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P R O C E E D I N G S

(1:30 p.m.)

OPERATOR: Ladies and gentlemen, thank you for standing by and welcome to the Connect2Health FCC Virtual Listening Session Policymakers Forum. At this time all participants are in a listen-only mode and later you will have an opportunity to queue up by pressing * then 1. We will also have an interactive session in the call where you will need to mute accordingly as well. If you should require assistance during the call you may press * then 0. As a reminder, this conference is being recorded. Currently we will be taking a role call and I'll provide the names of the callers.

We have Eli Fleet with HIMSS; Jacob Terrell, National Association of Counties; Jennifer Plymale with Marhsall University; Maria Givens with NCAI; Tim Carney with ASTHO; Kamala Hart with FCC; Patty Mechael with HIMSS; Carolyn McCoy with ASTHO; Eric Frederic with Connected Nation; Cindy Muir with NARUC; Andy Rhea with

Cherokee Health Systems; Chantal Worzala with American Hospital Association; Jeff Hallstrand with Price County Teleplant; Tracy Hines with Colorado Telehealth; Michael Morris with WVDHHR; Jeff Reardon with FCC; Michele Ellison with FCC Task Force; Susan Howard with NADO; Tracy Brewer with Ohio University; Angela Panettieri with National League of Cities; Leonie Heyworth with VA; Michael Iaquinta with iSelectMD; Suleima Salgado with Georgia Department of Health; Kevin Galpin with VHA; John Peters with Veterans Affairs; William England with HRSA; Elaine Gardner with FCC Disability Rights Office; Emily Moore with ASTHO; Maureen Lewis with NTIA; Tom Watson with Anderson Court Reporting; Gayle Teicher with FCC; Yahya Shaikh with Connect2Health. We also have on the call Chris Gibbons, David Ahern, Ben Bartolome, and Karen Onyeije. At this time I would like to turn the conference over to our host, Karen Onyeije. Please go ahead.

MS. ONYEIJE: Thank you, Carolyn, we appreciate that. Good afternoon, everybody. My

name is Karen Onyeije and I am the Chief of Staff of the FCC's Connect2Health Task Force. On the phone with me is my colleague Ben Bartolome who is a special counsel on the Task Force. Ben and I are going to do our best to serve as your co-moderators for today's virtual listening session titled "A Policymakers Forum on Bridging the Broadband Health Divide." So, thank you so much.

Let me begin by first welcoming you to this session and extending our appreciation to each of you for joining us for this critical endeavor today. The Task Force simply cannot do its work without detailed stakeholder input and actionable ideas and suggestions from all parts of the broadband telehealth ecosystem including all of you on the lien with us. So, we are beyond grateful for your time and your focused attention for the next 90 minutes. We look forward to hearing your perspectives and to learning from each of you on these very fundamental issues.

So, a bit of background. As you know

this virtual listening session is related to the Commission's April 24, 2017 Public Notice on Broadband Health, and it is the fourth in the series. The vision behind these listening sessions is really to create an acceptable mechanism to accommodate the significant interest in this broadband health proceeding from numerous stakeholders across the country.

One of the key areas of focus that we had is on the broadband health gap. By that I'm referring to the apparent divide at the intersection of broadband and health between rural and underserved communities on the one hand and their more urban and digitally connected counterparts on the other. Based on some data analysis conducted by the Task Force we found that, unfortunately, the broadband health divide is wide and it's growing. For example, we found that the picture of health remains vastly different in connected communities than in digitally isolated communities, and that that is true even if you look at access to care, quality

of care, and health outcome metrics.

So, one quick example is if you take 2015 broadband data the least connected counties actually have the highest rates of chronic disease. So, for obesity it's 25 percent higher, for diabetes it's 41 percent higher. In fact, what concerns us is that rural counties are ten times as likely as urban areas to be in low broadband access, and I mean by that below 50 percent, and high diabetes areas, so above the national average, about 10 percent. Unfortunately these digitally isolated counties also experience physician shortages that are more than double the national average.

Just earlier this week a study was released about how cancer rates are declining nationally but that Americans living in rural areas are more likely to die of cancer. What we're clinging to is the hope that we got from stakeholders like the National Cancer Institute and others who believe that connected health can improve detection and treatment of cancers in

rural areas and will be able to address some of this early mortality and morbidity. The sad thing here though is that these cancer hot-spot areas in rural America coincide with low connectivity areas.

So, our charge today is to solicit your perspectives on where we are with this broadband health divide and to get potential solutions from you. We want to gather actionable input on the persistent challenges and transformative opportunities that are posed by broadband and health in rural and underserved areas. And we really want to drill down if we can to concrete ideas for moving the ball forward.

As you've heard, we are a pretty large group on the call today and a very diverse group of participants. There are more than 12 states represented and we're really delighted that you saw value in sharing your views with us. We have representatives from federal and state government, from state and regional health networks, public health departments, academia, different levels of

government as I said, and tribal nations as well. On behalf of Michele Ellison who is our Deputy General Counsel and Chair of the Connect2Health FCC Task Force we just want to thank you again for taking time from your busy schedule to join today's session.

Now, we want to hear from you but I'd like to give my co-moderator, Ben Bartolome, a few minutes to share with you an overview of how we're going to proceed during the roughly one-and-a-half hours that we have together. I will tell you, because this is our third session, that the time will go by very quickly so we want to proceed as efficiently as we can. Ben?

MR. BARTOLOME: Thank you, Karen. As we previously informed you, this session is being recorded and the recording will be transcribed and the transcript once complete will be made publicly available on our website at www.fcc.gov/health. It will also be part of the official record in GN Docket No. 16-46, which is the FCC's Broadband Health Docket.

Prior to this call we sent all of you a copy of the Broadband Health Public Notice and a list of thought questions in order to give you an opportunity to think about what you might want to share in advance of today's session. So we're really looking forward to hearing your input. Among other things, the input we receive from you will be used by the Task Force in making recommendations to the Commission, and your input will also serve to inform us about future projects and initiatives we might pursue. So, it's really important that we hear from as many of you today as possible.

We remind you that if you have any additional comments or input after today's session, especially if something comes to mind later on, we would encourage you to file written comments in the docket and we sent you instructions for how to go about doing that. In addition you may also contact us directly via email at connect2health@fcc.gov. It's the same email address we've been using to in sending you

information for today's session.

Now, in terms of format, we are dividing the session into three segments. Segment one, which will be about 15-20 minutes, will be devoted to grounding the session with information from specific participants that we hope you'll find informative and we think will serve as an appropriate level set for today's session.

In segment two, which will run about 45 minutes, we'll focus on the questions we sent you in advance. Those questions relate to two broad themes that we want to cover today. The first is about potential solutions for bridging the broadband health divide and the second is about emerging issues in broadband health that you think the FCC as well as other policymakers should really be focusing on.

For segment three, we want to reserve roughly about 15 minutes at the end to give anyone an opportunity to provide any other comment or input, even if unrelated to the two themes I just mentioned. Finally, if there is time remaining --

but I'm anticipating not because we have a pretty large group which is fantastic by the way; but if there is time remaining, we may also open up the lines for more free-flowing discussion.

Now, when you are speaking for the first time please feel free to tell us a little bit about yourself and your organization, and also please tell us which city and state you're calling from. Again, as a reminder, as our AT&T Operator Carolyn instructed, whenever you're ready to provide a comment in response to a question please just press * and then the number 1 on your phone and you'll be put in queue.

I think that's it. Let me now turn the session over to Karen to get us started on the substance. Karen?

MS. ONYEIJE: Thanks, Ben, I appreciate that. As Ben mentioned, this first segment is really designed to give us all a shared starting point for the discussion. We're going to ask a couple of participants to kick things off for us. At this point, can I ask -- I think you guys are

on -- Dr. Patty Mechael, Maureen Lewis, and our colleagues from the Veterans Health Administration, Dr. Kevin Galpin and John Peters, would the four of you please press * and then the number 1 on your touchtone phones just to join the queue now? That would be fantastic.

So, participants, I'm just going to signal that we're going to move very quickly through some of this general information that we're hoping to elicit. It will be about the future of healthcare and connectivity and how consumers are or aren't adopting the internet for health, which obviously will be incredibly relevant to the FCC and other policymakers in the broadband health space. And then also we want to get some sense from the Veterans Health Administration about specific telehealth models, lessons learned, challenges and so forth that can help inform a roadmap for success.

We hope that these comments are going to get your thoughts flowing and we're going to try to keep the segment to 15 minutes, so just note

down any thoughts that you have as we go through this. We will give you an opportunity to respond or echo or amplify what you're hearing from these folks.

All right. So, Carolyn, would you please open the line of Dr. Patty Mechael and announce her please?

DR. MECHAEL: Hi, there. Is my line open?

MS. ONYEIJE: Oh, fantastic, I wasn't sure. Dr. Patty Mechael, thanks again for joining us. We really appreciate it. Can you tell us briefly about the personal connected health alliance and your background? And then we're really hoping that you might be able to offer us and the group some perspectives on the future of healthcare as it relates to broadband connectivity and some of the future realities that you think policymakers like the FCC and others on the call need to be thinking about and preparing for now?

DR. MECHAEL: Sure, thanks, Karen, and

thanks to the FCC for taking this on as an issue and bringing us all together around it. It's incredibly important. My name is Patty Mechael and I run a part of the HIMSS Organization called the Personal Connected Health Alliance. For us personal connected health and the focus of our work is really on helping to make health and wellness an effortless part of daily life through the increased use and strategic use of personal connected health devices.

So, we now know that there are more mobile phones than people on the planet, and so we live in a highly connected world. Through these connections, what we're finding are a number of major trends that are happening in society that are now starting to find their way into the health spectrum.

So, one of the major trends that we are seeing in this space is a movement towards personalization and consumerization of everything. So, travel has become increasingly consumerized, shopping has become increasingly personalized, our

interactions through social media and even the advertising that we are exposed to is increasingly being tailored towards individuals.

We are seeing similar trends in the health sector, and a lot of that is being driven by innovations in technology as well as innovations in science. So, genomics is playing an incredibly important role in moving us towards a more highly personalized experience in health where through the combined use of data from systems and tools like electronic health records to your mobile phone to the data that is coming in through the increased use of wearable technology, and then if you add all of those thing with genomics we're now getting to a more highly personalized approach to health which also is pushing into another trend within health is the shift from treatment of disease and detection of disease into prevention of disease.

Now a lot of the data that we have from a population health perspective is giving us greater insight into where are populations most at

risk where do we need to focus attention in terms of our efforts from a health service perspective, but then where are some of the key opportunities not only to do early detection and treatment but to actually prevent disease in the first place? And this push towards prevention I think is going to be really, really important and is also being driven by a lot of the policy work that a number of you all have been driving forward around value-based care which is really how do we keep people out of the healthcare system in their homes and supported for longer?

One of the other major trends that we're finding in this space is a rapidly aging population in the United States as well as throughout the world. And this desire by boomers to maintain a sense of independence as well as to maintain their mobility, their activity, et cetera, and again the proliferation of personal connected health devices is playing an important role in that. Now, none of these tools are going to be very, very useful if we don't have

connectivity, so broadband is the enabler that facilitates a lot of this.

And then also if you think about and look at even the recent natural disasters that have happened, there is an important role that telehealth and remote patient monitoring is playing on the treatment side. So, when you have shortage of healthcare providers in some of these key geographic locations, then the importance and the role of telehealth, remote patient monitoring and these types of resources and tools, becomes even more important.

So, we're seeing throughout the world, including in the United States and from the research that we're doing that there's like a 20 percent uptick in the use of connected health devices. And we feel that this number is only going to continue to increase, particularly as more and more people get involved in their own self-management of illness, self-care, as well as the intensified drivers around value-based care and really pushing more of the onus on individuals

to become much more involved in taking care of themselves. I think this has huge implications not only for rural areas but also for urban areas, that we need to really look at connectivity in general and what the demands are of the population given the sort of new emerging set of technologies that are coming into the fore and how are the policies and the access to broadband being designed in a way to meet those.

I'll pause right there.

MS. ONYEIJE: Patty, that's fantastic. What I love is that this phrase broadband as enabler, that's great. Can I ask just one quick question of you? You talked about a 20 percent uptake in the use of personal connected devices. I assume you were talking about devices beyond FitBits and the like. Can you give us a sense of what that is?

MS. MECHAEL: Sure. So, for diabetes monitoring we're seeing remote patient monitoring devices and there has been a lot of really great research and evidence in this particular area that

really does show better outcomes for individuals. Cardiac monitoring is another big area. Telehealth both synchronous and asynchronous, telehealth consultations and communications is having a significant impact particularly in the areas of mental health and behavioral health.

We also know that in some of these areas there are sort of like the dual health challenges that come up. So, individuals with chronic diseases are much more likely to also suffer from depression. So, you do have this sort of double whammy that exists for a lot of people, but then you also have a number of connected health tools and approaches that are out there that can be used strategically to address those.

MS. ONYEIJE: That's great. Thank you, Patty. I want to bring Maureen into the conversation now, especially as you started talking about some of these personal connected health devices. Carolyn, would you open the line for Maureen Lewis and announce her please?

OPERATOR: Yes, one moment.

MS. ONYEIJE: Maureen, are you on the line now?

OPERATOR: Maureen Lewis, National Telecommunications & Information Administration, United States Department of Commerce. Please go ahead.

MS. LEWIS: Thank you so much for the opportunity to participate today. I wanted to just apologize at the outset that I'm going to be citing a lot of statistics from broadband adoption research that NTIA conducts.

We have been studying Americans' use of computers and modems since 1994. We commissioned our first supplement to the current population survey which the U.S. Census Bureau administers but we've been gathering data on the digital divide at varying intervals since 1994. I wanted to let you know that our next computer and internet supplement is scheduled to go into the field in November of 2017 with subsequent surveys planned in November of odd numbered years as our resources permit.

So, NTIA's broadband adoption research indicates that in fact consumers are actively engaged in health related activities online, and the data also suggests that health activities can hold some promise for demonstrating the value of internet connectivity to non-adopters. We revise our survey periodically to reflect the changes in the ways that people access and use the internet.

So, in July 2013 NTIA began asking respondents about online activities such as seeking medical information online, accessing electronic medical records, and connecting to health plans or providers. Then in July 2015 we added another question about health monitoring services that Patty was just talking about.

Because I'm going to be talking a lot of stats I just want to let you know that our complete data sets along with a data explore tool that gives you an opportunity to look at some of this data by demographics and blogs and reports analyzing the data are all available on NTIA's website at www.ntia.doc.gov under our broadband

adoption research. So, I'm going to give you some highlights from our 2013 and 2015 data that are pertinent to our discussion today.

Internet use at any location by individuals ages 15 and older increased from 74 percent in 2013 to 76 percent in 2015. In 2013,

percent of internet users, 15 years or older, researched health information online; just two years later in 2015 that percentage had increased almost five-fold to 48 percent according to our data. Between 2013 and 2015 the percentage of individuals 15 or older that accessed health records, insurance information, or communicated with a doctor online grew 20 percentage points from 6 percent to 26 percent. In 2015, which is the first year we began asking about online health monitoring services among internet users ages 15 or older, 6 percent used such services.

But we also have to be greatly concerned with non- adopters. So, according to NTIA's 2015 data, 33 million households, or about 27 percent of all U.S. households, did not use the internet

at home where we know that families can more easily share internet access and conduct sensitive online transactions privately. Of that 33 million, 26 million households which represented a fifth of the nation's households lacked a single member who used the internet at home or at any other location.

Consistently our survey results between 2001 and 2015 reveal a consistent pattern of the reasons why households say they don't use the internet at home and number one has always been they don't perceive a need or don't have an interest in using home internet. The second reason according to these trends said service is too expensive, and the third less frequently cited reason is that these households don't have a computer or the one that they have is not adequate.

So, between 2013 and 2015 we found that the proportion of households that cited no need or interest as their main reason for not using the internet at home increased percentage points from

percent to 55 percent. But the other two reasons actually declined, so those expressing cost concerns or lack of a serviceable computer dropped during that period. Interestingly, these trends were the same regardless of demographics, rural or urban residence, or the presence of school-aged children in the household, although the extent of the changes varied a little bit.

Of the 55 percent of households without home internet use that stated a lack of interest or need for the service in our 2015 survey, 60 percent of these households reported they did not need a service while the remaining 40 percent expressed just general disinterest in having the service at home. But we think that these more detailed reasons for no-home internet use can help inform the development of policies and programs that address these households' concerns.

So, for example, perhaps digital literacy programs introduce non-users to online learning tools on topics that interest them and may stimulate their desire to use the internet at

home. For households that perceive no need for the service information about internet applications that enable them to address health, education, or employment needs may persuade them that the convenience and the privacy of home internet access could improve their lives.

So, with that I'll stop. Thank you very much for your interest.

MS. ONYEIJE: Maureen, thank you very much. You've given us a lot to chew on. And you did warn us right up front, so we appreciate it. Just one quick clarification because obviously we are running short on time. Clearly the trends that you mentioned, some of the trends seem to be trending in the wrong direction from certainly a connected care perspective, but you also talked about 26 million households where there was no one in the household that used the internet at home. We were wondering whether that applied to both fixed broadband and internet use as well as mobile.

MS. LEWIS: Yes, well that includes 26

million households that don't use the internet anywhere, so that's neither at home or at any other location. So, the type of internet connectivity doesn't come into play at all for these households.

MS. ONYEIJE: Absolutely. Thank you. It's not like Ben and I don't have 10 additional follow up questions for you, but let's pause for a minute and have Dr. Galpin and John Peters who lead the Veteran's Health Administration's Office of Connected Care quickly join the conversation at this point. Kevin and John, what we are hoping you can do is given what you just heard can you share briefly some of the underground experiences that you have with successful telehealth models, presumably not related to these 26 million people, and what's working, what hasn't worked? What connectivity challenges are you facing in reaching veterans, particularly those that are living in rural areas?

So, Carolyn would you mind announcing our next two participants, Dr. Kevin Galpin and

John Peters?

OPERATOR: Yes. John Peters from the Veterans Health Administration and Dr. Kevin Galpin from Veterans Health Affairs Telehealth Services. Your lines are open.

DR. GALPIN: This is Kevin Galpin. I really appreciate being invited to this forum. Let me just make sure everyone hears me. Can someone validate I am --

MS. ONYEIJE: We're hearing you perfectly, Kevin. Thank you.

MR. BARTOLOME: Yes, perfectly. Thank you.

DR. GALPIN: Great. I'll go ahead and just give you an overview of who we are and what we do. Me, personally, I'm Kevin Galpin, the Director of Telemedicine for the VA. I have a background in internal medicine in clinical and traumatics and have worked in primary care inpatient medicine health and traumatics and telehealth for the Veterans Administration.

We do a tremendous amount of telehealth.

We find the argument for doing telehealth incredibly compelling as far as our ability to make care more accessible, bringing that appointment out to a rural community, increasing capacity in the organization, moving clinical resources around so we can put providers in areas where they otherwise aren't currently living. And then improving quality; doing some remote type monitoring programs either into the home or in the ICU. So it's really integrated into how we are operating in the organization.

Just to give you some of the scope on this, last year we did 2.17 million episodes of care to 900 VA sites; 45 percent of the veterans that got care from telehealth lived in a rural area. We served over 700,000 veterans in 50 specialty areas.

We do different types of telehealth programs. We do video telehealth, it's called our Clinical Video Program. We've had a long-running success with certainly mental health. Anything that doesn't require a physical examination is

pretty straightforward. When I say physical examination, I should say a hands-on physical examination because through telehealth you are doing an examination, but just not a hands-on one. So, lots of success with mental health, but really it's hard with 50 specialties. I would just say broadly if you don't regard physical examination you can pretty much do your comprehensive clinical assessment through telehealth.

We've also demonstrated some success with even a primary care model where we have providers on the other side of the counter helping to hold stethoscopes, nodescopes (phonetic). We are moving that type of program out. We do video, we do store and forward type applications programs where you might take an image of a dermatologic rash or the back of an eye in a rural location and have someone look at it, a provider look at it, and then send comments back. And we do a lot of remote monitoring, so we have veterans in their home and they're giving us information on a daily basis either signs or symptoms or responses to

questionnaires so we can monitor how they're doing with their care in their home.

I think this is really applicable to the conversation, we have mobile medical units and mobile vet centers and so we have trucks that will go out into the community and will park in certain areas and try and serve communities that are traditionally underserved, any place we're looking at a physical building but don't yet have one. In this type of case broadband becomes a big issue because trying to set up the connectivity for these trucks is challenging. And we've seen how important these types of units are in disaster response, certainly over the past month; and the value that a telehealth response can potentially bring to an emergency area if you have the technology, if you have the connectivity.

But it would be wonderful to know that wherever we go in the country that we would be able to stop a truck, be able to get connectivity, take care of patients. That is something that clearly we're not close to.

I think some of the data that I think people are interested in, and we've talked about the number of encounters, but some of the trends. Just this past year -- and this is part of our major initiative to make care more accessible -- we really want to do more and more of health care in the home. We've formally announced our Anywhere to Anywhere Telehealth Initiative in the VA. We really believe that if the veteran wants their care in the home, on their mobile device, while they're travelling, we should be able to provide that care.

Our data is supporting that. Through August of this year we did over 55,000 encounters to either home or non-VA locations and that is a

percent increase from the year before. We're projecting that we may actually see over the next year, and almost certainly over the next two years, but even next year a 2,000 percent increase over where we are right now. So we think that area of growth is going to be tremendous. We think that there are multiple different types of

specialties where patients are going to prefer getting that type of care at a location of their convenience, either in the home, on a mobile device, while they're travelling, et cetera.

We've seen success with this. There are some nice published research studies coming out of the VA related to PTSD and the non-inferiority of treatment of PTSD into the home versus traditional care. I think we've had two over the past couple of years.

We've also seen cost reduction data and travel reduction data. One study showed that we saved about $28 per episode of telehealth care at a rural site. And we do pay for veterans' travel in a lot of cases so that's different than private sector. But it was over two hours of drive time for the veteran that was saved for each one of these visits. So, at least in our model there is a very strong return on investment type data that you can see. But from a clinical perspective I think there is mounting evidence that this is a successful way to deliver care.

Why this initiative, I think this is so important for us is we have data we've asked our Rural Health Department to produce data about how many veterans -- if we say VA is going to deliver telehealth and care anywhere to anywhere and we're going to push out care into the homes, how many veterans right now can't receive it? That's a critical number for us. When we got our data back, we have about 80- to 90,000 veterans that live in areas where there's either no broadband or no 4G connectivity. These are data based on 2014 so it's not quite just yesterday but that's a big number that we'd like to bring down.

We believe this should be available everywhere. We'd like our programs to be available everywhere. And this is something where we're looking to other organizations, other departments in the federal government to help us with and say how do we reach those veterans? And we certainly have some contingency plans, but again that's a big important number for us.

To summarize, we do lots of different

kinds of telehealth and we really want to do more and more into the home. We think that is, again, where we're going to see tremendous -- and again, the number we're looking at is 2,000 percent growth maybe even just over a one-year period. But we have concerns that we can't reach everyone. And we have by zip codes the number of veterans we can't reach right now and that's our big concern.

MS. ONYEIJE: Kevin, I have to tell you just these stats alone are pretty compelling, both in terms of what successes you've seen and some of the various models. But that 80- to 90,000 number is a little bit chilling especially since you told us earlier on that you did 700,000 episodes of telehealth. You served 700,000 veterans and we're talking over 10 percent of that patient population. So, I want to thank you for putting that out there.

Now, here's what we'd like to do. Obviously Patty and Kevin and Maureen and John, we want you to remain part of this dialogue but what we'd like to do is to go ahead at this point and

move to the second segment where we invite all of the participants to, again, either comment on or echo some of the things that they've heard from the three of you.

Just to get us started, I'd like to just remind you about the couple of themes that we'd like to put on the table for this segment. There are two broad themes and they're certainly consistent with the material that we've shared with you, there are no surprises here. The first, because we as a Task Force are focused on not only defining the problem but making progress towards solving it, so the first theme is solutions for bridging the broadband health divide. And the second is to think a little bit more about some of the issues that Patty put on the table in terms of emerging issues for policymakers in broadband health.

We're going to start with the first issue and we will reserve -- we'll make sure that we get to the second. So, if you want to comment on any of those I would urge you to press * and

then 1 on your touchtone phone and you will be in queue and we will recognize you.

As folks are queueing up here I did want to say in terms of solutions in reaching critical need areas we as a Task Force have been hearing from various stakeholders particularly in rural communities that while they can see the vast potential of broadband in health along the lines of what Dr. Galpin was saying, they're struggling a bit sometimes to operationalize that vision, and they tell us that part of the problem is that broadband health solutions are not getting to the areas and communities that need it the most.

So, here's the question we want to pose to the group: How are states and counties and health departments and tribal nations and other non-profits and philanthropy identifying the specific gap areas, the areas with the most critical need at the intersection of broadband and health? How are we identifying those? And then related to that, do states and local communities have specific broadband health plans, strategies,

policies, for addressing these gap areas, the ones with high health need and low broadband access and adoption. So, I put that out on the table, thank you.

If you would press * then 1 on your phone we will recognize you. Carolyn, would you announce the first participant?

OPERATOR: Yes, absolutely. We did have five more folks join the call. Did you want me to go ahead and announce those names over the call?

MS. ONYEIJE: Yes, that would be great. Thank you.

OPERATOR: Sure. We have Preston Wise from the Wireline Competition Bureau, Eli Fleet from HIMSS, Dr. Kelly Murphy from FCC, Fred Eastman from Mercy Health Network, and Kevin Loux from SOAR.

The response now comes from Chantal Worzala from the American Hospital Association. Please go ahead.

MS. ONYEIJE: Hi, Chantal.

MS. WORZALA: Hi, good afternoon. Thank

you so much for having this call and for all of the work that you are doing on helping to close that broadband health divide. Very exciting work.

I did want to give you a little bit of a sense of how hospitals are using broadband and telehealth. We are at a point where this is becoming mainstream and we have 65 percent of hospitals already using telehealth to some degree and another 13 percent have it on their very short-term plans to implement.

We hear from our members and particularly those in rural areas that lack of adequate broadband is a huge barrier for their ability to deploy telehealth and remote monitoring solutions to address some of the really challenging health divide issues that you've raised in setting up the call.

They do work with their states and local governments but they're also looking to the federal government to help fill in those kinds of blank places on the map. I think the FCC has done a great job in putting together that broadband map

where people can look by zip code and by county to understand where the broadband gaps are, and I know that providers in those communities are really very interested in tapping into some of the resources that the FCC has available. So, I do think that the Rural Health Care Program is crucial, the Healthcare Connect Program is crucial, for filling in those white spaces on the map.

As you know, the AHA did submit comments earlier this year to really encourage some of the improvements in that program that we think will make it a faster road in terms of spreading adequate and reliable broadband. That includes things like increasing the cap, increasing the discount percentage from 65 percent to 85 percent, and really doubling down on administrative simplification for that program.

So, I just want to congratulate you all and thank you all for keeping this issue live. I'll just share that we at the AHA recently had a meeting where we brought 350 leaders from

hospitals and health systems across the country to talk about their infrastructure needs among other issues, and of all the infrastructure needs that they thought of for healthcare broadband for rural areas really rose to the top.

So, we do have a lot of data that we'd be happy to share with you and we'll certainly put into the docket on how hospitals are using broadband including a very recent set of case examples. But, again, I know that the states and local governments have a role to play in sort of prioritizing broadband needs but cannot underestimate the role of the FCC in really being that resource because as you know government budgets at all levels are really quite strapped.

So, thank you for the opportunity to contribute to the conversation.

MS. ONYEIJE: Absolutely. Thank you so much, Chantal. I think as the conversation proceeds one thing we might ask you to address as this goes by is really how hospitals are using telehealth beyond the four walls of the facility.

You talked about lack of adequate broadband being a potential issue, and what we're trying to hone in on is broadband to whom and where. We heard Dr. Galpin talking earlier about making sure that veterans have broadband access at home so that they can get the kind of care that they need after serving our country. So, getting a sense from hospitals about the future of using broadband to care for patients in their homes, understanding how they're going to scale around remote monitoring, that kind of thing would be very useful. So, if I could ask you to think about that and then pipe back in later we'd appreciate that.

MS. WORZALA: Happy to do so.

MS. ONYEIJE: Carolyn, could you announce the next participant?

OPERATOR: We have Emily Moore, Association of State Health Officials. Please go ahead.

MS. MOORE: Thank you. Hi, everyone. My name is Emily Moore and I'm a senior analyst at

Health Transformation here at ASTHO. We represent state health officials who lead the state in terms of rural health agencies in this country. We believe that telehealth has a lot of opportunity for both delivery of healthcare as many folks have talked about today, but also for... in public health services who often serve as another safety network for a lot of these important services. I'm really encouraged by being a participant on this to also share that public health perspective.

Telehealth is a really big interest for state health agencies. Many have collaborations either as a partner or have developed their own telehealth network using a hub and spoke model between their state and local health departments.

So, I actually would like to turn the floor over and if possible Carolyn, the operator, could allow my colleague Suleima Salgado to share her on the ground experience in how she works at the state level to coordinate their broadband connections and prioritizations for these critical need areas.

MS. ONYEIJE: Absolutely. Thank you so much, Emily. Suleima, can I ask you to just press * and 1? And while you're doing that I know that there are various folks on the line from state and local government and health departments and we really would encourage you to give us any thoughts you have on this issue about reaching the areas that have the greatest critical needs. Also, I think we have on the line folks from Indian country and we would very much value those perspectives as well.

Suleima? I don't know, Emily, if your colleague is on the line.

MS. SALGADO: This is Suleima. Can you hear me?

MS. ONYEIJE: Perfect.

OPERATOR: Suleima Salgado from Georgia Department of Health.

MS. ONYEIJE: Hi, Suleima. Please go ahead.

MS. SALGADO: Thank you. And thank you, Emily, for allowing me to speak as well. Again,

I'm Suleima Salgado with the Georgia Department of Public Health. I run the Telehealth and Telemedicine Program for public health in the state of Georgia.

Just a little bit of background. We currently run a hub and spoke model from our state office down to our county health department. Our state is very decentralized when it comes to public health but we do have a great relationship with all of our 159 counties. All the 159 counties have access to telehealth through our state telehealth program. We currently have more than 400 endpoints throughout the state of Georgia which are endpoints of anywhere we have telehealth equipment, so we provide a variety of services whether it just be used for telehealth videoconferencing, staff training, professional development. We use it more on the administrative side but we also use it to implement telemedicine programs such as behavioral health, a lot of pediatric services through our Children's Medical Service Program, also through our Women, Infant,

and Children Program. So, anything from pediatric complications for asthma, pulmonology, nephrology, pediatric neurosurgery, consultations, sickle cell, we have genetics clinics, infectious disease clinics that we do through our HIV Ryan White Program throughout the state. So, we have probably over different telemedicine programs that we run through our local county health department using broadband and telehealth.

As someone mentioned earlier, the access to broadband has been really significant for us and we're really appreciative of the funds that we are getting through the Rural Health Connect Fund. A majority of our program is funded with the rebates that we get through USAC. Our program probably cost us anywhere from $2.3 to $2.5 million to run per year, and for state government that is a huge undertaking. Normally people don't have those kinds of budgets for telehealth especially in state governments. But with using broadband and having the benefits of FCC funding and the Rural Healthcare Connect Fund in the past

we've been able to get the rebate up to 90 percent on these circuits allowing us to justify in our legislative board to have it approve and understand the value of telehealth.

In the past couple of months it's been very difficult for us kind of just managing and budgeting and looking at where our needs are and our gaps to continue and sustain such a massive program if those funds were to be cut or limited. I know there's a lot of conversation right now given the fact that we've reached that $400 million cap so I just want to kind of consider that as an option.

Most of the districts and counties that we serve, a lot of people don't think of Georgia as having as many rural pockets. But I would be very comfortable to say that at least 50 to 60 percent of our state is rural outside of the metro Atlanta area and we really struggle with even just getting broadband up and running in some of these communities. The cost associated with throwing dedicated T-1 lines of any sort in these

communities is very high cost for these county health departments so we are already working with very limited funding. We do use the old-fashioned hub and spoke model, we do run dedicated lines which a lot of other states and counties use, the existing broadband at AT&T and the wireless clouds, but in these rural counties they don't even have access to that.

So, again, really just realizing that while we are looking at innovative solutions for using broadband in some states and some counties you do have to use the old fashioned antiquated model of kind of how can you even just get broadband into some of these communities. That is a huge gap that we are continuously struggling with any time we kind of just got out there and put telehealth.

And we know that there is a need because there are physician shortages. We look at our Obstetrics Department and we know that 39 of our 159 counties don't even have an OB/GYN in the state of Georgia. So, we use telehealth and

telemedicine to add value to those communities and bring those providers there. But when we get to a place where we're actually ready to build a sustainability plan we realize that the cost of the broadband to get it and to keep it up and running for a year contractor, you know, four years at a time is just way too high for a local municipality to undertake.

So, really I guess my request would be to just kind of really look at the cost of assessing this broadband and really knowing that there are still major areas that don't have access to broadband as a whole.

MS. ONYEIJE: Are there solutions that you would recommend, Suleima? You had put various things on the table here. You've certainly talked about the power of the technology and how you're leveraging that, but you've also talked about gaps and challenges and I'm curious about any solutions or recommendations that you might have for the FCC and other policymakers on the call.

MS. SALGADO: That's a great question.

I really think it would be prioritizing the need. So, when we look at the funds and when funds are released is really looking at the priority of how this money is being utilized. So, if the goal is access to rural areas of the state or rural areas who don't have specialty providers and bridging the gap when you look at diabetes. If there are certain initiatives that are kind of priority I think that should be considered when allocating funds. And I agree with everybody else, we've gotten really innovative as to how you can use it but, again, you're using it for rural and metro area who probably already have access to some provider.

So I really think prioritization should be kind of key and put in the forefront when looking at how these funds should be spent and really looking at the gap. So, if people can give you a case and say, well, justify why you feel you need broadband and why you should receive the rebate or whatever first, I think that would also kind of help weed out those extra organizations

who may not be using it to its maximum capacity.

MS. ONYEIJE: Now, that's very interesting. I'm struck by your comment about the 39 counties that do not have an obstetrician, if I heard you correctly.

MS. SALGADO: Yes, that is correct.

MS. ONYEIJE: I am curious, you talk about the prioritizing about needs. Is the Health Department in Georgia doing that, and if so how? How are you -- everyone has some need,and I'm curious if you have found a way to sort of slice and dice this within your state to figure out, okay, who has the most critical needs for telehealth services and here's how we're going to parcel out our time and resources.

MS. SALGADO: Yeah, we really in public health have looked at not only social determinants of health but population health as a whole so we look at heatmaps throughout our state. We look at telehealth and telemedicine as a way to add value or to bring services to counties where there aren't any available. So we really rely on our

heatmaps and our Medicaid data and our provider data that we get from Medicaid to really notice where those target populations are.

So, if a county comes to us and says, hey, we'd like to use telehealth, can public health help us? Or can our local Georgia partnership with telehealth help us? We really look at those heatmaps and say, okay, what are you considering doing? I'll use cancer as a perfect example. We launched a tele-dermatology program in South Georgia because we looked at the heatmaps and the data that came from Medicaid and Medicare and said most of the cancer is coming from southeast Georgia. Well, what's going on in southeast Georgia? Well, there are a lot of outdoor farm workers, day laborers, linesmen, that work in that cluster of the state. Okay. Do they have providers, yes or no? The number of providers available? And then we cross that with Medicaid data and look at those numbers and then determine where those populations were in those pockets. Then we said, okay, providers in the

community, is there a cancer provider in this area? No. Okay, so here's where we need to be.

So, really looking at your public health data and using the existing resources to determine what the needs are is pretty much how we determine our expansion model and our services.

MS. ONYEIJE: That's very helpful. Do you happen to know whether there is a regional plan that's similar to what you're describing?

MS. SALGADO: So, we work with the Southeast Telehealth Resource Center that's actually based out of Georgia, but I believe they cover Florida, Georgia, Alabama, and South Carolina. So, we have been partnering with them to look at the data to see kind of where we're going. But since we are specifically focused through public health in Georgia that's kind of been our target. But we do look out to them and ask them for resources.

MS. ONYEIJE: Thank you so much, Suleima. We really appreciate it.

I think I want to put one additional

issue on the table at this point and solicit thoughts generally from the group. I think Suleima talks a lot about funding and maybe we should shift to that for a few minutes. Again, just remember you press *1 on your phone to join the conversation at any time.

So, here is the question I would throw out in part based on what I just heard, how are telehealth networks being funded in your communities or nearby communities? Is the funding, like Georgia, primarily federal, is there state funding available, private funding, philanthropy? And if I could ask some normative questions too. Do you believe that we are funding the right things in rural telehealth? Obviously some participants have talked about funding connectivity for healthcare facilities and others have talked about needing connectivity to patient and consumer homes. Are we funding the right thing? What are we doing now and is it the right thing?

And then another strand I think we'd

like to ask you to address is we've heard from rural and underserved communities that sometimes it's not easy to access the various streams of funding available. The Task Force has had numerous stakeholders especially from rural and underserved areas tell us about challenges that they face in navigating what they have called a patchwork of federal and state funding.

So, your thoughts on whether there are ways for federal and state government to better coordinate around telehealth funding, just to make it easier for communities many of whom Suleima was referencing to better access the needed support. If we have thoughts on any of those questions please press * and 1 on your phone.

I will tell you that I'm watching the time here, but I do think the funding question is an important one. So, I don't want us to move forward until we've had a chance to talk about that a little bit. I'm sorry folks, we are having some technical difficulties on this end. Would it make sense... Ben -- can you hear me still?

MR. BARTOLOME: Yes, I can.

MS. ONYEIJE: So, we are having a bit of a technical glitch on this end. Would you go ahead and -- I don't know if you can Carolyn can hear me, but if you would just announce the next participant that would be great.

OPERATOR: This is Carolyn. I can hear you over the line.

MS. ONYEIJE: Oh, that's great. So, this is not going to be any sort of commercial on whether connectivity works or not.

If you can hear me, do folks have thoughts on the funding issues that we were just discussing? If I can just call on Bill England who I know is on the line from HRSA and provides a lot of telehealth funding. Bill, do you want to comment a bit on this issue?

MR. ENGLAND: Sure. And I just hit *1, am I on?

MS. ONYEIJE: You are, thank you.

MR. ENGLAND: Sure, great. Actually, I thought I should go ahead and comment on what

Suleima just mentioned about working with the Telehealth Resource Center in Georgia which, yes, does cover a number of states. That's just one of 14 telehealth resource centers that our office funds. I think many people on the call are quite aware of telehealth resource centers, but the kinds of things that they're doing in Georgia could absolutely be emulated by a lot of states. And I can say a little bit from my past history of 15 years with the Universal Service Program, not all states are coming close to taking advantage of the resources available as I do know Georgia is.

But way beyond that, and I will comment that our office provides a variety of grants for telehealth and one thing we don't focus very much on is connectivity because from our perspective the Commission is doing a great job with the Universal Service Program so we're not focused on that. But reimbursement and cost are extremely important issues, how to get money to buy equipment and all sorts of other activities. All I will say on that is look at our telehealth

resource centers which cover every state in the country and territories, they are our local experts, our regional experts. They can help point you to sources of funding and have all sorts of training modules.

I recently heard from someone that they didn't know how to find what government resources were available for telehealth which was a little bit surprising given where that question was coming from. Grants.gov every week publishes new funding opportunities and simply searching for telehealth there's a number of things being published. We can't really talk about 2018 because we don't have a budget yet, but when we do there will be plenty of telehealth opportunities. And it is a lot of work for small health care providers to keep track of that, but for instance, states could be notifying all of its constituents that grants.gov has some telehealth opportunities coming up.

MS. ONYEIJE: That's great. Can I ask you to comment on the -- I know you run

competitive grants at HRSA where many of them. Can you talk a little bit to the suggestion that came from Georgia about funding programs, prioritizing the needs based on heatmaps and other things?

MR. ENGLAND: Well, again, commenting a little bit on sort of my past experience, Georgia noted that they're using a lot of T-1 lines and I think that is probably true for a lot of the bricks and mortar facilities. It doesn't obviously touch the broadband 4G, 5G type stuff, the direct to consumers, but that happens to be sort of a sweet spot in the Universal Service Program that makes it more cost effective than maybe some other services.

But, unfortunately, since the Fund that's being referred to has hit its cap the question is some needs are higher than others and there could be a reason to prioritize. Obviously I'm a little biased because I'm in the Office of Rural Health Policy so our focus is very much on rural and our funding authorization safety net

which means we're focused on safety net providers. So, we obviously would think those are the most critical needs that have been identified. Sure, I can certainly see -- if there's not enough money to go around then prioritization based on need seems to make a lot of sense.

MS. ONYEIJE: Fair enough. So, Bill, I'm going to keep you on the line for a minute because I do think it would be useful to move to our second theme here because I fear we're running out of time. In addition to solutions what are the issues that FCC policymakers and other policymakers at the federal, state, local, tribal sort of levels that we need to be keeping top of mind here and staying ahead of? It's critically important for us; in fact, it's part of the charge of the Task Force to help position the Commission to stay ahead of the broadband health curve. One concern we have obviously is sort of potentially unintended effects of leaving folks behind as connected health becomes more common and the gaps between connected communities and isolated

communities become more apparent.

If you have any thoughts on what those emerging issues might be I would ask you to share that. And anyone else who has either solutions or issues to share just, again, press *1 and you can join our conversation.

MR. BARTOLOME: Karen, I think I'd like to specifically ask Eric Frederick with Connected Nation, if he's on the phone, if he has any thoughts on the theme that you just mentioned. I think that would be helpful.

MS. ONYEIJE: Eric, could you press *1, and then Carolyn, can you announce Eric?

OPERATOR: Eric is on the line from Connected Nation. Please go ahead.

MS. ONYEIJE: Hi, Eric. How are you?

MR. FREDERICK: Good. How are you? Can you hear me okay?

MS. ONYEIJE: Yes.

MR. BARTOLOME: Yes, we can, thank you.

MR. FREDERICK: All right, great. As you know, I'm the Community Affairs Director for

Connected Nation. We've been mapping and researching and doing community planning around broadband access, adoption, and use for more than a decade now, and we're big participants in the SBI Program that NTIA ran.

I think on this topic being able to better identify unserved and underserved areas for broadband access and adoption is absolutely critical. When we switched from NTIA maintaining the national broadband map to the FCC's Form 477 data there was a lot of publicly available information, or publicly acceptable information that was lost in being able to examine underserved areas.

So, I think improving the scale of mapping availability data so that we can get a little bit more surgical in the areas that we identify as being unserved by broadband, not only for the infrastructure access itself but also for adoption. I think we've come to a point where we've gone as far as we can with the data that we've collected in making general assumptions

about who is underserved both geographically and socioeconomically, and I think we need to get more surgical with it.

Through our Community Planning Program that we operate at Connected Nation we've been doing very detailed surveys in communities across rural parts of the country in Michigan, and Ohio, South Carolina, Iowa, and other places where we've been asking about healthcare use among residents and sometimes those patterns that we find there don't mirror those at the national level. So, I think being able to better diagnose what areas are underserved by broadband access and adoption as well as being more surgical in how we examine the local community issues will ultimately end up getting more folks connected in leveraging broadband connection for telehealth applications.

MR. BARTOLOME: That's great. Eric, I was wondering, you do a lot of work obviously with communities as part of your organization helping to ensure that broadband is available and adopted in the various communities and states. I was

wondering, do you think it's more effective for folks like in your organization trying to educate and inform folks on the ground about the value of broadband and particularly broadband health, or do you see a role at the federal level that can be effective in trying to motivate and persuade folks on the ground about the value of broadband health technologies?

MR. FREDERICK: That's a good question. I think the answer is there is a role for both. But because we've been working with communities for so long I've found that local community action and support is where the most work gets done. Being able to take information from a federal level and translating that to locals it works okay, but when you start making it personal to the community that you're working in or gathering very hyper-local data for that particular community it suddenly makes it more real so that you're not applying national generalities to a rural county in the middle of northern Michigan, for example. If you can gather information from them and bring

local stakeholders to the table like the healthcare providers, public health agencies, residences, businesses and the like to the table it starts to make it a lot more real.

So, I think taking federal guidelines and federal best practices and advice that have been gathered from across the country is good but ultimately where the work gets done is translating that to the local level and making it very personal so that communities can develop solutions that work for them since every community is different.

MR. BARTOLOME: Thanks, Eric. Karen, do you have any questions? Otherwise we should see who is next in queue.

MS. ONYEIJE: Absolutely. Thank you, Eric. We appreciate that. Carolyn, would you announce the next participant please?

OPERATOR: Yes. We do have Maria Givens from National Congress of American Indians. Please go ahead.

MS. ONYEIJE: Hi, Maria, how are you?

MS. GIVENS: Hi, good, thank you. This call has been really informative. I work at the National Congress of American Indians where we advocate for the 567 tribes in the United States. As most of you guys probably know, tribal lands are the most unserved areas in the country for broadband. Coupling with that the federal government's trust responsibility to provide medical services and healthcare to Indian people we really see a really good opportunity here with telehealth solutions.

So, we know that the Indian Health Service has been working on this issue through their Telebehavioral Health Center for Excellence, and that started in 2009 and it's been growing ever since then. We're just hoping that the FCC and this Task Force can work together with the Indian Health Service to bridge this divide because what we're seeing with our communities is that, as time goes by, there are more communities that feel even less connected in all facets of life, especially with health.

In Indian Health Service, as some of you probably know, the biggest problem is recruiting and retaining qualified professionals, and telehealth is a way that we can really solve that problem, solve the problem for IHS and HHS. This is a way that the FCC through coordinated efforts could really help solve that issue.

So, if anyone on the line wants to get in touch with NCAI later about all of this we have a website, ncai.org, and we can definitely help to point you in the right direction for anything tribal telecom or tribal anything. I just wanted to thank you guys for letting me speak here on this call and also just let the Task Force know that Indian country is really interested in this, we really see a whole lot of potential here, and we definitely don't want you guys to forget about Indian country as you move forward on this.

MR. BARTOLOME: Absolutely not, Maria. Actually, while I have you on the phone if I could just ask a quick question. You mentioned one of the issues is retention of professionals in Indian

country, and I don't know if this is a question you can answer or if it's better directed to the Indian health services at another time, but we're hearing certainly that as you know in rural areas the availability and adoption of broadband-enabled health technology and solutions, such as telehealth and telemedicine, are affected by a variety of different issues and factors like the lack of access to broadband networks, certainly capital resources, hospitals closures unfortunately... [and] you mentioned retention of professionals like physicians. Are those the same issues that are also extant in Indian country or are there any unique issues in Indian country that we should be acutely aware of in trying to close the divide there?

MS. GIVENS: I would say that all of those issues that impact rural communities acutely impact Indian country. Then I think the other piece of this puzzle is that there is a federal trust responsibility to provide healthcare to Indian people. So, it's a little bit different

than the health system of the rest of the country, but there is a federal responsibility to make these systems work. It's no secret that there is room for improvement at IHS. We think this is a really cool, interesting way to number one bring broadband to communities but also to help fulfill that trust responsibility.

MR. BARTOLOME: Okay. Thank you very much.

MS. ONYEIJE: Thank you so much, Maria. I'm going to ask if Patty and Kevin and Maureen would mind pressing *1 here. We wanted to get your views on these emerging issues question just from your unique perspectives. Patty, for example, you were talking a little bit about what I would call future proofing issues right at the top of the hour. And I'm curious just from each of you, what emerging issues are you seeing from your perches?

So, Patty, are you on the line?

OPERATOR: One moment while the lines are opened.

DR. MECHAEL: This is Patty again. I think from our perspective at the Personal Connected Health Alliance some of the emerging issues that we're seeing are really around interoperability and the ability to evenly move data from various systems. So, when you're talking about telehealth and now you're introducing remote patient monitoring, and increasingly people want to have their wearable data integrated into their electronic health record and integrated into clinical practice, what we're finding is that making sure that there are clear guidelines and architectures out there that can facilitate safe, secure data exchange between different sources of information.

So, that's a real big area that we're seeing coming up, especially if you start to think about like the internet of things where everybody wants everything everywhere they go and they want all of their data in one place which from a health outcomes perspective is going to be really, really critical as well. So, having as much information

up to date in the hands of individuals themselves as well as their providers is mission-critical.

And then the other one is really around -- and somebody alluded to this before -- reimbursement and what actually gets covered and what gets paid for. We are moving into a virtual world in which health-related interactions increasingly are happening very differently than they had in some of the traditional models. So, making sure that the financing and the ability to make sure that healthcare providers are getting paid for the services that they're providing irrespective of where they're located, but also dealing with issues around jurisdiction. So, can a healthcare provider who is board certified in one jurisdiction provide teleconsultations and health services in another one.

MS. ONYEIJE: That's fascinating. You mentioned IOT, so I am curious about whether the widespread adoption of things like remote patient monitoring -- I think that Dr. Galpin was talking about the 2000-fold increase that he anticipates

in the veterans' space. For things like remote patient monitoring and IOT solutions do you anticipate or do you see ways in which the kind of connectivity that's necessary for all the participants at facilities, patients and caregivers, will change? I think that there are some folks who have been saying that we do need to start thinking about more episodic access to connectivity to address this kind of care delivery, but I'm curious about your views.

DR. MECHAEL: I think universal access is an important issue in the same way that -- universal access to broadband is important alongside universal access to healthcare and health services. I think those two go very much hand in hand. I think we need to do better assessments of the types of broadband connectivity that are going to be needed in a world where more and more interactions are requiring higher bandwidth and really make informed decisions about where to invest resources and how to invest those resources.

So, remote patient monitoring, synchronous teleconsultations, these are increasingly bandwidth-intensive and so if we're moving into a world where we're doing continuous monitoring, which is the recommendation in some healthcare situations, and moving care into the homes I think that's going to require a whole other conversation around bandwidth.

MS. ONYEIJE: Very interesting. So, I'm going to pull Kevin back into the conversation here. Are there emerging issues that you are seeing in the veterans' space or that you're observing more generally across the country?

DR. GALPIN: I think going back to just into the home that's where we are, and I think the universal ability to have broadband connectivity in some form is what we're really looking to as the next goal.

One issue that I don't know if I'm seeing it specifically but I think we all know is an issue is just the idea of clinical capacity. I mean, are there enough providers out there, are we

going to see a lot of providers retiring and not being replaced as quickly? Do we have the work force? I think this is another area where having broadband universally available makes a difference. Through telehealth, we strongly believe we can expand the workforce because as people retire part of the reason they want to retire is they want to move to a new location, maybe closer to family or out of a big city where there's hustle and bustle. We want to be able to connect to where the providers are too. So, there are providers that move out to rural communities, they want to live at a lake house and go fishing, and we want to give them an opportunity to maintain work in the medical sector and broadband in rural areas is a way to capture that piece of the workforce and hopefully expand the entire clinical workforce.

So, I think the concept of do we have enough providers to manage all the care that we're going to need to have and how do we extend our providers, how do we expand that workforce, and

again I think connectivity is one of the ways we do that.

MS. ONYEIJE: So, broadband as a force multiplier then?

DR. GALPIN: Yes. So, it's not just connecting to the patients but it's connecting to where the providers choose to be.

MS. ONYEIJE: Absolutely. Kevin, we can follow up on this, but we would be very interested in getting a more detailed sense from the VA about the kind of connectivity that would work best for your patient population and we could extrapolate from there. So, if I can put a pin in that. Certainly if you can talk about it now that's great, if not we would love to follow up afterward.

DR. GALPIN: Let's follow up on that afterwards and I can maybe get one of our technical experts on to go into detail on that.

MS. ONYEIJE: Perfect. That's fantastic. Maureen, I don't know if you're on the line still --

MS. LEWIS: I am.

MS. ONYEIJE: -- but if you have any thoughts on emerging issues, whether on the data side or elsewhere please.

MS. LEWIS: I did just want to mention that our 2015 survey data revealed something interesting about multiple device users versus those who just use a single device to connect to the internet. We are finding that people who have multiple connections either using personal computers, tablets, smartphones, tend to conduct more activities online including engaging in health-related activities. So, for example, single device users with smartphones were less likely to seek health information online than personal computer only users.

So, I know that a number of underserved communities tend to over-index on the use of smartphones. I just want us to sort of be aware that this is just one data point from one year, and our 2017 survey may shed more light on this, but we may want to be sensitive to how people are

accessing the internet based on the devices that they're using. And I know that as we've talked today there is a lot being delivered through smartphone technology but we want to also make sure that, as we are looking to smartphones as a way to deliver more connectivity, that we're perhaps relying on it appropriately and not overemphasizing its utility. It's important but we'll kind of see where the data go in future years, but we're kind of tracking this closely.

MS. ONYEIJE: That is a very good point. It comes back to that question of not only the quality but the kind of connectivity that will really be needed to allow consumers in rural and underserved areas and beyond to sort of participate in the connected care future that Patty and others have been talking about.

I knew this was going to happen. We wanted to make sure that we were respectful of your time. But before we close the session -- because we're right at 3:00 now -- we did want to just open this up to anyone else who wanted to put

any other comment or give any other input just press *1 and we will recognize you. We at the Task Force are certainly willing to stay a little bit over if needed.

If you would prefer to reach out to us separately we are happy to engage with you offline. That is also another core element of the Task Force's sort of objectives and our charge is to have as broad an outreach to stakeholders across the country as possible.

So, we completely understand if folks need to go. We know what we're on various time zones here so we appreciate that. Carolyn, please let me know, I think folks are probably going to reserve their additional comments. I can't quite see any more whether there are folks in the queue or not.

OPERATOR: There are no commenters in the queue at this time.

MS. ONYEIJE: Thank you. So, what I'd like to do then is to thank you for participating today. This was really an outstanding session and

it's given us a lot of food for thought. We greatly appreciate the input that you provided.

There are so many things I could highlight here and there are a few that stand out. I heard over and over broadband as an enabler, the drive to move broadband and health from healthcare facilities to the home, that there really is a compelling case for telehealth and we just need to figure out how to make sure that people are not being left behind, to some of the questions about relevance and the fact that health may be a use case that addresses that relevance question, to the issue of physician shortages and broadband as a force multiplier.

So, I just want to thank everyone again for their thoughtful input. If you have additional comments you want us to consider please reach out to us at connect2health@fcc.gov or submit more formal comments.

There is a wealth of information on the FCC's broadband health hub for those who have not been following our work which is fcc.gov/health.

So, for example, the critical need counties that I was talking about earlier -- those are on there -- the Mapping Broadband Health in America Platform is available there.

And I just want to wish everyone a wonderful afternoon and thank you again for your participation. Carolyn, would you please make final announcements and conclude the session?

OPERATOR: Thank you. Ladies and gentlemen, that does conclude your conference for today. Thank you for our participation and for using AT&T Executive Teleconference Services. You may now disconnect.

(Whereupon, at 3:04 p.m. the PROCEEDINGS were adjourned.)

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CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Carleton J. Anderson, III
(Signature and Seal on File)
Notary Public in and for the Commonwealth of Virginia
Commission No. 351998
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