology and

health span and lifespan in five years, and then the reality hits. I think in the short term, AI is going to disappoint both the optimists and the pessimists. But I think in the long term, AI is going to destroy the pessimists. You don't want to think about AI. Many people in this conference have talked about, “Oh, AI is only going to increase the equity gap.” I don't think so. Don't think of AI as a private jet or a private yacht. Think of AI as an electricity that does not differentiate between someone with a chandelier sipping champagne or someone somewhere in a streetlamp, and some student reading under the streetlamp to go to a medical school in a remote part of the world. That's how we want to think about AI.

Esther Krofah 49:22

Yeah. Myechia, I'd love your perspective on this topic.

Myechia Minter-Jordan 49:22

Yeah, I want to just bring it back to, I'm really fortunate. AARP represents over 125 million Americans over the age of 50, and I'm able to go into people's homes. I'm able to visit with caregivers. I'm thinking of a caregiver that I visited in Florida, and I sat with her in her home and watched her and discussed with her how she navigates the health care system. The affordability is an issue that we can no longer ignore as we think about designing systems for patients, and she's concerned about, how is she going to afford the medications for her mom? She was concerned about, how do I make sure that I understand which medications interact with another medication? How do I get my mom transportation to her medical appointment? And so, when I think about health care system and health care system redesign, most of the care that we will be delivering as we move forward in leveraging AI, leveraging technology, would and should be delivered in the home. And so, as we're thinking about the hospital system really should be the last resort of places where we get care. Most of that care should be delivered in the home. And how do we make sure that the tools and technologies allow us to be able to do that, allow us to pull the caregiver into care, allow us to ensure that we have affordability at the forefront of our minds as we're developing guidelines and practice guidelines for people to employ for themselves? How are we thinking about the community services that need to wrap around these individuals to be able to age in place? We know most of us want to be able to age in place, and so how are we creating systems that allow us to do that and empower us to be able to make those choices? And so, I always come back to that as a physician of, how are we thinking about what do we want? What do you want for your care, and how do we design the system that allows us to be able to get the care that we would want for ourselves?

Esther Krofah 51:10

Do you see any promising models there? What are you seeing in connected care at home—

Myechia Minter-Jordan 51:12

—I do. Yeah, I'm really excited about the work that we do through our Age Tech Collaborative and watching the companies design care to ensure that the physician can speak to the individual in their home, which then obviates the need for the caregiver to have to take their loved one out of the home, and providing care, providing education and training to caregivers, leveraging tools and technology. So, I'm excited about some of that. I'm excited about some of the ambulatory services that I see going into the community to do mammogram testing or to provide low-intervention services within the community, which then highlights the fact that people have that greater accessibility that we deserve and that we need as a society to become healthier and to be empowered as we make choices. So, the more that we can think of that health at home, and what does it take to be able to amplify that, improve the outcomes of that, then we will be further along in the health care continuum that we are on this journey on.

Esther Krofah 52:05

Well, in our final two minutes, I want to go rapid-fire down the panel. As we think about, as I asked the commissioner earlier, in the next 12 months, what are you the most optimistic about? What should we be watching for from your sector? Bob, let's start with you.

Robert Bradway 52:31

Ongoing innovation, potential advances against a form of heart disease caused by high levels of Lp(a). We have a therapy that reduces by 95 percent that lipoprotein. If we can demonstrate in clinical trials that that leads to reduced heart attack, stroke, unnecessary revascularizations, that'll be a big moment in the field, and I hope it won't take eight years for that to get into the guidelines.

Nancy Brown 52:44

It won't, I promise you. Right here on this stage, Bob Bradway.

Robert Bradway 52:47

I'll hold you to it.

Esther Krofah 52:49

That was a very public commitment there.

Nancy Brown 52:51

That's all right. That's good

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Esther Krofah 52:53

All right, Nancy, what should we be expecting out of the American Heart Association, next 12 months?

Nancy Brown 52:57

Yes. The AHA will continue to do its job to get evidence into practice, but I would say also through our investing arm, AHA Ventures, we're really betting our own money on some solutions, especially in the area of women's health, which is often misrepresented, underappreciated. And as you said earlier, women are 51 percent of the population. They have a lot of heart disease and a lot of strokes that could be prevented if we had solutions for them earlier.

Esther Krofah 53:24

Excellent. And what can we expect from you, Alicia? And we're seeing incredible announcements come out of ARPA-H.

Alicia Jackson 53:31

My big one is clinical trial innovation, both technological and regulatory. The government is really focused on this today, and we have a wealth of data and tools that really enable us to rethink clinical trials—that really the model is from roughly 60 years ago, and we all know we can do better. And so, I think you're going to see a major push there, and that's very exciting for everyone in this space.

Esther Krofah 53:51

Yeah. Excellent. Myechia?

Myechia Minter-Jordan 53:55

Yeah. We're going to continue the fight for the 50 plus in this country, raising visibility around the longevity economy, the power of the 50 plus, fighting for caregivers. We're fighting for a family caregiver tax credit to ensure that caregivers have the resources that they need to be able to deliver the care that they are delivering without any support or without it being valued.

Esther Krofah 54:16

Dipen?

Dipen Parekh 54:17

I would say in the next 12 months, two pet projects for me. Scale the agentic AI with Scope Health across many of the verticals. And number two, working with a consortium, BioCog AI company, that does all genomics, any omics, so genomics, proteomics, metabolomics, anything on the genome side, and connecting it to the electronic medical records and solving rare diseases. BioCog AI. So, we are going to work with them, and they're going to form a consortium, and I hope many of the health systems join that consortium.

Esther Krofah 54:47

What a terrific panel. Thank you so much everyone for joining us. My big takeaway is, change the incentive. If you know replacing your badge costs $500, it changes behavior immediately. Thank you so much, Bob, Nancy, Alicia, Myechia, Dipen. Really appreciate your insights. Thank you.

Announcer 00:55:06
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