MARK MCCLELLAN
Let me begin by welcoming all of you who are with us today for this Fall Meeting of the National Academy of Medicine Leadership Consortium for a Value and Science-Driven Health System. This is a particularly important time for the work of the Consortium, as you'll hear about today.

Welcome, as well, on behalf of the National Academy of Medicine team, led by Dr. Michael McGinnis, who we will be hearing from momentarily. And this is a kind of new format for us with much more of a web presence. We have a number of additional participants in the meeting today, welcome to all of you, and I hope you'll continue to be part of our activities with the Leadership Consortium going forward in this and some new virtual formats. We're getting through the pandemic.

I'm the director of the Duke Margolis Center for Health Policy at Duke University and I have the privilege of working with the very diverse group of leaders who are part of the consortium, you'll be hearing from many of them during the course of the day, as well as some special guests and we'd like to thank you for being here with us today as well.

We're going to focus in this meeting on the effects of the COVID-19 pandemic on the healthcare system and reflect on both the challenges this crisis presents as well as the opportunities, it's opened up to drive transformation towards a more equitable efficient and effective healthcare system.

Before we get started, just a few housekeeping items, please mute your line when you're not speaking. Remember to unmute when we call on you to speak will remind you about that as well. For those of you who are joining us and the broader audience today, please use the Q&A feature in zoom to type in any questions or comments that you'd like to bring to the attention of the group. And we'll try to get to as many of those questions as possible for consortium members the panelists. Remember that you have the chat feature available for messaging, the host of the meeting as well as other panelists, so make sure you're signed in using your unique panelists link so that you've got that capability available if you sign in through the, the, the general registration link by chance, please contact, Ariana or Therese via email for further instructions. So I'm going to come back to the agenda in a few minutes. But before we get into the details of the meeting. I'd like to turn to Mike McGinnis for a broader overview and update and welcome to the group.

MICHAEL MCGINNIS
Thank you very much, Mark and I want to thank all of you for joining in the session both those with the leadership consortium and those who are engaged in the public. This is a really wonderful opportunity for us to work with multiple sectors and contend with some of the most compelling challenges of the nation.

As Mark alluded to earlier, we were dealing with a situation of novel venues, which is a good thing in some ways also has its own unique challenges in the way of basically got three things I want to cover one is welcome and thanks to all of you. A second is a little comment on the venue issue and its implications and then mostly an update on the Leadership Consortium and the work that we're doing through the
consortium and the National Academy of Medicine with the Leadership Consortium members, their constituencies, and the sectors that they represent as well as many of you who are tuned in today for the session. By way of thanks, I want to especially thank not only those of you who tuned in. But our chair, Mark McClellan who’s provided fabulous leadership and guidance to us throughout the course of our work and of course he’s drawn in many directions to provide that leadership and guidance and many other venues as well. And so we’re privileged to have your guidance, Mark. Thank you very much.

I also want to offer thanks, and welcome to our new staff. We have two new staff. Ariana Bailey, who is having the maiden voyage, if you will, and fielding the logistics and Asia Williams, who has come in as a research associate is helping throughout the work as a whole.

And finally, I want to welcome, not a new staff but in a new role, Ayodola Anise, who has agreed to sign on, after a little arm twisting, to serve as my deputy. So again, thanks, and welcome to each of you.

The venue that we’re dealing with is one that obviously all of us have deep experience now with the virtual world and we find not only that, it’s efficient in some ways, but it’s clearly fatiguing as well. So we’ve shortened our meeting and we’ll be talking in our executive session later on about the best ways to move forward in in the scheduling and cadence of our Leadership Consortium meetings. We do want to take advantage of the virtual opportunities, but we also want to, as conditions improve vis a vis the pandemic. We want to make sure that we do have the opportunity to bring people together, obviously, today we’ve taken advantage of the circumstances by opening it up to the general public, our meetings are always filled with very rich conversation and informative engagement of key issues. And so it’s desirable for us to share that to where we can, and we’ll talk more about that.

So that brings me to the slides for update and although I’ve got 10 slides, I’m going to be very quick. I guarantee you that I’ll keep it to an average of no more than 30 seconds.

Okay, the Leadership Consortium is made up of stakeholder leaders in public private independent organizations from key health sectors collaborating under the auspices of the National Academy of Medicine for action on their common interest in advancing effectiveness, efficiency and equity and health medical care and biomedical science. We’ve been operating now for a little over a dozen years and we’ve been uniquely positioned in that respect, and that will become apparent in just a second. Next slide please.

For the time of our operation, since 2006, we’ve operated under the vision of a learning health system. A learning health system is one in which science informatics incentives and culture are aligned for continuous improvement innovation and equity with best practices seamlessly embedded in the delivery process individuals and families active participants in all elements and new knowledge generated as an integral byproduct of the delivery experience. Next slide please.

Our focus has been collaborative action. Next slide, you’ll see that as I run quickly through these other slides.

And the collaborative action is oriented around those four dimensions of science informatics incentives and culture. I’m not going to go through the elements of all of these slides in the interest of time, because you’ll have them available will send them to everybody afterwards.
But just to note that there are commonalities throughout all of the four areas, we have an evidence mobilization action collaborative to advance to work on science we have forged anchor principles for stewards of evidence development and we are in the process of developing core indicators of progress in addition to developing projects around important for the major gaps in our policy and program leadership. Next slide please.

In the issue of informatics, it’s essentially what you see here is the same framework for activity with anchor principles core indicators that guide our digital health action collaborative in a series of key activities that are engaging fundamentally important issues to the field artificial intelligence and machine learning, the issue of health equity AI and algorithmic rhythmic integrity and so forth. Next slide.

In the incentives arena. Again, we have developed anchor principles that are be rolled out through networks of collaborating organizations developing a series of core indicators that will use for assessing our national progress and we’re in the process, as you’ll hear in a minute of developing a substantial focus on the issue of financing that rewards better health and well-being, what are the payment structures that are most important in this respect. Next slide please.

In the culture arena. Our culture inclusion and equity action collaborative again anchor principles and core indicators a series of activities that are aimed at activating and providing tools for patient family and community engagement as we’ve all learned is so essential for progress in every dimension of our activities. Next slide please.

COVID-19 has presented us with a perfect storm that provides poignant and painful reveal of system that is highly resourced but highly fragmented. Medical supply lines, care financing, and system that’s underlined put the population health groups who are vulnerable from systemic bias and neglect. And you can identify, each of you could identify two or three more for the challenges that have been put into stark relief by our experience a common lesson is that science informatics and incentives and culture matter. A lesson that may be even more compelling, certainly for our discussion today is that their alignment matters even more.

So our focus at this point in this meeting is on the issue of strategic alignment aligning science informatics incentives and culture. Through the sector assessments that we're going to hear about today because we are uniquely positioned as an organization with sector representation in the leadership of the key sectors represented to be able to assess in progress the challenges that are being presented by the covert pandemic and not just the challenges in terms of responses to pandemic and infectious disease circumstances, but really systemic challenges that require attention as we move forward.

So you’re going to hear today the reports from an extraordinary set of sector leaders about the work in progress. We’re going to also discuss a little bit about the sector and system wide priorities for transformation which will become an ever increasing focus and then we’re, we will not talk about today, but we will keep you informed about our progress and developing a focus on financing that rewards effectiveness, efficiency and equity in health. So, next slide please.

The day will have us reviewing of the sector leadership and assessments in patients and families and communities, clinicians and professional societies, care delivery organizations, digital health, state and local public health, health care payers, health product manufacturers and innovators, health and biomedical research, and quality, safety and standards organization. So again, thanks to each of you for
being with us. And special thanks, of course, in advance to our sector leaders and collaborators who will hear from in a bit. Mark, let me turn it back to you.

MARK MCCLELLAN
Right, Mike. Thanks very much for that. Overview lots of work going on. So I just go over the agenda for today in a little bit more detail.

We're first going to have the privilege of hearing from someone who has been very busy lately Surgeon General Vice Admiral Jerome Adams.

Jerome has been very active and trying to convey the important public health messages in this pandemic, as well as the important public health messages that were present before and we still need to pay attention to in the pandemic, as well as some really thoughtful views on where we are and how to move forward in light of COVID-19 and the road ahead and this unprecedented national crisis.

Next we're going to hear from leaders in the field, representing the nine key sectors of the health and health care system responses Mike just went through on the previous slide, they're going to summarize some of the lessons learned and opportunities for further progress and improvements based on the work that they've been doing. And we'll have some discussion about that as well.

Then we're very pleased to have Joanne Kenen from Politico with us to share some reflections from her perspective on the pandemic and discuss some of the implications for national transformation again.

A good basis for further discussion along the way. I do want to remind you see we have people starting use it already that Q&A button is good for asking questions for us to answer either electronically, or to try to build into the discussion that we're going to have today. So with that, I'm very pleased. I think we have the Surgeon General with us now.

Maybe I will go ahead and do a brief introduction, while hopefully Ariana, I know we can make sure that we are getting Vice Admiral Adams connected properly, but just by, by way of introduction for the Vice Admiral. He's the 20th Surgeon General, the nation's doctor, which is what this position became. His mission is to advance the health of the American people with the motto that better health through better partnerships is a good way to drive that. I know from prior Surgeon Generals that I've worked with that they typically have more events and talks around the country meetings than there are days in the year. I'm sure it's an interesting change and how to make those connections with the era of the pandemic and much more virtual contact and limits on how much actual event interaction can occur. But as you all probably seen that the Surgeon General has been very active in public service announcements engagements with a very wide range of communities and working on new partnerships and strengthening existing partnerships involving business faith, education, public safety and national security communities.

The Surgeon General oversees the operations of more than 6000 uniformed health officers who serve in nearly 800 locations around the world on promoting protecting and advancing the health and safety of the United States. Dr. Adams is focused on building a culture of health and prevention in all sectors and as part of these efforts. He's compiling a report of available evidence and best practices on the connection between private sector investments and public policies, with the goal of inspiring not only research but providing tools, providing resources for effective community health investments again health in all policy areas and all community activities as a result of these new kinds of collaborations and as we, as Mike talked about his opening remarks.
The COVID-19 contacts is both highlighted the importance and the need to build upon those kinds of resources where we don't have them today. And it’s also launched some new opportunities for making progress in those partners ups and let me just check back with Ariana. Do we have the Surgeon General connected yet?

Mike, I don't know if you want to, if we want to just pause for a moment here in the hopes that we'll get him on soon or if there's another item that you’d like to go on to a little bit more in depth.

MICHAEL MCGINNIS
Let’s move directly to the sector updates, and then when he's available, we can break in, because even though there’s an important flow and continuity to them, they are individually arranged so we can have sort of a pause at the appropriate juncture.

MARK MCCLELLAN
Okay, we'll do that. And for those of you who are involved in this sector updates. I see David on I think we'll be starting with you. But Mike, did you want to provide a few introductory comments ahead of the updates.

MICHAEL MCGINNIS
No, I think we should move right ahead. I was underscoring in the course of my comments earlier, the fact that the National Academy of Medicines Leadership Consortium, of which you are all important members is unusually well positioned to have the finger on the pulse of the challenges in each sector and similarly well positioned because of your leadership roles. Not just in your sectors, but throughout society to have a sense of the cross cutting employee implications and the notion of how we move strategically across sectors to make progress. So just without underscoring we can go ahead, Mark.

MARK MCCLELLAN
Okay, great. That's actually maybe a good introduction to the Surgeon General's remarks, so David, would you mind starting off.

DAVID SKORTON
My pleasure. Thanks so much, Mark. Thanks Dr. McGinnis and everyone who has organized this thing so well it's incredibly important to the country and I want to thank you for all the work you've done. In order to save time, I hope that my colleagues who are co-lead authors on this will forgive me for not enumerating everybody's name but there were as a large group of people are responsible for this and I just the person fronting it this morning to share the documents for the overall consortium. You can see the names of the other authors and also they will join me in thanking the incredibly effective NAM staff and helping us to get to where we are. So just a couple of slides.

The challenges related to patients, families, and communities, which of course is the main point of everything that we’re doing is what I’m going to be talking about. First of all, a critical sector demographic vulnerabilities were revealed by COVID-19. The disparities that were not created by COVID-19 but were shown in bold relief. Where I for one example, excuse me, and communities of color and indigenous communities experience disproportionate rates of infection hospitalization and death rates. And very importantly, we find that patients and families and communities themselves were not enough or frequently enough or effectively enough included in key decision making.
Next critical sector: communication and collaboration vulnerabilities, the disparities that I just mentioned, and the well-recognized lack of inclusion of community voices, patients voices, and family voices have been factors that have contributed to a lack of trust, not only in public health, but in health care systems in general. And that of course has many, many ramifications, for example, people's willingness to adopt medical advice, even, for example, to the point of using vaccines. And there has been unfortunately a proliferation of misinformation or confusion on the severity of COVID-19, the status of testing and treatments.

Finally, on this slide, the critical sector policy vulnerabilities that we found were unequal access to adequate supports, economic supports, information supports, and so on sometimes fall into the category of social determinants of health. And then, of course, more specifically, insufficient access to adequate testing and to affordable treatment. This latter point is especially important, since a roughly half of the country gets its health care coverage from employer sources and the economic downturn related to the pandemic has taken many, many people off the employment rolls and therefore off the insurance coverage rolls. If I could have a next and last slide please.

Thank you, um, in terms of lessons learned these specific priorities for transformation. We believe that it's very important to have more effective engagement of patients, families, and communities and responding to this and other emergent events. And in fact, this year, as we roll out our strategic plan at the Association of American Medical Colleges. We're expanding the traditional tripartite mission of academic medicine that is medical care, research and education, to include community collaboration as a co-equal leg of the stool.

Secondly, transformation of home and community based services, nursing homes, reframing to better suit the needs and the desires of patients and their families. And I want to emphasize again that the way to find out about desires and needs is also to ask and include the voices of the people themselves not only expert voices.

Finally, reduction of long standing really unconscionable disparities. Which my generation, for example, working on this for decades. I and others did not get the job done. We need to push harder on this. Now, finally, last point is a system wide priorities for transformation. Therefore, meaningful inclusion of patients, families, and communities that is their voices in decision making across all sectors of the study. And finally, of course, increase access to care and conditions that support health whether without a pandemic. So those are our findings. I appreciate the chance to share them, Mark and Michael.

MARK MCCLELLAN
David, thanks very much for that concise summary and we are going to go back to the Vice Admiral now. I really appreciate him joining us and actually this is good introduction to his comments, but I would just add to David's remarks. So we started off with this one because it is really something we intend to embed in all of the sector updates that you're going to hear about later on today, but right now with that introduction.

Vice Admiral Adams, we already said a lot of nice things about you and all the critical work that you're doing at this uniquely challenging time and actually think David's comments for a good setup to some of the things that you've been working on. So thanks for joining us.
It is absolutely my pleasure to be here. Thank you so much for your patience. It's been an interesting day. My wife started cancer treatment today for a recurrence of her metastatic melanoma and I also had keynotes this morning on tobacco control, and on Recovery Month and opioid overdoses. And so you all are my last big event today, before I go to meet up with her.

But I want you to know that each of these things is incredibly important to me and my wife also has someone who said, Look, I've got friends here to go with me. I'm going to be fine, it's incredibly important that you are there to talk about this issue to this very important audience. And I just want you to know. I'm glad to be talking to my friends at the National Academies again, albeit in a virtual manner and at a very trying time for all of us were tuning in today to discuss the state of healthcare, healthcare delivery and healthcare systems and their nation grappled with a terrible new reality.

Just this week our nation passed the sobering milestone of over 200,000 lives lost to COVID-19 as many of you have heard in the news. Now the third leading cause of death in the United States. SARS-CoV-2 has shaken our world to its core. And we've struggled over the past nine months in a race to protect human life from a new and deadly adversary. Indeed, we know that COVID-19 has caused the level of strife and suffering unseen on our planet for over a century.

As when facing any unknown adversary we're forced to engage in. However, educated, they may be trial and error guesses on how to fight back. We take lessons learned from situations that seems similar and we try to apply them to see if anything works. But unfortunately, the reality is when you don't know something, you just don't know it takes time to work through the scientific process and to uncover data validated answers, to gather and verify information about who is most at risk, how we can both prevent them from falling ill and how to best treat and care for those who do become infected.

I personally, as your Surgeon General, worry greatly about assaults from all sides on the credibility of science and on health and science practitioners and institutions. Many of the debates that you're seeing occur right now on a national level I worry are going to have impacts decades into the future on the credibility and people’s faith in long trusted institutions.

And I hope you'll discuss how each of you and the National Academy of Medicine in particular can help lead a de politicized conversation about the scientific process and help people understand that being wrong is a normal part of that process, but having the vigilance to keep looking for information that disproves what you think to be true as well as having the humility to acknowledge it and to change course if actually what makes a good scientist.

For example, we now know that the virus, unlike its relatives, has a high degree of asymptomatic spread. We were wrong on that one. But it wasn't due to incompetence or due to nefarious intentions. It was due to again relying on what we knew to that point. But continuing to follow the data into let people know when the data showed that we were wrong.

We know now that the virus may spread through both large and small particles in the air and that mask or an effective way to prevent spread between individuals. We know that patients laid on their stomach versus their backs have an easier time breathing and can recover more comfortably and more quickly. And we know that we achieved better outcomes we delay ventilation support. All of these things have allowed us to decrease the number of deaths that we have actually anticipated in this country. Remember back in March, April, there were many people, many of your organization's many of our organizations that were concerned that we could have had millions of people dead in this country at this point. So while we need
to be respectful of, cognizant of, and appropriately sorrowful for all of the lives that have lost because one preventable life lost is too many. We need to remember that we've come incredibly far in eight months from a average fatality rate of 30% at one point, just in the past year down to less than 5% if you get diagnosed with the virus.

That there's also still a lot we don't know. We still don't understand why the virus is so vicious in the bodies of some while others won't even experience the most modest of symptoms. They won't even know that they have it. And we still don't know what the best course of drug treatment is to give those who succumb so that they have the best chance of survival.

We have more options than ever, but we still need to work to improve the tool chest and also to figure out which tool to take out of the tool chest for which situation. But the most profound realization that we must now except if that the old state of our health and healthcare systems and especially our social infrastructure was inadequate to sufficiently protect the health of all Americans, we all just quite simply need to own that. And that is to say that, as a nation, we have the obligation to care for the health and well-being of our citizens by ensuring equitable opportunities to care for oneself, but the outbreak of coven 19 has demonstrated in stark contrast that that simply isn't the case.

In the US, the COVID-19 rate of infection is three times higher and predominantly black community versus white ones and the mortality rate is a staggering six times higher. What is perhaps more staggering is that even under ordinary circumstances, the life expectancy of people who live near blocks away from each other. Such even the highly racially segregated neighborhoods of New York or Chicago or Indianapolis can vary by over 20 years nearly by walking a few blocks.

It can be tempting to chalk up some of the disheartening disparity of infection and mortality rates for COVID-19 is simply side effects of the life choices that people of color in these communities may have made.

After all these communities also tend to have higher rates of smoking, obesity and hypertension. Perhaps these communities would not have been so hard hit by the onset of code 19 if they just taken steps to be healthier some postulate. Well, we know that people can only make choices based on the opportunities presented to them or to put it, I often say it, I strongly believe in personal responsibility, but I also believe the choices people make are 100% predicated on the choices that they have in front of them.

Predominantly black and brown communities are more likely to live in food deserts and lack access to healthy affordable foods. In addition to being more likely to lack walkable communities, making them far more likely to suffer from diabetes, hypertension and obesity making it far less likely that they can make healthy choices. The same healthy choices that we have when we choose to go out and take a walk. When we choose to go out and eat a salad. When we choose to engage in activities that we know are health promoting.

The fact is preexisting medical conditions are more often than not the result of preexisting social conditions. Now in the COVID-19 error mitigation measures like social distancing and telework. For instance, simply aren't available to low income black and brown people living in spaces that are on average smaller more crowded and they're less likely to be in jobs that allows them to work from home.

The lion's share of people of color are falling ill and dying from COVID-19 at higher rates than their white peers, because they're being reckless, or because they've made uninformed choices to put themselves at
risk. Rather, as a society, we have created the perfect storm of conditions to disproportionately affect black and brown folks at the hands of a pandemic, because we’ve denied them the opportunities to build resilient communities.

And that’s where meetings like the one you’re having today come in meetings of the mind among leaders change agents from many sectors allow us. And in fact, they should force us to take a hard look at where our systems have left behind and failed too many. Meetings like this are unique opportunities to right the wrongs of systemic disenfranchisement. Especially in the healthcare sector as healthcare and medical professionals, we know more than most about the intersection between community wellness and health.

We know the importance of exercise and a healthy diet and that’s access to the means of a healthy diet can have on an individual’s health. The value of preventative intervention versus the much higher cost of treating an ailment down the line is something that we often talk about what our systems aren’t designed to reward wellness and prevention, they’re designed to reward sickness and emergent care.

We’ve also failed in our larger understanding and leveraging of how the American economy functions and how that can and should influence our response to disasters such as epidemics. For example, there’s been a lot of debate about the failure of the federal government to stockpile personal protective equipment. Yet, at no time has the federal government ever had the capacity to procure or stockpile more than about 1% of the total personal protective equipment in circulation.

The sad reality is that while some health care personnel were working week straight or walking around and reused and makeshift PPE. A few hours, and sometimes just a few minutes away. There were furloughed healthcare workers and boxes of unused supplies sitting on clinic and surgery center shelf that were closed. There are certainly lessons to be learned in terms of preparedness on a federal scale.

Believe me. There are also lessons to be learned about the expectation for the fence to swoop in and be saviors and mobilized and production of supplies and an unforeseen capacity overnight. The truth is, and the system we currently have the private sector and local communities have always had a greater ability to do that in a situation that requires a nationwide response than the feds do. That’s why those of you in this meeting, need to be the ones driving the conversation about how we move towards more sustainable business models in our practices.

Businesses that compensate for population health instead of operating on fee for service healthcare delivery models that meet people. When and where they have their need instead of being an inconvenience. That is pushed aside until it's too late.

Looking at incorporating preparedness protocols into all of our operating practices so that we are in a better position for the next pandemic, whether it’s viral or whether it’s due to some other unforeseen catastrophe. And we need to look intersection Lee across our industries and within our companies and organizations to address ways in which we can consider incorporating the principles of equity. And prevention into the policies which impact our employees and our communities.

I applaud the work of the National Academy of Medicine for spearheading this look into key sectors to address the challenges that our health systems face but also recognizing the opportunities for improvement in value care delivery and outcome. Our greatest innovations in health care delivery and policy in this nation. And on this planet.
I’d remind you have come after wars that come after times of terrible tragedy. Clara Barton from the American Red Cross after the Civil War advancements in blood transfusion science occurred because of World War Two. We saw a greater adoption of the use of antibiotics and discussions about who should and shouldn’t get access to health care coverage after World War Two. The innovation of trauma care after Gulf wars is something that will be saving lives far into the future.

The fact is, every crisis brings opportunity for change and shame on us. We don’t capitalize on the opportunities and the lessons that are being brought to bear in the midst of COVID-19. These aren’t easy conversations to have, especially as we’re all admittedly suffering from pandemic fatigue and I often saying there’s no chapter in the pandemic playbook for an impeachment trial, a presidential election or a social justice moment that we haven’t seen since the 60s.

But as a community of healers those part of the greater healthcare delivery team and tangential industries. I just want to say we have a responsibility to collectively rise above all of the politics all of the noise. We have a collective responsibility to do better. We can and must address the underlying and equities and deficiencies that allowed coca to strike minority and underserved communities with such devastation. So that we never find ourselves so vulnerable to any sort of attack again viral or otherwise ever again. It's something that I began looking at long before the onset of COVID-19.

And then I want you to stay tuned because I’ll examine at length in my upcoming Surgeon General’s report on community health and economic prosperity. Through years of public health and medical practice I observed that the healthiest communities were also the most profitable. No big surprise there.

But I also realized that organizations that actively invested in the health and the well-being of their communities also seemed to flourish. It wasn’t money thrown out for philanthropic purposes. It wasn’t money that was just extra and give it out from the goodness of our hearts. It was money that was invested and gave a return on investment.

So I had my team do the research and what became clear that organizations and corporations that invested in their communities. Well, being also showed greater profitability and success. And our upcoming Surgeon General’s report we detail some of the exemplars and case studies that demonstrate how investing in community health is not just something to do as an act of social responsibility, but that it can actually pay dividends.

And that’s what the conversation today is really about. How can we all implement a value and science driven health system that works in the best interest of communities of physicians and of stakeholders. It is possible and the impact of COVID-19 has made its necessity more pressure than ever. So I’ll just close by saying, I look forward to the conversation today.

I look forward to reading the outcome of your session deliberations. And if we have time, I'm happy to take a few of your questions. Thank you for all that you’re doing and for all that you’ve done and just don’t lose hold of this moment. Don't let it pass you by. Now you know I'm a big Hamilton fan. We can’t afford to miss our shot because even though it seems COVID-19 will never go away. The fact is, we thought that about Ebola. We thought that about Zika. We thought that about each one, and there will come a time in the very near future that we will move on to whatever the next problem, our nation and our planet faces. But, shame on us if we simply look at this as a fire to be put out and don’t think about how we can change. What are some fundamentally broken systems, or at the very least systems where we now see we can substantially improve to make sure we're better prepared the next go round and ideally
that we prevent the next pandemic from occurring. Thank you for the opportunity. And again, happy to take some questions if we have time.

MARK MCCLELLAN
Vice Admiral, thank you very much for your remarks, but I think even more so for your heartfelt commitment to really doing something about the big challenges that you've laid out, and also special things to your wife sounds like she has an equal kind of commitment to these very important issues and you know I know our thoughts and prayers are with you all, as she goes through this next phase of her treatment.

If you don't mind. We do have a few minutes for questions. For those of you who are panelists, so you can use that raise the hand function and we'll get to as many of us we can. While I'm waiting for that you did mention the report coming out, which sounds like right on target for what we need now so that positive examples of a path forward. Are there any particular ones you'd like to highlight that address some of the issues that you raised and that are very important for the deliberations of this group.

SURGEON GENERAL JEROME ADAMS
Well, thank you so much for that opportunity. And one of the things that I love about the conversation. You're having today. Again, cross sector. So I love to tell the story I was speaking to the US. Conference of Mayors. Mayor Benjamin on one side of Columbia, South Carolina, a little bit of a smaller city. Mayor de Blasio on the other side. And it was a room full of Mayors. And we were talking about walkable communities because New York City and Columbia, South Carolina, are two of the most walkable communities in the country.

And I wanted to know what made these mayor's tick. So I said mayors. How many of you all ran for office on a pledge to lower your community's hemoglobin, a one see rates by 15% and I'm going to assume that you're all laughing because whenever I tell the story that line brings applause. But that said, not a single mayor raise their hand.

And so I said, Why did you create walkable communities. What, why are you interested in this. And they said, we created walkable communities because we know that walkable communities are safer, more foot traffic, more well lit, less likely for people to be injured or hurt.

We created walkable communities because it increases property values, it drives more business to the downtown area and more revenue and that increases our property base. And so I make this point because as a physician, I think of a walkable community if lowering your hemoglobin. But most of the public doesn't think like we do they think about health, they think about the economy, and they think about safety and security.

And so we need to really speak in a language that resonates with people in this report translate that and I'll give you a very real example. Build an industry is a wire manufacturer with global reach, but they're based in Richmond, Indiana, which is actually a small town. They were interviewing dozens of people to fill a single job because they would have the application submitted, bring them in for first interview, bring them in for a second interview hire them and then they fail the drug screen and they'd have to start all over again. So what they did not from a fundamentally health point of view, but from a business standpoint, said we're going to screen people up front before we even have them submit their application. And if they screen positive, we will direct them into treatment through partnerships. They formed with local nonprofits and with the local health department and other organizations. And if they're successful and treatment we will save a job for them. And what they found is that the people who
successfully made it through that program are their most loyal employees. They actually miss less work than people who don’t have a substance use disorder. And this is an example of us learning to address the needs that people truly have out there as opposed to trying to hammer them over the head with our health, health, health message when they’re really worried about how am I going to pay my bills and how am I going to keep myself safe.

So many more examples like that in the report, and I don’t want to take time away from questions by going too much in the report because I hopefully will work with many of you, including the National Academies to push that report out. I think COVID-19 has really shone a light on what happens when we don’t pay attention to the health of our communities and how it has an impact on our economy. But again, it’s important for us to think about those other partners and for all of us to collectively, think about the chain of stakeholders.

And finally, the most important thing I would say to you is one of my favorite quotes, many of you heard me say it before. People need to know that you care before they care what you know and different people have different love languages. So we need to learn the love languages of the stakeholders that we’re trying to convince and speak to them and their love language as opposed to speaking exclusively in ours, and that’s what your meeting today is about. But that’s what I would encourage you to continue to do the faith community, the business community, the law enforcement community. They all need to be critical partners and rethinking what our new health ecosystem looks like.

MARK MCCLELLAN
Thank you. And, and we are. I know you’ve got other things to do. We really appreciate your taking the time. Maybe one last question I try to consolidate from a few that have come in from our audience and participants today you touched on some of the important things you think we need to do to move forward get beyond the pandemic and deal with these difficult underlying issues. This is a really challenging political time as you as you pointed out, just a storm of lots of different issues coming together and you’re right in the middle of this. What have you found, Vice Admiral to be most effective for toning that down and getting back to a focus on science and public health to drive progress on these really important issues.

SURGEON GENERAL JEROME ADAMS
I love that question. And if it were easy, we’d have it figured out. But I think that one of the things we have to do. And we talked about this in regards to interactions with people of color and disadvantaged communities. We all need to acknowledge that we carry with us implicit bias. Whether it’s towards someone of a different color someone of a different religion or someone of a different political party.

I think one of the first things that we can do is really explore and acknowledge our own our own biases that we carry with us. I’ll tell you. What’s been interesting is seeing many of my colleagues and I’m proud. I’m very happy to see now that anytime you turn on the TV. I could turn on the TV that that’s behind me right now. And I guarantee you there would be a position on one of the major news networks, that’s a great thing. We’re getting good visibility, but there are a lot of folks out there who hate the other political party, more than they hate the virus. And that’s demonstrated in their actions and in their words and I’m talking both sides, I think we need to recognize our own biases and try to take, it’s not to say that you can’t be political. But it’s to say that it’s very hard for you to be seen.
As an agent of science, if you're out there, arguing for or against one political party or person. So I think that's important for us to acknowledge. I think the other thing we have to do and what I try to do is get as local as possible.

I've been on the road, quite a bit. Even though many of you know I'm high risk, I've got high blood pressure. I'm pre diabetic. But I've been on the road. Most of the last several weeks because on the road, whether it's in Central Valley of California or in South Carolina. Or in Houston, Texas, where I'm going this weekend, I can have direct conversations with people in a way that you just can't have that conversation right now from in Washington DC and in the midst of the political climate.

We need to have the courage to go to other people's tables, instead of expecting them to come to ours. Finally, and I saw a question about climate change. It's another great example that I like to talk through because it illustrates some of the failures, we've had in health communication. So one of the places that I love going to have conversation with them. Just last week is West Virginia. I've been to quite a bit because of the opioid epidemic. But I will tell you, I've been to many communities in West Virginia where 50 to 75% of the community is directly or indirectly dependent on the coal mines for their livelihood. I also know that there were people who have loudly said that from a political standpoint if they were empowered, they would get rid of the coal industry said it in no uncertain terms. And they said that thinking that they're having a conversation about climate change, but think if you're one of those people in West Virginia. Who actually is dependent on the coal mines to pay their rent to send their kids to college to put food on the table. They're not having a conversation about climate change, they're having a conversation about their livelihoods. And that's where this failure occurs and us being able to have conversation we're speaking in different languages. Were speaking and completely different framing. We haven't really adhered to. People need to know that you care before they care what you know. Because I'll tell you that person in West Virginia. Thanks, that you don't give a damn about them. When you go out and say, I'm going to shut down the coal mines and they know that they're granddaddy worked for the coal mine daddy works for the goal for mine. And they're hoping to get a job at the coal mine so that they can pay their bills, we need to better illustrate the plan the glide path to a better world for everyone. And there's a way to do that when I have conversations about our impact on the planet.

I sit down with someone as a parent, I say, wouldn't you agree that we all want to leave a world that is better for our kids than the one that was handed to us. No one of any political party is going to say no to that. Well, when you agree that there are actions that we can take in our communities. They can either increase the chances that the world will be better or decrease the chances, the world will be better and people agree on that. And then you work backwards and you say, well, what are some small things that we can do in our lives in our, in our communities to make that happen. And you keep working backwards and let the goal be the determinant of the conversation versus letting the political vehicle be the driver of the conversation.

So probably more than what you all wanted to hear from me on this topic. I'm sure some of you disagree with me and what I said. But that's my approach. I really tried to be empathetic. I really try to understand where people are coming from. I really try to get to their level and meet them where they are. And I found, I found that in most cases when you take that approach people really will listen to you and that you have way more in common with people, then there is out there that separates us. We need to find those threads that are in common, and we need to have a little bit of humility as leaders and as health professionals in particular to know to know and believe that we don't know it all. And even when we do know what all that that may not be what motivates people to act or to change behaviors and change policies and if we can do that. We can all commit to doing that. And I'm convinced that we can make a
better world for everyone out there. I really hope that we'll look back, just if we look back at advancements in innovation and health and technology after past wars that in five to 10 years we'll look back and we will be appropriately more informed respectful of the live lost during this pandemic, especially those lost due to COVID-19 but we will also be able to say that's the point in our history and our nation's history when we really got serious about fixing some of these fundamentally broken system, then you know what we've seen dozens, hundreds, thousands 10s of thousands more lives because of that realization.

So thanks, Mark, for the opportunity. I just couldn't be more excited for the conversation, you're having. I wish we could be having it in person. But I really look forward to the proceedings and I'll be taking in and out throughout the day and throughout the meeting because I want to learn to. So I hope you all stay safe. And I hope you get your flu shots. Get them. Get them publicly get them as soon as possible, because this is going to be our most important flu season of the last several decades. And what's a real shame is having an intervention out there that can prevent an epidemic that can prevent death and disease. Yet, knowing that less than 50% of the public. In less than 40% of black and brown people actually avail themselves of that that prevent preventative aid so. Thanks, appreciate the opportunity. And I'll see you all soon.

MARK MCCLELLAN
Thank you much, thank you very much. Vice Admiral, and I appreciate your time, your effort, your empathy and engagement with us on this will look forward to continuing to work with you as the National Academy work continues and thanks for getting that last message about flu shots as well. You know, this is a it's got to be the toughest time ever to be a Surgeon General, not only because of all these deep fault lines that COVID-19 and the other stresses on our country have exposed, but also because you've got to do now in person and virtual job. You're probably setting the record for number for Surgeon General appearances and that's a pretty high number. So thanks for taking the time with us. And again, all the best wishes for your wife going forward to. Thank you.

All right. And Mike. I'd like to turn back to you for moderating our sector report out.

I think we can pick up right where we left off with maybe a little bit of discussion around that the first one from David on patients, families, and communities.

MICHAEL MCGINNIS
Excellent. Thank you, Mark. And thanks again to Surgeon General Adams for a remarkable, passionate, and inspiring comments to all of us. And I'd like to add the best wishes of the National Academy of Medicine to your wife for her speedy recovery.

And thank you David for a very nice and concise presentation - you set a great standard for all of us. And did your work in your sector team proud, we would like to have a little bit of follow on comment.

If I could turn to Georges Benjamin for a quick reflection on the patient family and community sector assessment.

GEORGES BENJAMIN
Sure. Hopefully you can hear me. Yes. Great. I think that's important. You know, the whole issue around families and the challenges families are having. I think we need to really make sure that we're capturing that in a holistic way. And not recognize that they're part of the community and the challenges they have
are frankly fairly complex and so I think as we go forward, we need to just make sure we’re looking at that through that lens and recognized family includes many people and many generations as part of that as we look at that.

MICHAEL MCGINNIS
Thank you Georges. Do we have other comments from the Leadership Consortium that folks might want to make before we move to the next session. I realize we're a little bit behind. But I don't want to short shrift what Mark indicated is our ultimate target for improvement.

FREDERICK ISASI
I just wanted to mention as one of the co-authors a very big thank you David did a wonderful job. As always, he’s a terrific co author. We’re very conscious of a couple things. I think there’s a real passion within the group to make sure that health equity is a central focus of the discussion in the inequities that we're seeing on a really important moment for the country and also trying to build linkages between this report and the impact on patients, families, and communities with the other insights that are coming from across the sector. So we're trying to make sure that there’s a strong signal coming out of national academies that draws a link between the impact on people and the observations and insights, a crane within the sector.

MICHAEL MCGINNIS
Thank you Fredrik. You have reinforced two of the fundamental charges to each of the sector groups and that is one to look specifically at the issue of equity and how it’s playing out within the sector and the second is to look across sectors that ways for synergy and looking at how we can loop back to ensure that we’re addressing the system wide possibilities.

With that, I think that in the interest of time, we'll move on. We're going to try to set up some time for the end of the sector presentations, if necessary, we may have to encroach a little bit into our Executive Session, because we want to make sure that we're doing full justice to each of the sector presentations and next up, I believe, in the event, a little change in the schedule, it’s health payers.

MARK MCCLELLAN
Yeah, I think it's I think it's me. And not that people haven't heard enough from me already today, but anyway. Rahul Rajkumar is the co leader of this sector effort around payers and want to thank him for all the work that he’s put in and he's dealing with some urgent payer issues right now so you apologize for not being here.

Let me highlight first that the challenges that this group has identified and this is sort of the, the pair perspective on exactly the same challenges that we've already been hearing about including from that great pre preceding presentation from David and colleagues.

First and foremost, it is obvious of the sector has real vulnerabilities. They were there before they’ve just been highlighted in the pandemic when there is this big change in utilization caused by the pandemic. There were several things going on early on. One was uncertainty and concerns about utilization going up due to issues related to COVID-19 treatment and management and potential complications.

as we saw those big declines and utilization as fewer people went to get the care, including the care that they really needed concerns that there might be a rebound with future trends are going back up, leading to a lot of uncertainty facing payers about how exactly they should be planning for this unprecedented
public health emergency. We've also seen some shifts and enrollment something like 3 million plus individuals losing coverage at this point and a significant shift into Medicaid and people moving out from their job base coverage, maybe into Cobra coverage or something like that. So some challenges and that the mix of patients and impacts on revenues and projections for that reason as well. And this was all when payers needed to take new steps to ensure access to care and stabilize revenues for providers, especially in any smaller practices but really lots of really entire sector was one of the hardest hit in our economy in the spring and heading into the summer. So those were all areas where payers had to respond quickly new kinds of payment models financial assistance relief for some of their members who were struggling with premiums and the like another set of challenges related to responding to the pandemic through needed data sharing and collaboration.

Getting data when on patients when they're not coming into the office relying on virtual telehealth and other technologies to do that sharing data with public health authorities around new outbreaks and learning about their patients who had actually tested positive with not easy to do with health information systems that were not well integrated and new collaboration is we're also needed to deal with the changes in practice, not just scaling up telehealth visits, but really developing models of care delivery that recognize that people were going to need to get more services at home or in settings that put them at less risk, both from their own perspective of confidence and safety and also from the need to treat people in different circumstances as well so responding to all of those shifts and sites of service, bringing in new kinds of providers Tele health across state lines. All that was supported by payer responses to make payments more flexible and support these kinds of new models, but very hard to stand up for many healthcare organizations and the, the payers working with them in the setting of this urgent public health emergency and that revealed a lot of challenges that need to be addressed both for this pandemic and going forward to pick up on the Surgeon General's theme.

Financing of care remains very fragmented and very reliant on fee for service essentially the healthcare organizations that were relying on fee for service payment were the hardest hit in the pandemic. And so, at a time when you'll hear about this from the provider groups coming later the time when we really needed their assistance around responding and implementing these new models. Many of them were just worried about staying open or minimizing the amount of staff that they needed to lay off and since many of the fee for service payments had been dependent on in person care is not to mention fragmented care didn't lend itself well to the kinds of care responses that were needed in the pandemic.

So in terms of responses as on the next slide. The group identified a number of priorities within the sector. As we are trying to take steps to make care more efficient and effective at a time when we really need to manage costs and tough economic setting for the businesses, the individuals, and the public sector paying for healthcare finding ways to not restart. Some of the care that stopped so many services that are needed like immunizations, the preventive services that the Surgeon General mentioned are still on not coming back, fully lot of elective procedures have to a larger extent but so many gaps.

If we're going to redirect resources to focus on those needed services to the extent we can direct them away from low value services. That can be very helpful. And I've been some publications and this group is going to include some of those specific examples.

Is report finding ways to treat problems that involve low value care historically with better ways of managing issues like back pain, headaches and other types of conditions that have led to access costs and low value and then really making telehealth a more central part of healthcare going forward, not just by
paying for visits, but by supporting more integrated models of virtual care that build in remote monitoring that that use longitudinal data to help support.

Those telehealth visits that identify where telehealth can really substitute in virtual care, can really substitute effectively for alternative models of care. And this is not just in enhanced primary care, not just in enhanced access to behavioral integrated care as well, but also in specialized areas of care moving in stage renal disease care more into the community setting through peritoneal dialysis and less reliance on dialysis in facilities or moving cancer here or care for other advanced illnesses chemotherapy drug administration.

Other support services into the home, rather than institutions which can be not only more convenient and safer for patients, but also lower cost as well. Critical to all this is accelerating the movement into value based care the healthcare organizations that have been most resilient in the pandemic. So far, the ones who were already far away from fee for service payments relying more on patient or population so called advanced alternative payment models they already had some of these data systems, telehealth and other programs in place and it’s a renewed commitment on the part of payers to spread those models may be working across the public and private sector more effectively on payment reforms and changing benefits to align benefits with these better care models so that when we can deliver better care, especially for vulnerable populations and those that have been most affected by the pandemic.

It should cost less for them as well, not the traditional structure of copays and benefits and out of pocket payments related to fee for service utilization. But really more related to value and helping people engage in these new models of care as well. So, a lot more to cover there. But let me let me stop Mike and open it up for discussion.

MICHAEL MCGINNIS
Thank you, Mark. And thanks to the whole team, which I know is firing on all pistons and you crammed a lot into a short period of time.

May we turn to Peter Long from Blue Shield of California to offer reflection.

PETER LONG
Hi, Michael. Hi, Mark. Hi, everyone. I would just say two things. One is the piece that there are lots of heroic efforts from payers across the country that will document in the paper. I think the real question for this group is what should we continue to have those heroic efforts and they made sense and work versus how they happen, despite the structure infrastructure that was set up against us. Right. Or there was set up in a way that didn't facilitate that. So I think that's the fundamental set of issues that marked raised was not. There's a great recounting I think of wonderful efforts to rise up to the challenges.

The question for us as a group, not just on the paper. But overall, is what are the things and that's what Mark raises. What are the things structurally that we would want to change. Such that we don't require heroism and builds on the Surgeon General's efforts. I'm allowed here. I will leave it at that and turn it back to the group, but I think that's our fundamental question is where does heroism make sense. And where do we need structural changes as we move on.
MICHAEL MCGINNIS
Thank you very much. Peter, and if there’s anybody else from the consortium, who wants to leap in with one more follow up, please do. I’m not very skilled at picking on people. But if you if the first one to the microphone can have it.

LEE FLEISCHER
Yeah. Hi, it’s Lee Fleischer now from CMS. I’m curious what kind of data do you think we need to help make these decisions about where the future should what the future should look like and how fast even being inside CMS. Do you think we can get to that data.

MARK MCCLELLAN
Just, just a quick response and Lee. We’re very glad to have you at CMS to partner in these efforts, what came up in the group discussion was a desire to really link payments more to quality to equity to the goal exactly the goals, we’ve been talking about today, but the challenges in doing so, both in terms of the measures that are available and in terms of getting alignment across our multi payer system in moving in the same direction. So I think the report will have some recommendations related to that. And we’ll look forward to working with you to refine those and hopefully get them into get them into action.

MICHAEL MCGINNIS
Thank you, Mark. And thanks to each as we move to the next session. Let me offer a couple of a transitional comments that we would have made at the outset, but didn’t. The first one is to introduce Dr. Valerie Montgomery Rice, who is the president and Dean of Morehouse School of Medicine, who is also a recent new member of the Leadership Consortium. Many of you know, Valerie. If you’re on visual wave your hand, and I also like to put in a plug. Maybe if you can be thinking about serving and giving a quick response to our next presentation on coalitions and professional societies after that presentation will come back to you. But again, a hearty welcome to you, and thanks so much for joining us. The second comment I wanted to make as we move to clinicians and professional societies is related to the questions that are being raised during the course of the presentations. We will be obviously since we’re moving very quickly, of necessity, through the presentations, we, we can’t catch anybody a fraction of the issues that are raised and they’re all very important and insightful. So we’ll be collecting those triage them to the various sector groups for engagement in the follow up. It’s important to emphasize that respective what you’re getting is a status report at this point of work, it is in progress and is about the midway point in terms of the overall progress. So thanks again let’s then move to our next sector report, which is from clinicians and professional societies and speaking on behalf of that group, presenting is Suzanne Miyamoto who is the head of AAN.

SUZANNE MIYAMOTO
Oh thank you Mark. And thank you again to the consortium. I have the distinct and wonderful opportunity to work with Dr. Jim Madeira and his colleague Dr. Maria Irons on this particular topic related to the clinicians in the professional side societies and authors, as you know how wide expertise or across the professions both on community health infectious diseases ethics. Looking at critical care and obviously the health professions, of course, and I wanted to say thank you to be incredible man staff who have been able to support us. You are thinking. And this process.

I think one of the things that the Surgeon General I hit upon and synergies across our discussion so far was really this discussion around the southern realities of COVID-19 and the impact on communities. And I think one of the things that struck me when he was speaking about the impact on communities and how the equities, but also our role as clinicians to build those resilient communities and I think as we dive into
the content around the impact for clinicians and professional societies and supporting clinicians throughout their work.

There was a range of issues. And one of the things that really came up and the vulnerabilities as we've seen time and time again is the impact on the clinical, those in a clinical setting as well in other settings across the disciplines with their impact on moral distress and moral injury and how that is impacting their ability to provide care and the very quick and swift significant transitions that had to be made during clinical care.

Thinking about the movement to different work environments being pulled from one work environment to a new environment where some of those changes were needed or the demand was needed or as I alluded to earlier. Some of the layoffs that had to occur because of the dynamics that were occurring within the larger healthcare system and the complexity of that was as noted in the slide, the lack of data standard is standardization and interoperability. And the ability to transmit that information quickly to clinicians, whether it be in the acute care setting out in the community and being able to receive clear, consistent communication in real time.

And I think one of the other pieces that was really incredibly important in our discussions today have been that effective communication piece, but also looking at it from the perspective of the public health work environment and the public health workforce. And I think one of the things that we know about the public health infrastructure, the public health workforce is the significant investments last over the years with the investments at the federal and state levels and the impact that that has as the Surgeon General talked about on vulnerable populations and the sharp and equities that arose from it. I think the trust for America's Health did some work looking at how many positions were lost from 2008 to 2017 and over 55,000 positions or lost in those local health departments and how does that impact the ability in a pandemic to get the information out to the communities that we serve. And so we think about the all of those factors and looking at the stress that it causes on the system as we think about those opportunities on the next slide, we really have some opportunities to look at both the as important.

On the next slide that we want to be thinking about is the transformation around looking at those models. And one of the things that as many of us know the National Academy has really led on is the Action Collaborative on Clinician Well-Being and Resilience, and looking at how those models and what has worked in a non pandemic elevates and needs to be elevated in this pandemic and beyond. And I think those challenges are going to give us some insights and the imperatives that we're going to be needing to move forward.

I think the other piece that we're going to have to be looking at for the clinicians and the professional societies and also, as mentioned before, tele health so I'll help with stood up very quickly incredibly quickly and how can this continue to be maximized where it is having a really great return on investment, to access and to be able to make sure that patients and communities and how can we provide support providers in their ability to continue that telehealth but also some of the policy changes that will need to occur because of the challenges with telehealth and how can we continue, some of the great work that has been occurring already to make sure clinicians have that readily available access to, to help.

I think the other thing that Dr McGinnis stated so eloquently earlier was that COVID-19 was the perfect storm of system fragilities and I think the other piece as we look at that, within the clinician sector is the educational infrastructure in real time. Health Professions schools were having to shift and change and think about new strategies, some professions were having challenges getting clinical sites somewhere
moving into the clinical setting. And really, how do we communicate and bolster that training and that workforce, so that they are able to move forward in the pandemic. We know part of this is so critically important is that interprofessional teams and those interdisciplinary teams and how do we use this opportunity to reinforce the team model and making sure our patients received the best care.

I think, you know, at the end of the day, one of the other pieces that we really highlighted upon was the pandemic further highlights the need for us as clinicians to be thinking about and advancing justice a surgeon general mentioned in his remarks was prevention primary care and the change of those prevention policies. So a lot of the work is really thinking about how to continue to make sure our clinicians are ready. So with that, I will pause there. I know Dr. Madara is on the line. And I know Dr. Montgomery Rice is going to offer some reflections, but we are really looking forward to the opportunity to hearing more from the Leadership Consortium.

MICHAEL MCGINNIS
Thank you very much, Suzanne. Jim, did you want to add anything to Suzanne's wonderful presentation.

JAMES L. MADARA
No, I think it was just hit all the points in the interest of time, I think we can just move to the reflection of Valerie.

VALERIE MONTGOMERY RICE
I am here. I had to cut off my video because I kept been disconnected. So thank you for allowing me to provide some reflection and I would say, Suzanne did a very comprehensive look, and what I would add to it is that what I think we can do as professional societies is ask ourselves, what are the resources we need to provide to our clinicians and our providers for strengthening their resilience and grit. I think we all were really challenged early on with the dynamic and different setting. In what city you were having in words how challenge. They were with things that I think we had taken for granted. And the amount of resiliency and grit that we saw each of those healthcare providers really exhibiting in light of the challenges that they were faced. So I think as a professional societies, we need to be on the preventive arm of that please really for helping to make sure that we're supported in our providers in that way. And then I think we also need to recognize that there are definitely differences that exist depending on where you are. And again, trying to get ahead of where those differences exist, based on the geographical locations where people are so those will be my comments.

MICHAEL MCGINNIS
Thank you, Valerie and thanks once again for your joining us. We're so privileged to have you with us. Before we move on to the next topic. Anybody want to add a brief comment from the leadership consortium membership. Okay, then let's move to care delivery organizations and Jeff Balser who is the president CEO of Vanderbilt University Medical Center is going to present.

JEFF BALSER
Thank you, Mike, and my thanks to everyone. And I also want to thank my co lead - this is a really a team effort. We have a number of wonderful co-authors that are assisting us.

The main challenges. I'm going to highlight, first of all, we all know that health systems had a remarkable drop in care volumes mostly during the month of March and April, but that persists even now for some healthcare systems and while that had a financial impact that a number of people have talked about, and
we'll talk about. There's also an aspect of it that we really do need to get our arms around as an industry and that's this term elective care which frankly is so misunderstood.

Many people think that it just means optional care like cosmetic surgery and others used it to mandate a complete cessation of anything except emergency care. And what we really need by healthcare elective is just scheduled – it could be, you know, urgent elective care. So I think that the, the term elective was a big problem for the public, for the healthcare provider industry for all the sectors and we really need to get around some standard definitions so that as we deal with volume changes that could occur in the future. We have a better understanding of how to how to manage those and communicate them.

Another challenge. And this is a communication and collaboration challenge is how to work together during a pandemic and that was a challenge across health systems managing large populations together for the first time, as well as coordination within health system so across healthcare systems.

Most municipalities have systems that where there are two or three or maybe a dozen different owned healthcare companies. To a large degree in competition with one another. And suddenly we found ourselves in a situation where we really needed to work together to support the overall pandemic and well I think in almost all cases folks were willing to do that. But we really need is some pre wired standards and reflexes around how we will triage patients and how we will triage resources during these kinds of circumstances. So we're not all trying to figure that out and negotiated in the middle of a crisis.

I would also say that within health systems. The, the fragmentation within health systems really became much more visible during the crisis. So if you've seen one health system, you've seen one health system. There are those that are completely consolidated under one single governance, including all the clinicians and providers like mine. And then there are those that are very fragmented where physicians are working at hospitals from many different companies. And in some cases in academic medicine, the practice plan is separately on from the hospital and during a crisis. Those became challenges as well so, again, having some pre understood plans and protocols for managing through all that within health systems we feel would be very helpful. Another issue is that most of the emergency preparedness. What we have done shs been really focused on anticipating events that are short in duration, such as a tornado that wipes out part of a hospital or a shooter incident.

Those kinds of things where it's awful. But it's short duration. This is obviously very long duration and we are finding that much of our emergency preparedness really didn't focus on that kind of eventuality and something we need to we need to really think about and work hard on. Another challenge that we saw and are continuing to see is how to improve search capacity, specifically in critical care. It was a challenge to manage certain compassion search capacity and less acute settings and acute in in within medical and surgical floors, but it was an even bigger challenge to manage search capacity in ICU settings. And so there's a staffing aspect to that. There's also actually a supply chain aspect to that, and many of the systems we've talked with feel that aspects of the nation's healthcare system supply chain really ought to be treated much more as critical national infrastructure such as the ventilator shortage that we saw.

And then physical infrastructure in hospitals designing hospital rooms so that they can flip between ICU care and non ICU care so that the gases and all the things we need to rapidly flex into more ICU capability are built into the nation's healthcare infrastructure would be a very important upgrade.

That our country could and should invest in finally financial reform and there I think what we're looking for is something that gives us sustainability in the in a situation where there's a sudden change in revenue
we certainly don’t want healthcare systems, unable to make payroll. And that that’s not only bad for the healthcare systems, but it’s bad for patients. So we need a reimbursement system. In addition to have it be having it be more value based but also one that assures a fairly constant revenue stream through a crisis and we need again preexisting regulations that would allow that to occur so that we’re not trying to work through that with dozens and dozens of different sources of revenue that we all deal with and healthcare systems. Those are some of the highlights of course there were many others, but I’d be happy to take questions or other comments.

MICHAEL MCGINNIS
Thank you very much, Jeff. And again, thanks to the team as well. Would you mind offering a brief reflection on what you’ve heard.

REED V. TUCKSON
I’m sorry for that. Thank you very much. And I think the real key to this has been that as our health systems respond to this crisis, it is telling us that there will be a change in what happens going forward that we’re going to have to be very considered about the community based preparation and those community linkages between the delivery systems. And the communities that surround them to really create something of a true shared vision and collaboration, so that we can increase community based resiliency. And to be able to manage these concerns going forward.

Secondly, I’m particularly interested in how well we will be able to deal with the economics of preparation downstream. What will be the supply chain implications here for the future, and especially as we start to bring things in home versus just in time response and dependency on more international systems, what will be the economic consequences of that and what will be the economic consequences going forward on redundancy perhaps embed capacity as we’ve worked so hard to take waste out of the system.

And we now try to right size that and have some redundancy built in the question would be is how does that get finance and so I think these are two elements, what the external looking community relationship and the internal focus to try to be able to have flexibility and resiliency on the internal side of operations, but how do you do that in a way that doesn’t already changed the honest unsustainable relationship of unit cost escalation associated with delivery. These are the challenges that I think that we are really going to have to stare down. And if we don’t put those squarely in front of us. Now we will be way behind come post-COVID-19.

MICHAEL MCGINNIS
Thank you very much, Reed. We’re going to have a little change in the schedule because of scheduling challenges and we’re going to go next to the health product manufacturers and innovators. But before we do that, are there any other comments for the healthcare organization group from the members of the Consortium.

JONATHAN B. PERLIN
Good afternoon everybody. I thought Jeff’s overview was just an absolutely terrific. You know, from the perspective of the health system that has provided care for over 60,000 COVID-19 positive patients, I think Jeff clearly hit all the right features. I just want to put an asterisk and amplify on the need for facile data. Whether its data in terms of prediction and better modeling at the local level, we know that the rates of COVID in every community are very different than what’s going on in rural Tennessee versus what’s happening nationally, for example, and the data then also need to flow across the components of the health system. And clearly, we still have continuing interoperability challenges in terms of formal care
delivery but something that I think was really clear this time was the lack of adequate connectivity with the health departments and its really at the junction of the health data, the ability to assess some of the social determinants and the merge with some of the formal health system data that I think we'd be able to be better prepared to meet community needs and certainly, heaven forbid, meet the next pandemic that said we have so much opportunity that fragile interface already that I think it speaks to the need for the worker. Thanks.

MICHAEL MCGINNIS
Thank you very much, Jon. That issue or the set of issues in particular the last week has come up several times and we'll return to it in just a few but let's first now turn to the health product manufacturers and innovators and presenting as a co-lead for the sector work is Vasant Narasimhan, who is the CEO of Novartis.

VASANT NARASIMHAN
Mike, thank thanks for the opportunity and appreciate being able to move up a bit in the in the schedule here and in Europe. We've done our best to try to reflect the various parts of the health product manufacturers, of course, a broad spectrum of participants in this part of the industry. But what we've tried to do is divide into the core areas: pharmaceuticals, vaccines, medical devices, and health products. So in terms of critical sector capacity vulnerabilities, it's been a pretty consistent demon. First this capacity constraints early on in the pandemic, especially in the early days, given that in most of our supply chains it takes a few months to in order to really scale up whether that's in drugs or in critical supplies for ICUs or whether that's medical products and of course you all know well the story around ventilators, there is a lead time associated with capacity scale up and then there's of course global demand considerations that add additional complexity.

The second key sector constraint vulnerability. We had identified was around global supply chains and how international trade, depending on the month was disrupted in various directions. Overall, you know that. I think it's a consistent being people having global supply chains and then see enables us to meet the demands in the United States and other countries, however, the, the fact that politics often plays an incredibly important role in international trade. There is the possibility for significant disruption. So that was kind of the critical capacity vulnerabilities. We identified early on in terms of communication and collaboration of vulnerabilities there was quite a bit of discussion on data collection. Sharing across sectors, so that there was a good understanding of what would be the demand for various products and services from our collective industries in terms of also understanding how those would shift over time. I think I understand. It was a lot of uncertainty early on in a pandemic, but I think that was one area of improvement, and then I think in terms of unclear communication and alignment on what are the needs at the federal and state government. This is particularly on the medical supplies. As well as device side, but understanding what would be the needs from individual manufacturers, because the demand comes up in an extremely fragmented way.

It's a, it's certainly a challenge for those manufacturers to be able to appropriately scale and then provide the products that that are needed. In terms of policy vulnerabilities and these are topics I was heavily involved in the H1N1 pandemic response in the vaccines that in 2009. So these are not new learnings. But the need for more capacity in manufacturing and to the extent possible capacity for relevant stockpiles, I think that's happened in the past, but typically wanes after a few years. And then we have a pandemic and we learn again you go back in history back to avian influenza and of course H1N1 and we have these this kind of recurring theme. Obviously there's insufficient research and development. I mean, right, and the
early days you’re focused almost entirely on repurchasing vaccines and repurposed and drugs. And of course, getting to a vaccine. It’s interesting.

From the early days of the first coronavirus source code coronavirus emergence, almost 20 years ago there was no effort around that, if we had done those efforts, perhaps we would have an oral drug much quicker, which would, of course, provide a lot of ability to scale very rapidly versus the various biologics. We’re currently pursuing. If you go to the next slide.

In terms of some of the opportunities. We’ve identified, like many of the other sectors clearly digital and analytics have enabled us to support clinical trials with remote monitoring, patient visits and enabling us to monitor patients from a distance, and also improve our patient support programs ACP interactions, you’ve seen, of course, explosion of telehealth services. That’s a clear opportunity, a huge acceleration, the ability to get from study concept sheet to study startup within six weeks is historically unheard of our industry and yet we’ve been doing it consistently over the last month. And then I think that there is an opportunity for strengthen collaboration on data sharing and standardization of data collection. I think on the one hand, it’s been impressive to see the explosion of interest in conducting studies by parties of all types around the world. I think maybe 10,000 studies now around the world and the range of different drugs and vaccines and diagnostics that are all in clinical development, but our ability to standardized protocol standardized data sharing. And do this in a thoughtful way so that we get the patients into the right trials with the appropriate rigor that can actually informed decision making, either by regulators or relevant clinical bodies is clearly something that can be approved and we still even at this moment. Don’t have a great method for data sharing across, across the sector.

And then in terms of priorities for transformation. Again, I don’t think anything particularly knew the importance of domestic or coordination and in strengthening international bodies that can provide us industry appropriate guidance. If you look today, there is still no international body that provides standards or guidance in terms of distribution of vaccines and drugs and diagnostics or medical supplies. It’s largely done by laterally across countries. Also bilaterally with the United States, that creates of course in equities, particularly for poorer countries. That’s an obviously an opportunity, I think, to improve and then the importance of cross border collaboration in terms of supply chains, particularly again on the medical products and medical devices side of things. That those supply chain disruptions lead to significant disruptions for the ability to get what’s needed to local hospitals local community health centers in the in their time of need. So I’ll stop there and then hand it back to you mind. Thanks.

MICHAEL MCGINNIS
Thank you very much. Really appreciate your leadership. Both to our work in the National Academy of Medicine and to your broader role in the global health arena and I’d like to ask Jon Perlin if he could offer a brief reflection on buses and the team’s presentation.

JONATHAN B. PERLIN
Oh, let me thank you for terrific comments. Sometimes I think the points you made resonated very clearly with a member of an organization that lived on that side of supply chain on I think this is really a unique opportunity. It brings into question on some of the protocols of supply chain, ranging from just in time inventory to geoconcentration as well as the economic incentives of what’s manufacturer and developing pipeline on the more promising side as you indicate on to thinking about your comments and other commentators on research is really accelerate and we have the opportunity to use our data systems to learn at scale and I would hope that in that vein, the capacity to really create development not only of
pharmaceuticals, vaccines, but also mechanisms for scaling of manufacturing and addition of distribution would be some of the other sort of structural learnings on that are important as well.

Finally, the last comment is that I think it’s incumbent upon all of us in association with a set of activities to really help contribute to the general understanding appreciation and education around the importance of expertise. I think the potential for some of this development to fall prey to misinformation or ambiguity on is just too real. At the moment, and I think the uptake for both support for development investment in the science necessary for development as well, frankly, as the utilization of the products of development, it really demands. Almost intense a public service approach to on improving and understanding of of science and expertise. I think that also suggests the important role for the Academy. So thanks for your terrific comments on. Thank you, Michael.

MICHAEL MCGINNIS
Thank you, Jon. I believe we have Mathai also with us, who’s the co-lead on this and can we call on you to make a couple of additional comments.

MATHAI MAMMEN
This actually summarized the various contributors perspectives really well and maybe what I would add is that each of the contributors for us to not only reflect on COVID-19 and what we would do the next time around but really talk about the broader biopharmaceutical ecosystem. Product manufacturers that ecosystem as a whole to address some systemic issues at that kind of plague, all of us, not just pandemics of the future. And so I think that's the thing that when our papers complete the readers and look forward to that. Thank you very much.

MICHAEL MCGINNIS
No thank you. And thank you for underscoring that dimension and I know a number of the comments that are coming in questions coming in are addressing that broader issue and will triage them to you as you work to enhance that dimension. But again, thanks to all of you on the team and thanks for making time and your European circadian rhythm. Very good.

Let’s move now to the digital health arena. This is an issue that has been such done in every single sector assessment and obviously is a vitally important dimension for any transformative enterprise across the board.

AMY ABERNETHY
First, I'll start by reviewing the vulnerabilities. And what does this tell us about the future and then turn to my colleague and I just want to step back for a moment and say that as this book of work got going the language of digital health suggested that this sector analysis was going to focus on tools and technologies such as what we've heard about with respect to telemedicine and the role of telemedicine in the remote management of patients as well as remote monitoring clinical trials. But in fact, as we step back and thought about that.

New key vulnerabilities identified what we really see is that this is around digital infrastructure, especially the data ecosystem and how important that is to then be able to enable all the different types of change identified and in fact what we've heard over and over again is the need for data and solutions through data is very important here. And so I highlight several elements in the vulnerabilities on. First of all, with respect to data related capacity. Especially on the public health data ecosystem side where we have very antiquated systems and transmission of test results as an example by fax machine. On the antiquated
system. It is very integrated on public health, but we also see a lack of interoperability within the
electronic health record side also causing challenges and then issues related to cyber security risk is also
highlighted as key vulnerability here.

There’s also issues as it relates to coordination across the many different actors and actress who hold data
that are going to be important to solve for the public health crisis. And also the lack of ability to interrupt
rate as well as be able to support sharing across systems and data retrieval and then finally on the policy
side. Not only is this around data governance and data sharing, but also keen of Rome vulnerabilities as it
relates to being able to utilize data in order to support agile clinical trial models hybrid trials real world
evidence and the such. Next slide please.

And so how might we pray or transform certainly priorities for transformation focus on data as our first
stop. Say of standardization harmonization, the ability to share and have a governance framework about
how do we in this space of a pandemic. Put that into action quickly and how we also ensure that our data
infrastructure supports the ability to take care of all of our populations, including those who are most
vulnerable. Through the inclusion of key information that will help us take better care of everyone. The
other issue, certainly, is the ability to have a data infrastructure that supports the use of real world data of
all types to answer the many questions of public health clinical evidence development and other priorities
across the system.

Other key priorities that we've highlighted and continue to work on our exists within the clinical trial
infrastructure. As well as in the digital infrastructure as it relates to many of the capabilities, we’ve
discussed, such as the role of tele health and continuing to push that forward. These are the aspects, we’re
going to be working on within the digital health sector and as you can see data is the underlying kind of
substrate of this part of the story. I turn it over to Peter Lee at Microsoft to add his commentary.

PETER LEE
Thanks Amy, you know, I think in the crisis response. We saw a huge disruptions in so many different
sectors and the amount of coordination and collaboration. There was enabled by data and shipping and
logistics manufacturing financial services retail and commerce. Even software development was pretty
remarkable. And yet, as we are seeing in every single sector assessment in this National Academies effort.

In healthcare, we seem to have found herself flying blind and with the inability to have appropriate
coordination and coordinated response, despite the fact that healthcare in the US and in the world has
undergone tremendous advances in digitization and so all of the promise of that coordination of insight,
being able to do predictive analytics seem to seem to fall short. And so as Amy had just described.

You know, we've zoomed in on specific issues and that has given us a way to focus our attention on how
we might do better. Not only for this ongoing crisis, but for future ones and I think understanding those
exact points of frustration which are being brought up over and over again across the various sectors is
basically. But the way that we’ve been trying to organize our thoughts.

MICHAEL MCGINNIS
Thank you Peter and Amy again for leading a very productive assessment process and we look forward to
the follow on and we really appreciate the perspective of ensuring that we’re tending first to the
infrastructure that’s necessary to enable the progress that is possible.

Let me turn to for comment to Judy Faulkner our colleague on the consortium, who is the CEO of Epic.
JUDITH FAULKNER
I read that some of those basics are really critical without standardization interoperability just can happen. There's not much sense and sending data over that the other side can't understand what it is, anyway. So first of all, people have to get together and standardized and I think the other thing is that at least with our health systems hope some of them who don't have the wherewithal to install the software that will allow them to interoperate because I think there's a lot of critical access hospitals in rural areas that really, even if the software is there, they may not have the helping the financial ability to install and support it.

MICHAEL MCGINNIS
Thank you, Judy. Are there other comments from the group or from members of the consortium?

REED V. TUCKSON
Mike This is Reed and as you know, Jonathan Perlin and I co-chair the Digital Learning Collaborative and one of the things that I want everyone to be aware of with your leadership Mike is trying to develop indicators that will tell us how well we are doing across the board, particularly in the degree to which information is being available and used by clinicians to change the way they support the and support their care decision. And the way in which individually generated health data is integrated into the learning health system. And finally, the percentage of digital health tools that are being used to that are being supported by evidence, the point that we’re trying to get at here is, I think, what, what you will see in short order is coming forward will be these indicators that will help make sure that we have a way to track progress in these key areas. And I think this is one of the most important things coming up, it's not enough just to have these ideas out there. We have to make sure that we are incorporating them and have some sense of the progress or unfortunately were in those cases, lack of it getting this done.

MICHAEL MCGINNIS
Thank you read and thanks also to you and john both for sharing the digital health section collaborative more to come on that count later on. Let's then move again in the spirit of the calendar and the time on the clock to our next presentation. And the last couple of conversations have been a terrific setup for that state and local public health and the co leads for the sector assessment or Karen de Salvo and Karen is the Chief Health Officer at Google. And I believe is going to do the honors. Today, right.

KAREN DESALVO
Hi, everybody. Great to be here. Happy to be here representing our workgroup including Bob Moffat who's my co lead for the chapter, we have some great folks that are co authors of this group, so we have people who have worked on the front lines and including myself in local and state and federal public health and have a really good trajectory of the history of this field very much appreciate. Also, the National Academy of Medicine team who has helped us to begin to crystallize the ideas. I think the timing of this is, even aside from the pandemic helpful, given that the public health community in the US has been on a trajectory, the last few years to think about how to create a 21st century model that leverages new types of relationships and data and approaches to the work that can more strategically and collectively address the public health challenges. There's been an acceleration of some of that work, you know, even in the last few months from public health. So we're hoping to build upon that.

Energy and thinking from the public health community directly of what they know they want to do for transformation and how the pandemic has really highlighted the need to accelerate some of that work. The challenges include that there are some sector capacity vulnerabilities that have been revealed. Because of the pandemic sometimes on the front page of the newspaper or in our Twitter feeds things
like the lack of investment in just basic infrastructure and workforce to be able to do what they need to do every day, much less in a crisis workforces anything from epidemiologist, all the way through to having contact racers available at the ready on the front lines.

And that also, there's been a fragmentation of the public health system to further distance it from not only the medical care system, but even some partners that seem likely very important like the preparedness infrastructure that happens. At the national, state and local level where sometimes those teams are not planning and collaboration and acting and collaboration in times of crisis, and that we plan to highlight that. There's also been a large gap in social care. Infrastructure and funding and general resourcing that's led to an increased role for public health. And in this pandemic to try to address the needs of communities writ large, especially vulnerable communities, but also working to address the social needs of people who need to be isolated because their code positive that there are some sector communication and collaboration vulnerabilities that have been highlighted and we've just spent some time talking about digital infrastructure. This is not unknown to the public health community and they've been wanting some upgrades, but also some modernization for better interoperability.

In between the public health infrastructure side for lab reporting, but also across sectors to improve opportunities for surveillance with electronic systems in places like the healthcare infrastructure and also need workforce vulnerabilities to modernize some of the talents and capabilities and certainly any strain system struggles to be in to effectively engage with black and brown communities as well as other vulnerable communities and I think making sure that those vulnerabilities. Don't get exacerbated following the pandemic was a priority for our group so far.

And then I think some discussion that we hope to play out about the need for understanding some of the policy vulnerabilities that have played out. Where there's not perhaps as much of a directive federal response in a national crisis that might give some clarity to especially small local health departments who need to be able to move swiftly. Next slide.

Some of the things where we are working on in terms of lessons learned fall into those big categories about specific sector specific priorities for transformation, including building upon the recently released 10 essential public health functions. This is an update of what has been described in the past about modernizing the mandate for public health at the local and state level linking that to an accreditation process them to enter funding for a sufficient workforce and infrastructure and other systems that can enable that work to be done in a way that meets the public health needs of everybody in the US, irrespective of their geography or the color of their skin.

To significantly improve the surveillance and monitoring systems including linkages to novel data sources or mobile signals from social media or from EHR systems as well as just broadly modernizing the digital infrastructure for areas like laboratory and he case reporting and then some opportunities for system why priorities for transformation that can enable and support better opportunities to address the needs of vulnerable populations marginalized populations who may not have access to the traditional medical or even other health systems that might be in place and then creating more clear linkages, particularly in the in the public health them and emergency management systems at all levels of government so that there's clarity about ownership and responsibility and accountability for addressing pandemics, but also smaller crises that happen in the everyday so I'll pause there and be happy to take questions or hear any feedback from the group. Thank you guys.
MICHAEL MCGINNIS
Thank you very much, Karen. May we turn to Bob Hughes, if you like to underscore any particular point, or if there are other questions or comments from consortium members.

ROBERT HUGHES
Thanks, Mike. Um, I'll just say I think the public health sector, it's come up in several of the earlier summaries, which I think points to the fact that it among the sectors that perhaps is leading the pack in terms of using a fundamental transformation. And I think the one of the challenges really is in moving towards that kind of change. Not only having it be in the financing mechanisms, but also in the underlying structure of the public health relationships among the agencies, particularly between the state and local agencies.

Think one other point I'd highlight is that in the sort of conflicts that have flared and communities across and in response to the pandemic and how communities have responded to it local public health officials are really on the front lines and they have often been in the middle of the controversies and have really been under some personal attacks and there's been some serious consideration about the safety of some of our public health officials, so I just think it's worth noting that the inadequacies of the way we have responded have really played out often in disagreements at the local level that have really put a local public health officials right in the middle of those controversies.

MICHAEL MCGINNIS
Thank you very much, Bob. Let's then move to our next sector presentation as we move to the last two. And next up is health and biomedical research which is co-led by Nakela Cook, who is the executive director of PCORI and Mike Lauer's a deputy director of NIH and Nakela, welcome to the consortium and thank you very much for your leadership.

NAKELA COOK
Thanks so much, Mike, and thanks for the opportunity. I'm glad to be here and I'm happy to present on behalf of myself and colleague, Mike Lauer who's just been a privilege to work with him and thank him for his contributions to the summary. So as we've been talking about through most of the morning that the health and biomedical research sector just is no exception to a lot of the broad sweeping challenges that have been discussed related to a lot of lessons that we are our learning with implications, perhaps even beyond the pandemic and some of the challenges that we've identified are really around. I'm trying to effectively generate valid evidence and research results in response to the pandemic and that the pandemic itself has exacerbated some preexisting stressors.

Particularly as we look at the research workforce and some of these stressors related to the workforce are probably most evident amongst our early career investigators and those who are underrepresented in science and are disproportionately I think affected in their participation and research worsened in the setting of the pandemic and there are a lot of uncertainties around quantifying these effects right now, but some of the early data are showing that women are posting fewer reprints, for example, or publishing fewer papers and thought leaders actually are worried about whatever progress we've made in terms of enhancing the biomedical workforce diversity that we have the opportunity to lose some of that in the setting of this pandemic.

We also recognize that the public has really look to the scientific enterprise in ways that never done before in terms of how to accomplish what some might have even thought was near impossible almost instantaneously trying to explain what's happening and develop some safe and effective cures and
vaccines, even within months. And so the research processes that we typically utilize to stand up studies have been challenged to do this more rapidly stand up clinical studies and associated infrastructure to translate research and practice across all sectors of the health system and balance this concept of rigor with speed, which I think has been an incredible challenge during the pandemic.

There’s also been critical sector communication and collaboration vulnerabilities and some of these relate to the imperative, now more than ever for communication and coordination and collaboration across researchers and funders and across sectors as well as building public trust in science and validated research findings and even prior to the pandemic. There had been a lot of efforts to promote data sharing and build interoperability across data sets which are gathering momentum, even though we know that these efforts were challenged by technology has the tendencies of sharing, as well as validated research findings that had the ability to be shared across when there are challenges standardization, etc. But there’s really a heightened urgency and a new challenge in this pandemic for data sharing and interoperability for research that’s been spurred on by the pandemic with several needs.

To deliver actionable more real time research results that can be built upon by the entire scientific community as well as independently replicated. They’re also been challenges to promote interoperable clinical systems data that can support identifying even the basics like outbreaks and tracking mortality rates, but also utilizing as Dr. Abernathy mentioned earlier real world data to promote the delivery of best patient care in the midst of the pandemic.

And we recognize that there are opportunities as well and challenges for this in terms of supporting data governance and infrastructure that will help us to stand up trustworthy data repositories for the type of research that’s needed in the pandemic other vulnerabilities, especially around policy relate to this paradox that we’ve been talking about for the research community that’s trying to respond to COVID-19 really necessitating and engagement of communities that are most adversely affected and those that may have some of the greatest distrust of the research enterprise. And less this emphasizes that challenge and need to build and establish meaningful partnerships with communities as research partners or incentives to build them.

There also been several lessons learned in terms of thinking about the critical sector specific priorities for transformation. And some of this relates to the fact that the biomedical research enterprise now really has an opportunity out of necessity to guide transformation that will help build long term resilience and diversity. For the research workforce and some of the opportunities here maybe to bring diverse research personnel into the front lines of the type of clinical trials and research that’s happening in the pandemic to engage more robust robustly with diverse patient populations and communities.

There is also, I think, a phenomenal lesson for us in terms of understanding how to adapt new and innovative funding mechanisms and processes that can help accelerate the research that is necessary to be conducted in this pandemic and translate into some accelerated findings and results and potentially even ultimately outcomes. And we also recognize an opportunity, our lesson learned for an opportunity to coordinate across research projects both internationally and nationally and learn from some of the activities that are being stand stood up across the globe that can help accelerate progress and deliver on some long standing efforts even related to data sharing and interoperability.

And maybe the last point related to lessons learned is around this opportunity to elevate communities and patients as equal partners and research while engaging the public and in science in a way that can enhance that understanding of the scientific enterprise. So with that, maybe I’ll pause and see if there any
comments or questions about several of the points that we are seeing those now in the pandemic and opportunities for the future.

MICHAEL MCGINNIS
Thank you very much Nakela for both you and Mike for a very concise and insightful us set of observations. And thanks also for your being so nimble and being able to engage the issues without the second slide on that challenge I should note to folks that all the slides will be available afterwards, even though I have to underscore that bear in mind this is a work in progress.

May I turn to Jim Madara for a brief comment on the health and medical research arena.

JAMES L. MADARA
Sure. Thank you, Michael. And that was really wonderfully insightful. Thank you. Nakela, and I guess I would think about a couple of different reflections. We talked about communications and one of the aspects of that is not only communications and the stakeholders, but communications with the general public. The Surgeon General raised that issue and one general thought in biomedicine is for to have the public better understand the scientific method. I do have to say I’m told by my social science friends that that’s the wrong approach and that Americans are busy with their families and work and they don’t really care about the detailed and scientific method. What they want is, you know, are trustworthy sources to provide the bottom line, what should be known. And to do that, their suggestion is one has to segregate that function of communications of science and a trustworthy way to trusted scientific sources that would include National Academy but once the speaker becomes a politician, whatever the issue is, it becomes politicized immediately. A sub component of that conversation is the type of language.

So these folks, remind me that there’s a big difference between saying x is the preferred approach. Versus saying that we’re in the learning phase, but based on the best current available evidence x is the best approach. And that would get us out of maybe some of the issues that we were in March and March and April 2 observation is around data. And studies, you know, there were observational sort of studies that were useful the recognition came from that.

However, in the rapid development of RCTs it was harder to do in the context of the stress and chaos of the moment. So, you know, how do we do that and how do we include not just large sites with early enrollment and art cities and such situations but sites that are non large with different populations that might be reflective of more real world like data.

Another data issue is how we follow up on what’s happening. It appears that many patients have been affected by code will end up having an unpredictable a rain a range of a more severe chronic disease. And so the pressure on you know the ability to get longitudinal data, the pressure on being able to incorporate remote data and social determinants of health that are going to be important in this area are all going to be important to think about and you know, as a friend once said to me, reflects on something Judy Faulkner said just a moment ago. The problem with healthcare standards for any specific element is that there are so many of them.

We have to get to a point where that no longer exists. And lastly, building on some things that we we’ve heard in virtually every presentation and that read toxin alluded to is the need for resilience and search capacity Jeff also talked about that and read mentioned the problem of, you know, the fiscal question of how you build that excess capacity. But I think another somewhat different issue is how do you retain the flexibility that you build that’s likely to have some marginal ongoing cost. In these extended periods
between crisis. So a good example of that is you know we did build additional public health capacity and fund it during the H1 in one crisis, but over the next decade. That was whittled away.

And so how do we retain that and that makes me also think of the Bloomberg School analysis, a pandemic responsiveness and when it was noted that the US is relatively weak in testing crises systems periodically.

Actually, one thing I would add is in talking to my biomedical venture research friends, they were also very affected by COVID-19, in that non-COVID-related bench research really went down for some period of time. And this involves everything from the appropriate husbanding of precious genetically modified animals to keeping processes alive for cell culture models as opposed to having them you know transitioned into a low temperature NAP for some period of time and then rebuild, that’s another issue that I think we will face in the next year.

MICHAEL MCGINNIS
Thank you very much, Jim, and thank you, Nakela again for spearheading the important work here and I know that as we transition to the last one, I just want to make reference to the fact that I know Rich Platt, who is the co chair of our evidence mobilization action collaborative are taking close notes and also will profit immensely, not only from the observations, but from the questions that come in. So thanks again.

Let’s move then to the final presentation of the quality and safety and standards organizations which is co led by Carolyn Clancy who leads the relevant activities at the Veterans Health Administration and is the former head of ARQH, and she works with Kate Goodrich, who’s now Humana and was previously the chief medical officer at the Centers for Medicare. So, Carolyn.

CAROLYN CLANCY
Thank you so much, Michael. Let me just say I have really, really enjoyed so many of the conversations today. And can also recognize the importance of the Academy’s leadership and trying to bring these together because there are so many cross cutting and overlapping themes. I don’t think it’s a secret to any of you that the space, known as quality, safety and standards organizations is a rich robust sometimes noisy patchwork quilt of state and federal groups nonprofits and so forth, as well as research organizations, but really motivated and inspired by to landmark reports in the National Academies, namely To Err is Human and Crossing the Quality Chasm it’s fair to say in the past 20 years there’s been a fair amount of progress. Particularly in reducing healthcare associated infections in being far more attentive to multiple aspects of patient safety.

And certainly being sensitive, which is different than being I think effective with respect to disparities and care and the importance of social determinants. But starting to get some traction in those areas. And then the pandemic kit. And it was pretty clear in terms of vulnerabilities that the system such as it is, which is actually a broad array of pretty decentralized healthcare systems which are highly variable in size and serve very different populations. Really was not terribly agile and adapting to new best practices, particularly during public health emergencies and actually building on something that Jeff Balser remarked earlier.

I will say VA is really, really good at short term public health emergencies. I mean, we’ve got people everywhere. We’re often the people backing up HHS providing care to people who have nothing to do with our health care system. And we’ve got equipment and all our facilities can run for a couple of weeks
because we have backups. But an ongoing months many months long and very unclear end in sight, public health emergency is a very, very different order of business.

That said something the Surgeon General said, I just wanted to add about rapid learning and how much we have learned in times of crisis, and he specifically mentioned military incursions reminded me of another series of I think Academy workshops, if not for reports on the rapid learning that took place during our experiences in Iraq and Afghanistan or the military made very rapid changes in how we provided health care to people who are wounded on the battlefield. So, you know, seeing an old mash rerun on TV is an incredible anachronism for how people who are injured on the battlefield are treated now and it strikes me that that might be sort of set of very important lessons to learn from I would say that we have no lack of safety standards enforcement would be a different question for vulnerable settings, particularly nursing homes, which I think is a tragedy that very few people saw coming and I think many people have been quite horrified by historically, it's always seemed to me that we were highly willing on at the drop of a dime to add more regulations to a nursing home mix and yet what we found across the country was both for state veteran songs, which are not under our direct control but are still part of that same ecosystem and for community or private sector nursing homes.

There were very, very important gaps in care and I do just want to acknowledge the work of some of my nursing colleagues here who've done a lot of outreach and many have been deployed for multiple weeks to various organizations. In terms of communication and collaboration vulnerabilities to say that we've seen a huge hit to public trust and the safety and quality. Following the death toll in nursing homes, I think is an understatement. I think it's hard not to miss or hard to miss rather that we actually didn't have incredibly good advice or recommendations or systems to help people in assisted living facilities and other kinds of arrangements. Where many of the elderly have chosen to live. Some of their final days. And I think that has to be very much squarely on the agenda as well.

And we've also seen a fragmentation of resources and data systems to track and monitor outcomes. Now mark remarked that when he was talking about the challenges facing health payers that those payers that we're not so reliant on fee for service. Tended to be those that could continue sort of a value based approach and were best positioned to emerge from this in a very strong position and I can't possibly disagree with that. But I would have to guess that many of those same payers also have multiple sites of care where the data streams are interconnected, which makes a very, very big difference. Having Telehealth. The other virtual encounters that don't go anywhere or connect to anything is fine for like right now this very moment, this particular need. But it doesn't actually help us learn and it's unclear how where patients are left confused between where I used to get care and advice and you know this other person. I'm connected to now.

Some of the other vulnerabilities. We've been very fond of saying in the past few years, that there's been a rapid movement to value based care in a way for fee for service. Some of that aspirational. It is really hard for to particularly for people on the earlier parts of the adoption curve for value based arrangements, who are suddenly hit with a very big drop in revenue. To let that fall off the radar or for it not to get that much attention. After all, if you have to furlough or lay off employees. That's going to particularly at a time when there's a very tough economy that's going to be front and center of everyone's attention, rather than are we still working on this new bundled payment arrangement and in terms of data and measures to identify lapses a couple that stand out for me. I think we still have a great deal to learn about people who didn't come in for care, understandably, they're afraid we hear that from veterans all the time.
And I've seen some payers you manner might actually be one of them. I’m not advertising or endorsing them but I did see an article where they were mailing people call a guard kits and I think blood pressure cuffs or something along those lines. And I know a lot of organizations are leaning forward now for flu immunizations in the life, but we’re way behind on kids immunizations. All kinds of preventive care. I am understanding in the private sector that because of the increased requirement for homeschooling and many communities. That many mammography facilities are now open have extended hours both days of the weekend.

Because, you know, in many cases, who's doing a lot of the homeschooling but we need a much, much better handle on that. And it's also clear from our own system that we saw a lot fewer hospitalizations from March through May. I think we also have opportunities to learn a great deal more about staffing capabilities and tracking across facilities. It was a surprise to me that even New York State had very little idea of who, what kinds of staffing needs that many of their hospitals needed. So it made me feel more inspired by people who just found their way to New York, because I had no idea who is going to tell them you really need to go over here.

And in the end, particularly looking at nursing homes. I think we, we need to get much smarter about assessing capability. And some of that in thinking about public health emergencies in general and this pandemic in particular is really about having regular quality improvement drills. I don’t mean table tops where someone shows a PowerPoint presentation and everyone says, well, that sounds really awful. I hope it doesn't come here. I mean really going through pretty extensive simulation exercises and I don’t think that's just limited to healthcare. I think that's got to be healthcare with other components of public health and that so quality improvement approaches really need to be part of standard protocols for emergencies. So in terms of system wide priorities for transformation.

Yes, we need smarter metrics that is like a given in every quality conversation. I think the new new thing here would be a lot more information both about virtual care. And frankly, outpatient care. We don’t know very much a whole lot of care. Prior to the pandemic has moved out of hospitals to ambulatory settings and it’s very, very hard to know in any systematic way with the quality or safety of that care is clearly issues related to worker safety arguably have not received the attention they deserve, particularly in this pandemic.

It's really, I mean, you've got the perfect storm right falling revenues adjusting time approach to inventory people afraid of losing their jobs, but also afraid that the mask that they're wearing that they really kind of sorted think is leaking now. Needs to be replaced and no one's got one for them. So that's clearly got to be a big part of our agenda going forward and clearly, based on some far more insightful comments from some of my colleagues.

Being on top of the issues related to evaluating and remedying disparities, which in my view is in not just cutting the quality measures and strategy buying them. That’s very helpful as an indicator, but it also has to be far more in depth attention to social circumstances in the life. So thank you for the opportunity. Michael and frankly, for all the presentations I heard part of this.

MICHAEL MCGINNIS
Thank you very much. Carolyn, in the interest of time, we're going to have to forego the comments here, but we'll have plenty of time over the next month or so to offer additional comments and encourage them along the way as I turn this back over to Mark for our wrap up session, I want to again thank each
one of our presenters who presented on behalf of an extraordinary set of sector team members and we'll watch. We're here is besides. Thank you, is to be continued mark over to you.

MARK MCCLELLAN
Right. Thank you. Thank you very much. Thanks, all, for a great discussion. I wish we had more time for comments, but I really appreciate all the comments and questions that have come in in the Q&A. We have tried to bring together a diverse set of perspectives as you've heard, and that, by the way, includes nurses and other allied health professionals who have been tremendously important than the response to the pandemic, not to mention the path forward from here to a more effective and person centered healthcare system and better health. So we are going to incorporate all of that into the further work and I hope you'll stay tuned as the these papers move forward and we come out of this pandemic in hopefully better. Much better shape with a more resilient healthcare system. We do want to spend some time now on another perspective on implications for health system transformation. And as I mentioned earlier, very pleased to be joined by Joanne Kenan executive healthcare editor of Politico.

Joanne has a tremendous amount of experience in all of these issues and she's going to reflect a bit on the implications of what we're living through now some of the topics that we've heard about today for healthcare transformation in the United States. And I think some personal perspectives that she's had from not only participating in the event today and working on these issues in the pandemic, but a long career on health and issues related to well being. She's has been involved in reporting. Since arriving in Washington in 1994 and just reading from Joanne's by have covered everything from Haitian voodoo festivals to US presidential campaigns, Joanne maybe comment on which one you'd rather be covering that right now at this point in the process.

She's been at Politico since September 2011 previously working at Reuters and a number of locations and also as a Kaiser Family Foundation media fellow and working and blogging about health policy. The nonpartisan New America Foundation along the way to her works appeared in a very wide range of publications, including the Atlantic, Kaiser health news, The Washington Post, the Center for Public Integrity Health Affairs AARP magazine. The National Journal slate many others. I could go on for a while, Joanne. Thanks for being with us today.

JOANNE KENEN
I'm going to try to be fairly brief, because I think you are running behind schedule and I want to have time for discussion. Um, I will say that I talked to Mark and Michael this week about what you wanted me to bring to this cyber table. I jotted down notes on pieces of paper as I sort of went about my business. And last night I pulled the piece of paper to sit down and pull it together. And I saw that it said chicken, salmon, and Granny Smith apples. So, that is what happens after you end your day. I have to watch part of my job is to watch President Trump's daily press conferences and yesterday's was quite a doozy. He both threaten to veto, you know, which is why I couldn't tell the difference in the shopping last week shop.

What I wanted to say today. You know, he both threatened to override FDA safety guidance for vaccines and he did not, as you all saw from today's headlines. He did not commit to a peaceful transition as well. He was asked several times to make sure he understood the question. And if you don't actually watch those briefings occasionally. I mean, I get paid to do it. I would, I think it's quite informative to just sit down one night and watch from start to finish.

But, when I began to I guess when I was thinking about two things here. One wonders what are the opportunities. And as I listened to you today and I just sit through all of it. Um, I think the opportunity.
The word opportunity isn’t the right word. I think the word is imperatives. That we have reached a point where we have to do the things that all of you know need to be done some of the things that went wrong in this pandemic were completely predictable. And some of them shocked us. It is much worse. I think that everybody anyone expected. I mean, none of us thought it was going to be a quick and easy pandemic, by definition, but I think we are at a point where we’re looking ahead at what’s facing us, you know, this fall and winter I’m forget the politics just sort of where the epidemic is where it’s where it’s spreading how fast it’s spreading how ill equipped, we still are for another for what is likely to be another search.

Yes, some things are better and a lot of things we’re just not there yet. And it is not I’m, those of you who know me, I’m a pretty upbeat person and I am actually really very worried about what this country is going to be experiencing maybe because some of you have told me to worry. Um, but I think it’s pretty bleak. Um, so we have we have opportunities. I’m going to talk about and then another theme that’s come up today, and while we were talking, the National Academy of Science and National Academy of Medicine put out a release and some of you may have seen in your phone’s about the politicization of science and how damaging it is. I don’t think that’s a very common thing for the Academy’s to do, but we are living through a multifaceted crisis of trust. We are awash in distrust in every in ways such as the experiences. Some of the believer public health people local public health people, which was also alluded to it. I just didn’t think we would be at a point where public health, people would need body cards.

When I speak about health care. I often speak about how you know music talking about pre pandemic of seven Obamacare and Medicare and healthcare politics and you know that healthcare had become a proxy for politics and even in a highly politicized fragmented period. It was disproportionate health care was more political than other domestic issues if I knew how you felt about Obamacare. I knew how you vote, pretty much, with very few exceptions.

And I’m used to the politicization of healthcare to what I do for a living. I mean a Politico. You know, I have an army that report submit your monitor or something like 20 healthcare reporters and national staff in another seven or eight in the States. But I’d never expected. I never did expect to ever confront a pandemic. Yeah. We all knew that what’s possible, did I expect the pandemic would become politicized to this expense that it is. No, I did not. I think most of you are surprised by chew that we were point wear a mask is a simple tyranny instead of a symbol of our common humanity and how we as a society should be taking care of one another. So, you know, that’s sort of how I think about what’s next. And I think about the landscape as a pretty disturbing landscape.

But I also still believe in possibility, and I believe that everybody who signed on for three more you know soul sucking hours of zoom. You’re here because you already know what you need to do. Some of the things that were brought up today or were highlighted by the pandemic. Some of the supply line China issues, some of the search capacity. Some of the research issues there. They’re more short term, they’re more things we’ve confronted the last few months, but a lot of the larger issues you already knew.

And you’ve been working for them. I mean, you’re not ignoring them and there are many obstacles, including political obstacles and caesarean obstacles and system inertia obstacles and not knowing how to form alliance or move ahead obstacles. But you know i mean you all new you know volume and the volume value conversation already. What do you call it the quality, quantity conversation, you’ve been having it for a decade now, or care coordination primary care of the importance of primary care, the need for women, when I talk about like the need for a medical home a primary care setting. I'm not endorsing a specific payment model or who's pet medical home is better. I'm not talking about in the technical sense
but the way if you miss being going the doctor needs to experience that you have someone who takes care of you and has a full picture of you and knows what you want.

Things like advanced care planning would just be part of what we do. Care coordination will just be part of what we do. It shouldn't be an idyllic unachievable goal. It should be something that we just get clearly but the lack of capacity for public health, you know, in surged after 911 we got better at it for a while, you know, Senator forest in those days, and Senator Kennedy were really smart. Passing a bioterror bill which all of you know, was also a basic public health bill gains were made, and then it was defunded or funding slow down and things deteriorated again and we were just not prepared.

So that's certainly going to be a priority when we get through this to restore it to put primary care front and center. To put prevention front and center and to rebuild public health or take the rebuilding we've done and make it permanent because we are really, really good as a nation of forgetting things fast.

We had a chance. Someone else referred to it. We had started 20 years ago we knew there were a current. I'm not a science person I am a policy person right I knew they were viruses out there waiting to get us and I knew that people were working on vaccines 20 years ago and they got dropped so that urgency of making this oh do that by to make that that has to be a priority for every one of you.

Not, I mean the payment in this changing incentives, which we have started. And if you're already working on them. You know what I said to mark the other day was like we've gone from islands to archipelagos of sort of quality and you payment forms. We don't have a landmass. You know, we need to, we're still isolated we've taken steps, but we haven't transformed the system. Um, so a lot of you who have been working in this space because you wouldn't be here if you weren't working in this space. Um, you really have to figure out how to act, which is what I was really asked to end with your talk, open up to you. How do you start making changes.

Some of the things that we have experienced, you know, we knew there were disparities, we knew there were social determinants of health issues, but I don't think many of us prepared for the gap to be as I put maybe those of us who are white and don’t experience weren't prepared. Maybe the communities that we're experiencing or not so surprised. But that clearly has to be front and center.

Of everything you think of that. And the way we cover the news is also. I mean, it's not that we ignore those issues before, but we're thinking about them in a more urgent way and absorbing them into everything we right as opposed to just, oh, let's do a story on disparities this week. But also those of us who are health literate and those of us who do have good insurance and those of us who are privileged in this system to some degree. I mean, I'm not Bill Gates, but I have decent insurance, but we are also i mean you All of you, if I can see you on my screen now. And I asked you all to raise your hands if you have been able to get the care that a loved one needed at a critical time. A lot of you would just burst into tears because our system as It's really unreliable and it's really uneven. So how do we take this, this, you know, this sort of a wreckage.

And one of the issues is how do we how do we build trust. How do we create trust. Because there are the distress is permeating absolutely everything and I tell you that as a card carrying member of the fake news right I am subjected to threats, my colleagues who are on energy out more visibly are subjected to more threats. You know we are we are discredited. We are attached. We are called liars, we were called tools we were called a lot of unprincipled things. We have more security than we had in our prior existing it's really, you know, if you go into journalism.
You know, you know, we've made mistakes if you complain about us. But we're sort of funny and mix of cynicism. I'm dealing. You know, I could have made a lot more money on Wall Street, and I believe in what I do, but now I'm an enemy of the people. Right. And that's been really frightening thing when half of our country believes that, but it's you as doctors or nurses or researchers are not immune. You know, there's no from the patient that you say you don't really need this thing. You heard about from your, you know, your golf buddy or your PTA, you don't need that.

Your patient isn't hearing. Oh, I don't need it. That's good. Okay. Oh, I really needed, but the insurance company isn't letting my doctor gave it to me. So you have that sort of micro distrust you have MS thing. It happens all the time. But it happens, you have the larger distrust in science we have damage. I mean, the CDC and the FDA, we're not going to, it's going to take a while for them to they made some mistakes that were just there were mistakes. I have been surprised. I did not expect testing to be the mess at what's in this country and that was some of that was mistakes, it wasn't all politics, um, but the kind of the country's going to have less food, which is why I think the academy put out those statements today there's going to be a lot of trust. Trust rebuilding and it's going to have to be coming from people partnering to across political lines.

How do you, how do you create trust. How do you create partnerships? If any of you have the ability to go really big, you find a partner in your community. And do you think big and bold. You may think it can work. You're really sure it can work. Go ahead, be big and bold, but I think a lot of what we have to do is going to be very small. I think it has to be finding someone who is not a normal partner typical partner.

Or in the healthcare system because we also have to break down those silos and find something small event. The example I came in here with you know having talked to mark this week. And I've done, I've been in North Carolina several times in the last few years, and I've done a lot of reporting. On what Mandy Cohen is trying to do there. She doesn't call it social determinants. She calls healthy opportunities which is a way better term. There are some things that are unique to Carolina in the way that the sort of the public and private sectors, lot of tech sectors lined up and a lot of what they were doing got stuck in Obamacare politics and has not moved ahead. But when I went down there and I heard that mandate, who is not from North Carolina secretary of health in the state. And worked in the Obama administration and worked on Obamacare and was coming down with this really ambitious change agenda on social determinants and Medicaid and poverty. And so, and silo busting and that she had bipartisan support. I first was very skeptical that she had bipartisan support until I talked to Republicans who she had bipartisan support, and she found ways of speaking, emphasizing different words and different messages to build support. So to talk to someone who was more of the, you know, squishier side about social determinants. The right thing to do. She could say she could talk to them about sort of moral imperative and the healthcare imperative. But she could also say, and you know what good economic sense. And then she could go to the republicans and say you get really good ROI out of this. And it's also the right thing to do. And she built Coalition's that way.

listen to the Surgeon General today, something he said, we've been kind of opportunity of where you can find language that two sets of language that are both true, but you can make the most you move ahead. When he was talking about walkable cities and that mayors who've done it for economic reasons for property values to boost shopping districts and things like that. And they weren't thinking about heart disease or diabetes. Doesn't matter you in the healthcare system can go find some real estate. Developers and talk about you know it's going be really good for your property values to make it walkable and by the way we're going to help prevent diabetes. So I don't know, I'm not in your community or your institution or but I just think that I think that some of these small trust building unlikely partnership cross sector is
going to be the way to go. Um, and I also just don't think we can. I mean, I don't know what the political environments could be, I don't know who’s going to win the election and on them is going to respect you for so to the election. I don't know what the Senate is going to be like, but I do think that there are changes in our society that we don't even understand yet.

Just like I think that we individually don't understand what the experience of going through this is for us as we sit in our homes, month after month, um, I think there will be things that were impossible political might be become possible in terms of rethinking things that we just took for granted us in Washington places you can't do that. Maybe now you can is a vested interest still going to be vested interests. Yes.

Does it matter who wins this election. What are your choices going to be changing healthcare. Yes, it's not my job to endorse anybody. You don’t. You all know that you'll have two very different scenarios. But whatever that scenario is whether you can act on a national stage or whether you're acting at the sidewalk and your community stage. I don't think we have any time to waste. Um, When I began talking about the pandemic and our 9am meetings. You know, it's a political news from its political right i mean they like me, they respect me. But they listen to me. But, you know, they weren't. They were focused on you know impeachment and the primaries and single payer and everything. And I'm like, talking about this is in China. And, you know, of course you know I’m often to turn to practice. Well, you know, I'm home. I said, I don't know when we're going to see each other again. They all looked at me like, Oh, there she goes again. And I've gotten so many messages from people saying, Wow, you were right and what I tell them was no it was wrong. You think I was Cassandra and I think I was Pollyanna It is so much worse than I thought it would be. And we have so much more work to do. Then I thought we would have But I also you know all the things we talked about today wasn't new to me but it fit together and you created this agenda and they've got to go out and fix it.

MARK MCCLELLAN
Well, we think, thanks, Joanne for those heartfelt comments and I really appreciate the point about taking us today. Yeah, there’s, there’s a there is still a lot happening in North Carolina to now if you look at the agenda, we are running a little bit over has been a great discussion. I want to continue it for a few minutes more, we should wrap up in 10 or last, but I would like to turn the first comment.

For this section is Bill Novelli – Bill is currently at Georgetown, but Bill is also someone with a tremendous amount of experience in communication with the public and with building for us. So Bill thoughts.

WILLIAM D. NOVELLI
Mark, thank you so much and Joanne hello and thank you for that. Michael. This has been a terrific day just a terrific learning experience. I want to go back is Joanne to do the Surgeon General and I thought that he gave us a good challenge. He said, What can we learn and what can we fix and we talked about social determinants and incredibly disproportionate risk that people of color have from covered. I mean, that he at home. And a lot of people talked about that as well.

You know, Joanne talked about the need to put primary care and prevention front and center. And it seems to me that with all that was discussed today in terms of what we can learn and what we can fix. We have got to do that. We've got to put prevention back on the national agenda and it's easy for prevention to fall off. And I don't mean little small pieces of prevention. I'm talking about at scale. He said, Why do we keep under investing in prevention. Why do we keep missing the boat in prevention and he gave three examples, he said. Number one, it's funded by discretionary spending and that's easy to cut And number two, Congress has a lot on his plate and they're not always up to speed on prevention. And number three,
he said, it’s really hard to engage the public in prevention. We all know this, you know, as, as I had said they’re all waiting for a pill.

They don’t want that pill. They don’t want to do the hard parts of what it takes to be healthy and I think he’s got a good point there. And if we’re going to do anything about social determinants of health if we’re going to fix the big problems we’ve got to really focus on prevention. And I’m not just talking about low income people, people of color. Look at vaping is a suburban problem. These are upscale kids and look at people not coming in for care. This is everybody. So I really learned a lot today. And I appreciate it very much, and I hope that we can take on board what Surgeon General Adam said what everybody else said Carolyn Clancy, and everyone else and Joanne as well and really figure out how we can make things better going forward. Thank you, Mark.

MARK MCCLELLAN
Thank you Bill. It’s been a full discussion, I would guess through the ad myself this this got the note about prevention is really what we’ve had a lot of failures and dealing with issues upstream in the pandemic, whether it’s preventing the spread of cases by having better, more resilient places to live and work environments or helping as Joanne said getting public understanding and trust around issues like masks. so I think your point about prevention also applies in the context of the pandemic as well. And we do have a few minutes for such an important topic. I know we’re running over but a few minutes for comments. If any of our other panelists have anything that they would like to add.

JOANNE KENEN
I would just also say that we have to think about prevention bigger than we used to think about it. Right. It’s not just getting a cholesterol test. It’s not just, you know, having a mammogram, which we can fight about whether you need one and when. It’s really thinking about the social determinants and thinking about it as what the Surgeon General said those are the pre existing conditions where the socially pre existing conditions we think about prevention, it’s thinking about it in a much bigger way. That sidewalk is part of prevention.

MARK MCCLELLAN
And joining I would add, you know, you talked about North Carolina those efforts around moving to value and building trust have been unquestionably influenced by what’s happened here during the pandemic, but it’s still there and I think the more as you say that we can focus on some actual practical steps like how do we improve testing access looking ahead. Issues with the vaccine or it’s going to depend on trust and where in these local environments. It’s easier to explain that.

There isn’t just a process that can easily be disrupted for how companies with independent oversight do large scale clinical trials, how they reviewed. How FDA regulates sure it’d be helpful for FDA to have even more guidance out there about what they’re looking for with their gold standard of review, but they’re going to apply it. So a lot of opportunities when we get beyond just the sound bites and some of those political context to have that discussion. I do think it’s still a challenge to raise that level of dialogue that is so essential for transparency and trust into our political context. If you have any further thoughts on ways that we can better work with your reporters who are inclined to focus on the you know the most inflammatory statements that tend to drive on this politically more than others.

JOANNE KENEN
Well, actually if anyone you can find my email online or I’ll stick in the chat one thing one narrow thing, but we’ve launched a couple of new products that will, all of which are free. They’re, they’re not pro
product. And one of the things we're, we've started on is something called future pulse and we're looking at the intersection of health and technology and there's just so much garbage out there, right, I mean like there's really innovative things and then there's just all this hype and I would just love for people to email me and say this is thing I've, this is, this is real. And this is just another bright and shiny object and you should not waste your time on it. I mean, that's what we do is sort of chase bright and shiny objects as journalists and then I mean I've often the, the social determinants is one is one of the few that stayed in had begun to penetrate the healthcare system and how people thought of things and then the pandemics of change the subject, but they're related.

MARK MCCLELLAN
We have time for one more question. Was there. I think there was maybe one.

DAVID BLUMENTHAL
I have a comment and a question. And first of all, I want to thank you and for her comments and providing a dose of reality. I think this conversation in the conversation. I also appreciate all the comments that we've heard today. It’s just strikes me that this is a potential agenda item for a National Academy to think about how to rehabilitate the scientific leader scientific opinion in this country and to recreate the trust that we once had and CDC and FDA. That it rather than simply noting the loss that the damage done to those organizations has created to think about how to remediate it and I think the National Academies having not been sideswiped by this conversation have an important role in potentially helping with that and there have been a lot of new faces through the media and elsewhere, new you.

Potentially trusted opinion leaders created as part of this pandemic and the question of how to take advantage of that visibility of people who are not part of politics, but nevertheless are authoritative. In the process of recruiting that trust is something else. But I do think we as awful as it is, it was happening to Tony Fauci and others. It does suggest that we need to surround our scientific leaders with other fresher faces, who can generate regenerate that level of trust.

ADAM GLUCK
This is add on I you just want to associate myself with your comments because I was I've been thinking a lot about those comments in the issue of trust and the erosion of trust and how to rebuild it. And how do we that theme into the report that ultimately comes out of these working groups because fi we're not able to make these recommendations will, you know, never get anywhere other than the paper they're printed on and whether they are government scientists at NIH or FDA or CDC or a scientist of, you know, working on vaccines for COVID-19. Or try to figure out new ways to prevent chronic illness without that foundation of trust that that was the kind of the hallmark of these leaders for our country in the world. I worried that we are we are not going to make it very far.

MARK MCCLELLAN
Thank you. I really appreciate those comments and I'm going to take those as the we're all going to take those as a challenge, both for the further work of the National Academy of Medicine collaborative on addressing these issues in the pandemic. And in the work that we're doing beyond that to build trust and to hopefully make progress on the very challenging issues that you all have laid out so Joanna I want to thank you for driving and an excellent and sobering discussion. But I want to thank you and everyone else today for helping us to see a path forward, you know, among the key themes that I heard trust is obviously one how to build that to enable more progress fragmentation in terms of many aspects of our response. And urgency, because all the issues that we're facing the pandemic. The cracks were there. The problems were there beforehand mortality rates in the United States were rising before code became the
number three cause of death in the United States at a much higher rate of impact than anywhere else in the world.

The disparities in race and ethnicity health inequities where they are beforehand. Before we saw these exacerbated differences. But I also want to take listening to Dr. Montgomery Rice about her comments on resilience. That was another term that I heard a lot today. And there are some bright spots plenty of examples of grit. That we can build on that you all have talked about and the different reports that were reviewed today that can be the basis for more effective response. We have more to do to bring them together to link them to tools and practical steps forward and to make them part of an effective approach for connecting with the public and policymakers. To get to trust and through trusted communications and transparency and science based approaches. To get to impact, but the foundations are there so very challenging time for the country. Thank you all for the leadership and the frank ideas and especially the proposed actions to help us move forward. Mike to close this out. I’d like to turn back to you for any final comments.

MICHAEL MCGINNIS
I’ll be very brief and say that I echo everything that you indicated mark and underscored on behalf the National Academy of Medicine. We’re very pleased to have had such a rich discussion we’re going to continue that discussion in our close session. But in the meantime, I want to thank all of our presenters and the public and our colleagues who are partners of ours as we move forward to trying to identify an action agenda that will make a difference and gain the trust of the American people. So thanks to each at all and we’ll look forward to hearing from you as we continue to polish and work on and complete and rollout of the conclusions of the various sector assessments.

MARK MCCCLELAN
But, just let me close out to by thanking everyone who joined us today. Great. Comments from all of you and it’s going to take all of us working together to implement the kinds of ideas we've discussed today. Thank you all very much and stay safe and stay well.