Please stand by for realtime captions.
[Music]
[Captioner Standing By]
[Music playing]
Good morning, and welcome everyone. Did I get your attention?
It is an exciting day, so I am glad you are all here. Given that Don Gordon is unable to make this meeting today we've asked [Indiscernible] to Chair today's meeting. I really appreciate that. We should, of course wish -- miss Donald A. Goldmann.
Thank you, Paul, and I'd like to to welcome all of the NAC Members, participants, media, visitors and any of those participating via the webcast. I will start off with administrative notes. First of all this will be the last NAC meeting for Sheila Burke. She was unable to attend today. Barbara FAIN, Don Goldman, now, he's going to try to call in this morning. George Kerwin, Allie Martin, Jerry [Indiscernible] and Yang.
Thank you for your service. We would like you at the lunch break to me to have a group photo taken right at the start of the lunch break.
Some additional housekeeping notes, if any of the Council members need transportation after the meeting please sign up at the Registration Desk before the lunch break, the lunch break, in addition to group photo with Gopal we would ask all retiring members meet in the pavilion for individual photos for lunch break as lunch break as well. General housekeeping notes, if you like to make a public comment, those comment, those will occur at 11:30 a.m. Please sign up at the Registration Desk, and then as far as food and up at the Registration Desk, and then as far as food and beverages, the cafeteria is located across the hall on this for. They offer beverages, They offer beverages, snacks and meals until 3:00 p.m. With those general administrative notes what I would like to do is have Council Members go around the table, introduced themselves. Again we have some people participating via the webcast so please remember to use your microphone.
I will start, Andrew have Council Members go around the table, introduced themselves. Again we have some people participating via the webcast so please remember to use your microphone.
I will start, Andrew Masica, [Indiscernible] health. We will go this way.
Janie to make a designated management of NAC.
Ginger Mackay-Smith, Associate Director in the office of the Director of AHRQ.
Lucie Levine, AHRQ budget officer and Chief financial Officer.
Beth Doherty, acting CEO and [Indiscernible] Hospital in Michigan.
Greg Alexander, Professor, and Associate dean of research at the University of Missouri School of Nursing.
Good morning. [Indiscernible] President, advocate for patient safety.
George Kerwin, a retired Chief CEO of melon help in Wisconsin.
Good morning. Tina Hernandez from Stanford University. Associate Professor of Medicine biomedical data science and s urgery.
Sally Martin, Professor of statistics and Dean of the College of science at Virginia Tech.
Chip con, President and CEO of the Federation of American hospitals.
Edwin Mondo Robinson, you reservation officer, currently Christiana Carol system in Wilmington, Delaware. I am transitioning over the next week or two to be to to Digital Innovation officer at [Indiscernible] Cancer Center in Tampa.
Barbara FAIN, Executive Director of center for patient safety and [Indiscernible - low audio].
Peter [Indiscernible], [Indiscernible - low audio] and Associate dean at Indiana University.
Shari M. Ling, Deputy Chief Medical Officer cost centers for Medicare Medicaid services.
David Atkins, Director of health services research for the VA.
Gopal Khanna up to five.
One additional note, Dr. Robin Wagner, Chief Officer office of Deputy Director for Public Health Science and Surveillance at CDC will be attending for Dr. Richards today. And then one other note, do we have any Council Members or anyone on the phone?
Okay. Very good. If any of the NAC Members of comments or would like to ask a question during the meeting, please turn your card on the side. Please do that. If you have questions or comments, with an that will move right to the first order of business which is reviewing the minutes from the July 24, 2019, meeting. There's a copy of the minutes in your folders I will give you a minute to look over those and see if there are any of the NAC Members of comments or would like to ask a question during the meeting, please turn your card on the side. Please do that. If you have questions or comments, with an that will move right to the first

order of business which is reviewing the minutes from the July 24, 2019, meeting. There's a copy of the minutes in your folders I will give you a minute to look over those and see if there are any changes or edits.
Okay, so any changes or edits?
And then we have, actually could you please introduce edits?
And then we have, actually could you please introduce yourself?
Thank in. Chris [Indiscernible - low audio] help.
Thank you.
Yes, and, Robin, can you introduce yourself?
[Indiscernible - low audio]
Thank you.
With that we might have heard Don Goldman on the phone.
So, if there are no changes to the minutes from July 24, I would ask a motion to approve?
Do we have a second?
Second.
All right, we moved to approve the minutes them. With that I will introduce Gopal to provide an overview of the agenda. Thank you.
We'll take a moment to talk about exciting [Indiscernible - low audio] before us. Jamie, is this working?
It is working.
Jamie is a magician, I will tell you that. Today we have a packed agenda. Let me quickly me quickly go through and give you an overview of the kind of topics we will be covering. Of course, the kind of topics we will be covering. Of course, first of all we will talk about our accomplishments and we've done a lot of work these past months since we saw you last time. We also will be talking about saw you last time. We also will be talking about our budget, 2020 budget. I am sure you would like to get an update, the overview of accomplishments will be presented by my colleagues here, the Associate Director in the office of Director, Virginia Mackay-Smith. And of course our colleague [Indiscernible], Lucie Levine, CFO will give an update on the budget. Talking about the challenges and opportunities, you have heard me talk about that that from a clinical support in the past briefly, but today what we're going to do is invite some of our colleagues here and give you a going to do is invite some of our colleagues here and give you a more extensive discussion on this topic, we would love to get your insights and comments as well. And that would be led by Dr. Edwin Lomotan. They give for doing that, admin. Appreciate that. We will also talk about gaps and gaps and opportunities to improve care. That is a a topic that is being very important. You heard me talk about Social Determinants of Health, and that to is, again, something we need to talk about, and I just talk about to do something as well. We invited Leith States top office of Assistant Secretary for Health to be here and talk about the Social Determinants of Health. We will then of course open the floor for public comment and then wrap-up around 12:00. of Health, and that to is, again, something we need to talk about, and I just talk about to do something as well. We invited Leith States top office of Assistant Secretary for Health to be here and talk about the Social Determinants of Health. We will then of course open the floor for public comment and then wrap-up around 12:00. This meeting is up until 12:00 today. Moving ahead let me talk about, Jamie? Okay. Reorganization. Over the last several months what we focused on was positioning AHRQ for the future. You talk -- you hear me talk over the last years there is a need for the Company to do that. That requires us to rethink ourselves to position ourselves for the future. What we have done said, let's align our social expert to the areas we need to focus on. And what are organization is doing is change.One, thing to ourselves, okay, for the use of focus with AHRQ, how do you bring subject bring subject matter experts and a line of to focus them, and give them the best possible tools for practitioners so they can deliver high-quality and high-value care to the American care to the American people, to the patients pick the second focus was to align ourselves and respond to the presidents agenda and secretaries agenda on [Indiscernible]. Again, if you recall a couple of years ago I talked about the Secretary looking at how we can realign the entire department of years ago I talked about the Secretary looking at how we can realign the entire department to position ourselves to the future. That is the second extremely important objective in how we can position ourselves by third objective was to make sure that we optimize our capabilities within the enterprise top bringing together are assets and resources and subject and subject matter experts, and then align them for the future. The good news over here is we were able to accomplish that with almost know disruption. What I mean by that is [Indiscernible] and people have been aligned and are focused now on the future. So, thanks to my team who has done a marvelous job in in making that happen. Let's move on.
A couple of other changes I must talk about as well. And two leadership changes in the office of Director. The first one is I asked my colleagues to serve as Acting Deputy Director of AHRQ. She is honest -- Distinguished Professor the -- Professor. I have respect for him and marvelous [Indiscernible]. Guess what, [Indiscernible] recognized as well and has been elected elected to be a member of NAM. And as you all

know, again, has been recognized because of David's leadership in the field within AHRQ and research for the future. Please join me in congratulating David Meyers.
[Applause]
We also asked [Indiscernible] too become the Chief Data Officer. She's the first CEO in AHRQ. As you, again, have heard me talk about the power of data and analytics going forward, one of our major competencies that AHRQ is analytics capabilities. I've asked [Indiscernible] too think horizontally, not just within AHRQ but across the enterprise and beyond and help us move the agenda. Thank you Mamatha for stepping up and taking this role. Please congratulate her.
[Applause].
Jamy if I can get the next slide it's always hard to say [Indiscernible]. It's bittersweet because you've all been very helpful, several of you. Let me read the names of the people who will be going often as he. Sheila, Robert saying, Don within AHRQ but across the enterprise and beyond and help us move the agenda. Thank you Mamatha for stepping up and taking this role. Please congratulate her.
[Applause].
Jamy if I can get the next slide it's always hard to say [Indiscernible]. It's bittersweet because you've all been very helpful, several of you. Let me read the names of the people who will be going often as he. Sheila, Robert saying, Don Goldman, Dr. [Indiscernible], Sally Martin, Jerry and Yingling. Thank you to all of you for your service over the last service over the last couple of years. I've heard you give great ideas. We've incorporated them in our planning process. Thank you so very much. And while I'm at it let me take a special moment to say thank you to Don Goldman. He's been an outstanding Chair. He has helped me personally on many fronts. He has been kind to serve in this ideas. We've incorporated them in our planning process. Thank you so very much. And while I'm at it let me take a special moment to say thank you to Don Goldman. He's been an outstanding Chair. He has helped me personally on many fronts. He has been kind to serve in this role, and most importantly, he's helped me and all of us bring new insights. He has engaged you the entire NAC, and and he's helped bring ideas that is helped us at AHRQ become more focused for the future. Don Goldman, I know you are away this morning so, special thank you to you, and if you are online, okay, he is on the phone. Don, thank you so much.
Can you hear me Gopal?
As we can.
I'm sorry not to be with you. As you know I'm on my way to [Indiscernible - low audio].
Do want to take the opportunity to thank you [Indiscernible - low audio] humility, curiosity and open this so you were able to hear and I will benefit from the Council that the NAC provides to you. It's a real pleasure to have someone who is such a on the phone. Don, thank you so much.
Can you hear me Gopal?
As we can.
I'm sorry not to be with you. As you know I'm on my way to [Indiscernible - low audio].
Do want to take the opportunity to thank you [Indiscernible - low audio] humility, curiosity and open this so you were able to hear and I will benefit from the Council that the NAC provides to you. It's a real pleasure to have someone who is such a good listener and a friend so, thank in.
Thank Thank you, Don. I'm grateful. And I know on behalf of all of our colleagues at AHRQ we appreciate your service. We know you have a of our colleagues at AHRQ we appreciate your service. We know you have a special love for [Indiscernible]. We do have a tie over here, Don. You reminded us how important this is to you so we have a time for you to thank you for your work and efforts, as well as a plaque. Done, if you we're here we would have done that and I'm hoping you would be in town. When you are we will hand-deliver this back to you as well as this type. I'm hoping to see you with the tie as well, you so we have a time for you to thank you for your work and efforts, as well as a plaque. Done, if you we're here we would have done that and I'm hoping you would be in town. When you are we will hand-deliver this back to you as well as this type. I'm hoping to see you with the tie as well, Don.
[Laughter]
I will definitely where the tie, where the tie, so, thank you.
AQ so much, Andy, Mr. Chairman, please?
Jamie?
Thank you.
We will now turn it over to Virginia Mackay-Smith. She's going to give us an update on accomplishment.
Good morning, everyone. The State of science and the State of healthcare in America that is given to them a lot of opportunities to use our programs and expertise too advance our mission, which as you know is to improve the lives of patients. I'm going to give you some examples of our recent accomplishments in our areas of core too advance our mission, which as you know is to improve the lives of patients. I'm going to

give you some examples of our recent accomplishments in our areas of core competency, Health Systems research, practice improvement, and data and a nalytics. The first of our competency areas is research, which is the bedrock of all of our work. AHRQ aims to focus our research programs to address key needs in healthcare in America. This slide shows an example of how an example of how we are using our grants program to bring the power of data and the innovative platforms and dashboards to support patients, providers and community stakeholders at the point of care. In September, AHRQ awarded a total of $6 million to three organizations for projects designed to promote health equity and improve the health of at-risk individuals in populations. Over the next three years these grantee organizations will integrate data on chronic disease, Social Determinants of Health, and community services with the goals of, first of all, identify those high-risk individuals and populations. And secondly, creating actionable dashboards that providers can use to support better management of their patients those high-risk individuals and populations. And secondly, creating actionable dashboards that providers can use to support better management of their patients conditions. These grants focus on several populations that are important to AHRQ, people with opioid and substance use disorders, cardiovascular disease, and multiple chronic conditions with a particular focus on low-income and minority populations minority populations with high social need. Dashboards at both the individual patient and the aggregate level will help Primary Care providers ensure that patient social needs are met. The graphic on this slide is a a hypothetical example of data that could show up on a dashboard, and in this case the percentage of a primary care practices patients who have social needs. For example, look at the primary care practices patients who have social needs. For example, look at the top bar there, 20% of the patients at this hypothetical practice our experiencing food shortest or lack of access to nutritious food. Thesecond of AHRQ's three competencies is using the results of research to improve practice. AHRQ established are innovated dissemination and implementation initiative with a two-part goal. First, too identify patient-centered outcomes research for KeyCorp findings that are not will delivered and practice. Secondly, too fund programs to increase the findings uptake and ultimately improve health care. Take heart is one of these [Indiscernible] initiatives pick up the core findings in this case are that cardiac rehabilitation programs help patients return to core findings in this case are that cardiac rehabilitation programs help patients return to an active lifestyle to medically supervised education, exercise, training and psychological support. However, only about 20% of the 1 million Americans who have experienced a qualifying cardiac event actually take advantage the subeditor we have. The take heart project which is being carried out under our actions program is to scale-up and spread knowledge about effectively enhancing the use of cardiac rehab. The project will involve two hospital, effectively enhancing the use of cardiac rehab. The project will involve two hospital, awards, 50 hospitals in each cohort. It will provide no cost training and automatic referral and Care Coordination, future interventions that have been demonstrated to increase have been demonstrated to increase cardiac rehab update. We our right now completing the recruitment for our first, award. Over 140 hospitals from 38 states applied to participate, will start recruiting for cohort two early in 2020. Meanwhile we have an ongoing recruitment for a parallel learning community in which we could take up to 200 hospitals that want to enhance cardiac rehab use, but are committing to the automatic referral and award. Over 140 hospitals from 38 states applied to participate, will start recruiting for cohort two early in 2020. Meanwhile we have an ongoing recruitment for a parallel learning community in which we could take up to 200 hospitals that want to enhance cardiac rehab use, but are committing to the automatic referral and coordination. In another D&I effort to take research findings into the practice setting to improve care, we are addressing are addressing unhealthy alcohol use. A few weeks ago health and human hurt -- Health and Human Services Secretary, Alex Azar, announced our multimillion dollar initiative to help primary care practices increase their efforts to Alex Azar, announced our multimillion dollar initiative to help primary care practices increase their efforts to address patients unhealthy alcohol use. Our six grantees will work with more than with more than 700 primary care practices to expand the use of evidence-based interventions such as screening for unhealthy alcohol use, brief interventions for those adults who are screened who drink to much, and medicated and assisted therapy for patients with an alcohol use disorder. These grantees will also be supported by a community of learning, this initiative also has an evaluation aspect to it because each one of the grantees will incorporate valuation into the uptake of the intervention with their own work, we also have an independent evaluator doing an overarching assessment of the program. Once effective interventions have been identified, anotherto it because each one of the grantees will incorporate valuation into the uptake of the intervention with their own work, we also have an independent evaluator doing an overarching assessment of the program. Once effective interventions have been identified, another aspect of AHRQ's improvement work is developing and testing testing tools and strategies to implement what works for improving health care quality in patient safety. This slide shows an example that relates to an overwhelming national priority combating opioid crisis. The AHRQ Academy for integrating Behavioral and help them primary care tell us several initiatives to address opioid misuse

disorder and Academy developed medication-assisted for opioid use disorder playbook as a practical step-by-step guide on how to integrate behavioral, health and MAT into Primary Care and other ambulatory care settings. While This slide shows an example that relates to an overwhelming national priority combating opioid crisis. The AHRQ Academy for integrating Behavioral and help them primary care tell us several initiatives to address opioid misuse disorder and Academy developed medication-assisted for opioid use disorder playbook as a practical step-by-step guide on how to integrate behavioral, health and MAT into Primary Care and other ambulatory care settings. While the playbook aims to help providers in rural Primary Care, it can apply to other amatory care settings as well. The playbook is an interactive web-based product that includes a searchable compendium of the latest tools and resources that address key areas of settings as well. The playbook is an interactive web-based product that includes a searchable compendium of the latest tools and resources that address key areas of implementation. Our final competency area is our wealth of robust healthcare data and the innovative ways they and the innovative ways they can be used. AHRQ continues to develop new ways to make our data useful and informative for the challenges facing healthcare in the challenges facing healthcare in America today. The new nationwide ambulatory surgery sample or MAT is an example doing exactly that by taking AHRQ's unique family of databases which have been curated over decades involving partnerships with essentially the Universe of non-federal acute care hospitals hospitals in America. In using these to create new national level database focused on one of the most important aspects of hospital-based care, ambulatory surgery. The new NAS database was released to the research public in September and provide national and major amatory surgeries performed in hospital owned facilities. The NAS is the largest All Payer nationwide ambulatory surgery database in the U.S., and it was constructed from the [Indiscernible] State amatory and services database. 34 stay partners contribute dated to the NAC, and more will be added into the database as it continues to mature over the coming years. We expect this newest member of added into the database as it continues to mature over the coming years. We expect this newest member of the HCUP family to a particular value for healthcare policy makers, addition to the research community that is already making great use of these community that is already making great use of these data. AHRQ data and analytics also illuminate areas of concern. These data show an ongoing and market decline in employees taking advantage of their employer-sponsored health insurance programs over the last 14 years. We're years. We're using this as an example to show particular capacity Stata. In this case the NASS data. We can use to look back over many years in time and thus get a much richer and more accurate picture of the trends in question. The analytics part of our use to look back over many years in time and thus get a much richer and more accurate picture of the trends in question. The analytics part of our data and analytics competency means we can use our data not only to answer the what question, but also to inform the who what and now for discussions. This slide shows research study from CPAC Call Center for access and cost trend. The study was trend. The study was accepted for publication in [Indiscernible]. Study addresses large and growing real disadvantage in health and mortality in the U.S. A common view a part of this is norms and perceptions surrounding mental illness in rural areas result in a reluctance to seek care. However, the AHRQ investigators work to suggest this is not a viable explanation. This chart from their work shows the average number of a viable explanation. This chart from their work shows the average number of mental health office visits for patients who already have who already have mental health prescriptions. So, they are looking only at individuals who need mental health care, too show a willingness to seek it out, and actually already use medication. And looking at these they found residents of most rural areas, which is the great bar has fewer than half as many office visits to mental health [Indiscernible] as those in urban areas, which is the blue bar. Rural urban differences in mental health care seem to be about a ccess, not need mental health care, too show a willingness to seek it out, and actually already use medication. And looking at these they found residents of most rural areas, which is the great bar has fewer than half as many office visits to mental health [Indiscernible] as those in urban areas, which is the blue bar. Rural urban differences in mental health care seem to be about a ccess, not about need or demand for care, policies and the closing the rural urban health gaps should focus on improving access to mental health services rather than changing attitudes and perceptions. Tele counseling for mental health and rural areas shows great shows great promise as a tool to close that gap. AHRQ's data are being used for predictive analytics as well to inform and direct realtime response to health emergencies. The HCUP team received a request from the Health and Human Services office of the Assistant Secretary Assistant Secretary for preparedness and response to provide a picture of emerging department demand during the massive wildfires in California. Within 24 hours the HCUP team updated a previous analysis to include the 2018 cap and nurse wildfires ensure that information with Asper to help inform their planning and response efforts. This chart is part of what they came up with. It shows, uses HCUP data to show the point at which poor air quality seems to trigger spikes in ED visits for the toxic effects of smoke, inhalation and respiratory burns pick the gray line on this chart is the air quality, in the blue line is ED visits for this condition. The chart

shows the ED visits are smoke, inhalation and respiratory burns pick the gray line on this chart is the air quality, in the blue line is ED visits for this condition. The chart shows the ED visits are essentially flat until a certain threshold of poor air air quality is reached, at which point the ED visits start spiking. This information can tell us when to to expect the emergency need to emerge so we can deploy healthcare resources accordingly. ASPR reported back to us as the use this as the use this information for both federal and local partners in realtime and working with the California wildfires park by the way, this is the second time HCUP data has been used for this kind of emergency response. You have heard before about a similar project using our data to help predict the healthcare needs for the hurricane Tomas of hurricanes we have had over the past few years. Again, working with ASPR and the Assistant Secretary for planning and with the California wildfires park by the way, this is the second time HCUP data has been used for this kind of emergency response. You have heard before about a similar project using our data to help predict the healthcare needs for the hurricane Tomas of hurricanes we have had over the past few years. Again, working with ASPR and the Assistant Secretary for planning and evaluation. Finally, in addition to our existing data resources, AHRQ is creating new new databases to meet new needs. In just the past two months AHRQ was asked by the Office of the Secretary to develop to develop data to be used broadly across several departmental initiatives for which we didn't have appropriate high-quality real-world data that were available to use. The answer was to use existing data to create a synthetic database. That is to create records by statistically modeling and [Indiscernible] that is so new values and data elements that are nationally representative to be generated, while both maintaining the original data statistical qualities and also protecting the privacy of people and institutions. We expect the benefits of these data to be pretty widespread. They could inform patients about quality of care. That could help providers and communities improve services by benchmarking they're own performance against other providers in the community. They can enable purchasers to develop value-based purchasing models, improve quality, and reduce the cost of quality develop value-based purchasing models, improve quality, and reduce the cost of quality care and insurance coverage. They can also be be used to facilitate State lead initiatives to lower healthcare costs and to improve quality. And generally, too support any kind of kind of research or policy project based on reducing cost and raising the quality of care. We're pretty excited about the possibility of these new data, and I would predict you will be hearing more about them in and I would predict you will be hearing more about them in the upcoming NAC meeting. Those are just some of the accomplishments for the past few years. I hope they have given you a sense of what we are doing and where we are going. With that in mind I will now turn the microphone over to my c olleague, and where we are going. With that in mind I will now turn the microphone over to my c olleague, Lucie Levine, too tell you how we are paying for all paying for all of this.

[Laughter]

Good morning. Let's try that again. Good morning, everyone. I'm really happy to be happy to be here to talk budget. My favorite part. I wanted to also welcome you too happy CR day. It may be the 20th anniversary but it is also the end of our current CR today, so everyone, please keep your fingers crossed for me. AHRQ is currently operating under continuing resolution or CR for the fiscal year 2020. As is normal in the last 20 so years except for last year there are no budgets that have been enacted for AHRQ or for anyone else. As of October 1st, 2019, so the President did sign a CR that goes through today. The CR funds AHRQ kind of at a daily rate based on the 2019 funding level of $338 million. There is an expectation when we did this slide we weren't quite sure if they were going to give us another CR through December or December or February, but it's clear they signed a CR through September 20th. It is expected to be signed, too be passed by the Senate and signed by the President tonight before midnight. I feel really good about that, but if I disappear this afternoon, [Laughter], you could start to worry. This is actually a pretty good case Scenario four AHRQ in terms that the CR is based AHRQ in terms that the CR is based on $338 million. It is better than the fiscal year 20 President's Budget, which provided a much smaller AHRQ and $82 million reduction. I'm not going to spend to much time talking about the President's Budget proposal, which I don't expect to be passed in any form, but essentially, this merged expect to be passed in any form, but essentially, this AHRQ into NIH and eliminated a lot of our programs, so we're happy so we're happy to be on the CR as the 2019 level which is 338. What do I think it's going to happen? Congressional action, we we're incredibly happy happy to see the house Mark provide AHRQ $358.2 million. That is $20.2 million increase over 2019. It's the largest increase for AHRQ in more than a decade. The Senate, having a much lower cap in total cost a total amount they can allocate to all of HHS provided AHRQ at the [Indiscernible] level. We feel confident that in negotiations AHRQ will be at close too, it's not going to be the house Mark but it's it's not going to be the President's Budget. We are hopeful that we can at at least stay even with 2019, so we feel feel good about that. And I would like to note that neither the house or the Senate even at the lower-level consolidate AHRQ

into NIH. So, we expect to move forward in Congressional action as a stand-alone Agency. And that's it. Thank you.
Questions?
Thank you, Lucy.
Any questions or clarifying comments from the Council?
George?
I guess I understand what your describing. What is the typical cycle? Is an annual?
Yes. We receive annual appropriations on a October 1 to September 30 time frame. We are an annual, you get an annual budget. We do have, the patient-centered patient-centered outcomes research trust fund is a mandatory stream of funds that h ave, until 2019 came to AHRQ annually, and those funds are no year. So, they are not held. They do not go back to Treasury back to Treasury if you do not spend them by the end of the end of the year but, yes, in general, it is an annual budget.
Sally?
Can you say anything about the quarry chance for that trust fund at this time? I know it's a little bit out of your purview.
There is a Bill that is being put forward today, yesterday to reauthorize the patient-centered outcomes research trust fund. If you had asked me six or nine months ago I would have felt they had very little chance. I am more hopeful. I am not going to put a percent on it. I am naturally pessimistic about some of these things, but I I feel a little better.
[Laughter]
I feel like it like it has a better shot than I anticipated.
Can you remind us what what Dollar value that is for AHRQ a year?
In general, AHRQ has received approximately $100 million per y ear. It has been an important funding source doing amazing work, so our so our fingers are crossed.
We don't see that in the 353 [Indiscernible - low audio]?
Yes, it is not budget authority or annual budget authority or annual dollars. It's a mandatory stream of funding, and it doesn't require Congressional approval after they set it up.
We'll go to Peter next.
Thank you, just a quick comment. First of all in the accomplishments I want to applaud the group. I think a lot of incredible work and it's been a relatively brief period since we last heard and heard and a demonstration of how impactful the work of AHRQ is of AHRQ is in the real-world, as well as advancing research and that virtuous cycle you will continue to maintain so, thank thank you for that. Just hopeful. It's nice to hear you are hopeful on the budget. We will all keep our fingers and toes crossed. Thank you.
[Indiscernible - low audio]?
Thank you. Have a question about previous presentation. May I ask?
Certainly.
I really like this [Indiscernible] for the opioid disorder playbook. We treat the patient as a whole person. My question is, do you have any idea how widely this is adopted [Indiscernible - low audio]?
I'm going to turn to our expert witnesses now. I see Arlene S. Bierman who runs the Center for Evidence and Practice Improvement, in which this project is located is is here. Can you come up to the microphone and speak to the question?
[Indiscernible - low audio]
[Indiscernible - low audio]
And, Eileen, just before you leave, has the playbook been up long enough for us to have any feedback on how much the playbook is being used yet, or do we have do we have to wait longer?
[Indiscernible - low audio]
[Indiscernible - low audio]
Thank you, Arlene.
May I ask another question? On the surgery, you know, the surgery, amatory surgery data and dataset, is this different than the data administrated by each State? [Indiscernible - low audio] surgery, type, insurance and all of those quality [Indiscernible - low audio]?
I think what you are asking, I think I can answer what you are asking. The State databases, of course you are specific. The NASS is a sample taken from those 34 states that are already are already participating in order to create a nationwide, what is it call, nationally representative. Nationally representative sample that can be used that way. So, it does differ in that way. For each State you are going to get the real data, pretty much the Universe of data for that State, but that State, but this is a sample that is representative [Indiscernible - low audio].
We'll go to David Atkins.

Quick question for Lucy and Virginia.
Has the quarry passed through? Or you dictated what the $100 million has to be spent what the $100 million has to be spent on?
It needs to be spent on dissemination and implementation and training.
Really, Patient-Centered Outcomes, research focused Patient-Centered Outcomes, research focused on dissemination and implementation and training. The law was pretty specific about our goals and [Indiscernible] also receive some federal funds and [Indiscernible] infrastructure and data investment.
If you were to lose that would that affect your ability to support things like K-award's and others? Some of that money is used for training?
There is a substantial amount of funding through the patients, through the
There is a substantial amount of funding through the patients, through the PCOR Trust Fund fund for K-award but continue to support general K-award pick we would not stop doing K-award but it's been a phenomenal investment to provide a variety of training using the PCOR Trust Fund.
And for Ginger, want to complement AHRQ for some of the work that you are doing. It's very useful for us. Are laying joined us for our opioid conference, and we are pursuing how we might work together on some of our initiatives at the we might work together on some of our initiatives at the VA for opioids. I'm interested in the synthetic database, because we have been thinking about this with VA data where lots of people want access to VA data, and privacy is a concern. So, I'd like to connect to ever the person is and see if see if there are things we could learn about how to do it with AHRQ data, we've been talking about it. It It has a really advanced for a couple of years.
I can tell you right now they want to connect with you as well. I see a couple of people who are leading that effort are in the effort are in the room now. I will get you their names names as well, data.As want to thank you. Of a half of my colleagues, I colleagues, I get the good job of saying what the work is, but they are the ones who did it so, on their behalf, thank you for the efforts.
Thank you all for the constant discussion. It interest of time with a tight agenda this morning what I would what I would ask is if you have comments we will will have additional time at the end of the presentation before the the presentation before the lunch break. Please save your comments until then and we will allow you to discuss those. With that, will turn it over to Dr. Edwin Lomotan, Chief of Clinical Informatics.
Hi, everybody. Thanks to Director Connor and NAC for opportunity to present this morning at together and put on something we work hard up for the last few years and near and dear to my heart called city is connect and in this case CDS for clinical decision-support. As I will describe we completed the initial prototype and demonstration phase I think fairly successfully, given the reality we cannot expect definite funding for projects like this we looking to your guidance on next steps on how to move forward division I will describe to you in the opening. [Indiscernible - low audio] for your input. Here are the questions we would like you to think about as I go to this presentation. I'm going to return at the end and show them again but, but, essentially, how do you see city is connect fitting connect fitting into a digital healthcare evidence ecosystem? A know that's a lot of words. You will see what I mean in a minute, but it supported to see how supported to see how CDS connect fix it to a larger ecosystem of evidence discovery, implementation? And in that ecosystem what you see as AHRQ's role? What you think of a public private or to Shemela? More specifically, what you see a long-term steps AHRQ consider to move forward?
As many of you know, [Indiscernible] has been a core area for AHRQ for a long time. 2016 because of funding from the Patient-Centered Outcomes trust fund AHRQ began a dedicated program around this support focused on dissemination of PCOR findings it to practice. This initiative had four practice. This initiative had four pillars of components with two broad and vicious things. One to [Indiscernible] into evidence and two, [Indiscernible] available. First the border was engaged community of patient, clinicians, pairs, Health IT vendors and many others the learning collaborative in the form of a patient-centered CDS Learning Network, which is a Cooperative Agreement grant with RTI. It's coming to a close [Indiscernible - low audio]. Thesecond which was prototype infrastructure for developing and sharing this support. More about there shortly. Third was to learn how to best disseminate disseminate evidence into practice with CDS the grant funded opportunities for demonstration. Fourth was conduct an evaluation of the overall initiative, demonstration. Fourth was conduct an evaluation of the overall initiative, which has just [Indiscernible - low audio]. I should know for the purposes of our program we've conceptualized decisions very broadly. Especially purposes of our program we've conceptualized decisions very broadly. Especially for physicians in the room, please thing be on the and reminders that often get in the way of what we're trying to do an EHR. Instead think of CDS as what is of what we're trying to do an EHR. Instead think of CDS as what is often described as the CDS [Indiscernible - low audio] bringing the right information to the right audiences in the right channel informants the right channel informants at the right times. It could be an alert and reminder but to be much more. It be a dashboard. dashboard. It to be magical -- model for nurses. Not just

for [Indiscernible] but for patients and caregivers. All [Indiscernible - low audio] workflow and quality in mind. CDS is much more than one thing. It's more than one piece of technology. It's a process that includes technology, but it's actually pretty human. In fact, the music about how you translate evidence-based care in the form of simple practice guidelines, is that set of recommendations get transformed into something process that includes technology, but it's actually pretty human. In fact, the music about how you translate evidence-based care in the form of simple practice guidelines, is that set of recommendations get transformed into something for technology [Indiscernible - low audio] health study? It's a human process divided into phases as you see here. For two had to translate the recommendation translate the recommendation usually published in the form of a journal article or PDF which exists as pros to a semistructured representation like a [Indiscernible] day because structured logic Care Pathways and [Indiscernible - low audio]. Then you have to take that and transform take that and transform it into structured or L3 representation. At this level AHRQ computer language and to represent the logic and in and in the case of decision-support something called stable quality HL7 stand representing logic and decision-support in [Indiscernible - low audio] Quality measures. Finally representation of CDS CDS the gets implemented in the local EHR Health IT. This is the actual running code that leads to the in phase and user experience with the clinician or other end-user. The think about this process is you see migrate from one level to the next there are a whole host of decisions you have to make to make the initial recommendation or L1 level, computer executable L4, guideline recommendations as you know AHRQ written necessary specificity for computers to other end-user. The think about this process is you see migrate from one level to the next there are a whole host of decisions you have to make to make the initial recommendation or L1 level, computer executable L4, guideline recommendations as you know AHRQ written necessary specificity for computers to work. If about assist and teams of people make people make assumptions and decisions to add [Indiscernible - low audio]. The other thing to know is this process happens all the time thing to know is this process happens all the time now by healthcare systems and maybe some of yours to translate the same set of clinical of clinical evidence into usable tools that clinicians and other team members can use. Unfortunately with everyone doing translation independently and in silos the collective effort is an efficient [Indiscernible - low audio]. Wouldn't it be great if healthcare systems did not have to start from scratch? What from scratch? What if they could learn from others and start not at L1 but maybe at L2 or L3 level? For the, what is the leap from one level to the next four fully documented? That is assumptions and decisions referred early are transparent so the next health care system could decide for itself whether the same assumptions at L1 but maybe at L2 or L3 level? For the, what is the leap from one level to the next four fully documented? That is assumptions and decisions referred early are transparent so the next health care system could decide for itself whether the same upheld if they adapted their own requirement. This is the thrust behind CDS connect to provide online infrastructure to share the how and the why behind decision-support so decision-support so that we don't have too reinvent the wheel each time and we can build on each other's experiences. each time and we can build on each other's experiences. What exactly is CDS connect? Contractor MITRE Corporation we created a website. It is an online place to discover shared CDS. It is a platform as a database a repository of shared CDS artifacts call those knowledge, resources I referred to earlier as coded representation and documentation behind those leap I I mentioned. It is a set of tools built in open source tool and other software to help people build and share interoperable decision-support. And it is a community. We have an open public built in open source tool and other software to help people build and share interoperable decision-support. And it is a community. We have an open public workgroup representing a diverse of prospectus to help drive what we build and gather feedback. In his first three years CDS has gone from a well-known concept to a repository we nearly 60 artifact entries from entries from [Indiscernible] organizations. Many of the contributors to repository us federal calling speak of fact have from the VA. They're opioid-related resources for the CDC and ONC pick in fact, or Chair come federal calling speak of fact have from the VA. They're opioid-related resources for the CDC and ONC pick in fact, or Chair come from CDC. We're referenced implementation for [Indiscernible] and one of the HL7 one of the HL7 da Vinci uses for the effort. We have over 200 registered users of [Indiscernible - low audio] tool over 70,000 case uses, 5000 plus downloads. Work as add 140 volunteers from any distinct organizations, we presented on this site many times site many times including several aims last year at several of the most recently at [Indiscernible - low audio] for that. We believe several open source offered packages including the [Indiscernible] tool. As a mentioned one of the ways we demonstrate the infrastructure is directly produce decision-support pilot testing reproduction setting and disseminated directly produce decision-support pilot testing reproduction setting and disseminated through [Indiscernible - low audio] specific use cases. For example in our second year second year we took on chronic pain management as used as a develop a minute summary or dashboard. If your familiar with some of the standards for decision-support this is [Indiscernible - low audio] app you cannot with an EHR to provide a consolidated provide a

consolidated view a patient's history, diagnosis, medications, [Indiscernible - low audio], and so for. Finally and so for. Finally this type of information is not a patient record and you have to go through multiple screens to get to it. The idea here is my consolidated view of the history with helpful digital fuels such as red flags with there's a concurrent script of opioid [Indiscernible - low audio] for the dashboard is based based on HL7 standards upon the tested in life clinical study such a. [Indiscernible - low audio] known to many of you and released as open source software will documented for pilot report, Implementation Guide and downloadable as well. As a mentioned this is open source, while piloting a specific EHR in is open source, while piloting a specific EHR in setting diagnostic clinic for a particular EHR, product of [Indiscernible - low audio] Health IT standards that it uses. If your healthcare system and interested in perhaps building something like uses. If your healthcare system and interested in perhaps building something like this in clinicians and patients around opioid use it's got tremendous support and also on [Indiscernible - low audio] best best practice. As alluded to CDS connect has been running three years. And the year was to develop and demonstrate prototype which prototype which prototype which we've done. We have organizations contributing to it it using infrastructure, but the initial three-year contract with Mutter to develop is over. At this point where maintaining CDS connect to generate interest. We need [Indiscernible] how to move it forward knowing knowing resources are finite. Within the last year is about matter team has matter team has helped identify long-term sustainability model for CDS connect, and the results are multiple interviews and interviews and outreach uses and others. We've learned stakeholders want AHRQ to continue involvement with what CDS connect does. Stakeholders have told us us in AHRQ contribute [Indiscernible] Integrity, trust worthiness and [Indiscernible - low audio]. Stakeholders recommended public partnership model, and a talking with stakeholders in trying to understand a bit about public-private partnerships we realize these partnerships we realize these take a long time after investment is billed. That going into all the details here I want to emphasize want to emphasize the last point the stand up a public-private hardship to support CDS connect in the long-term is to likely to be a phased approach with an approach with an initial Ideation expiration phase in the building phase that can take up to 36 months or more to to create this correlation, build the trust and demonstrate some of the value to members are willing to sustain the Partnership. In the course of thinking about this it's important to remember CDS connect primary mission to advance evidentiary practice. That endeavor if you think about endeavor if you think about it is much more than about CDS artifact. It's about tighter tunnel between the system and services we use to deliver care with evidence-based sources that drive the knowledge to driver. By no means [Indiscernible - low audio] audio] part of the gets useful to illustrate evidence implementation also depends on evidence discovery. CDS connect is one [Indiscernible - low audio]. Some review data. Like [Indiscernible - low audio] which support AHRQ practice centers. Resources for Clinical Practice Guideline, shared decision making tool, polity reports and so forth.We need is not just connect for the future but perhaps a public private partnership that provide both the people, processes, and some technical aspects that can support discovery, interoperability and best practices. Again idea is to make it easier supported by Health IT and interoperable and open way for evidence to make it's way from the sources of knowledge to the distribution channel. Those systems and clinical teams are patient attractive every day. 'S lipid city a service at the top-right in a box to recognize the will a lot of CDS [Indiscernible] part of EHR there's at the top-right in a box to recognize the will a lot of CDS [Indiscernible] part of EHR there's a lot that exist [Indiscernible - low audio] services connected and perhaps provided by different vendors would [Indiscernible - low audio]. To return to the set of questions I laid out in the out in the beginning. Knowing we are done with the initial phase of CDS connect prototype, I think we've successfully demonstrated interest in buy-in on the concept. Also knowing that ecosystem for delivering evidence-based in practice is much broader. What can we do? the concept. Also knowing that ecosystem for delivering evidence-based in practice is much broader. What can we do? What would be AHRQ's role in what you think of the public-private model? What you expect for that? Again we are in maintenance phase of CDS connect. We have modern on board for the next year and [Indiscernible] two years. We're going to stand up and build the public of a partnership or something like it. Now is the time to make those decisions. Thank you.

Thank you, Edwin pick we will go a few minutes into the scheduled break time. We did have a comment from Donald A. Goldmann specifically on the CDS connect the scheduled break time. We did have a comment from Donald A. Goldmann specifically on the CDS connect work. Done, or you connected in?

Can you hear me?

We can can hear you.

This is interesting work from the city is connect [Indiscernible - low audio]. I'm wondering if you could give a prediction is where you think this is going to become ubiquitous open source place to go? It's not a really good analogy but I'm thinking [Indiscernible - low audio] any academics organization of a we're using red cap or XYZ. Are you thinking you are are on that project treat that it will require public private

partnership? The number of case our pages looks impressive but not [Indiscernible - low audio]. How are you feeling about the traction?

That's a great question. I think it sort of depends on what you would like to see the trajectory go. For I think it sort of depends on what you would like to see the trajectory go. For example, CDS connect now is more than a repository. It's almost like a laboratory -- library. It's like a service that exists. It's not like you EHR will plug into it and it and things automatically which will appear is not designed for that purposefully. It's meant to be to be a place for discovery, I do have a place where healthcare systems can download those nuggets or knowledge artifacts. They can decide for themselves whether they want to upload too they're own system. There's an intentional separation there. Obviously there could be many services built into that to make them up and -- automation happen easily. To answer your question, I think it depends on what to upload too they're own system. There's an intentional separation there. Obviously there could be many services built into that to make them up and -- automation happen easily. To answer your question, I think it you think division is. I would love your input on that.

You have a way to track whether the case use and [Indiscernible] downloads have led to uploading in other People's systems or other use?

Is a great question. Right now it's a little hard only because anyone can other use?

Is a great question. Right now it's a little hard only because anyone can go, click on an entry and download it without us tracking you. We're not tracking the downloads and following what you are doing with it. I can tell you there have been a few instances where we've heard from contributors. Probably best example is Hunter Jeremy Michael at the Children's Hospital of Philadelphia presented on a panel yesterday. He has can tell you there have been a few instances where we've heard from contributors. Probably best example is Hunter Jeremy Michael at the Children's Hospital of Philadelphia presented on a panel yesterday. He has a really good story of why he contributed to CDC connect, why he thinks it's valuable. I think the channel for a couple of seconds to do things. Obviously [Indiscernible - low audio] pick if your interested in sharing decision-support, getting something out there for others to use it will serve to use it will serve that purpose. The other has provided for f eedback. When CDS put things up there and others have used it, it has improved what was initially up there. I think that is some of what we are trying to generate value around. initially up there. I think that is some of what we are trying to generate value around.

I have one extension to Don's question. What is the process of your uptake with CDS? The other is it would be ideal if we can figure out how to measure heads of CDS for outcomes. That sort of The Holy Grail. It's hard to do. Any updates how you might measure the practice updates?

Another good question. I mentioned the evaluation component and [Indiscernible - low audio] last month. We are trying to come up with up with a metric. It's something we've not been able too [Indiscernible - low audio] yet.

Peter in the chat.

I will try to be quick. And with, thank you and the Team for the the work. You been incredibly inclusive and communicating to stakeholders in going to the meetings. And engaging with folks to inform us. I've seen a personally and personally and I want to thank you for that. That is reflected the thoughtfulness of the work the thoughtfulness of the work just wanted to say thank specifically to your question a brief thought. One is that there are sort of different components to this that I know you have thought about more expensive elements of this but I think we focus a lot on data today and we should. And that is certainly a critical element content, but a lot of what you are talking about release about knowledge, those are related to different things. Obviously, they relate to each other. The content components about release about knowledge, those are related to different things. Obviously, they relate to each other. The content components of this d ata, information knowledge and what courses are, types are and how to track it is a lot of what you're talking about here. There's also capabilities, tooling and approaches. That also requires work and effort and [Indiscernible - low audio]. There's elements of governance, that includes the standards work you alluded to but also just general governance in terms of enabling trust trust and being able to trust the information is being tracked it in the knowledge sources, and when they are applied in different environments would actually get get the into the results. [Indiscernible - low audio] and is a critical piece. Of course of the research to demonstrate and study what is the impact? Does it impact the change in practice and outcomes? With regard to your question about AHRQ's role I think there are a few areas. In each of those different categories it categories it would benefit public-private partnership because there are parts of each of those that probably would be best suited to an that probably would be best suited to an Agency, and others that will be best suited to the private sector. And so, the convening function of AHRQ is to be able to bring those parties together with an HHS, but then also in public private space pick the other would be the development and maturity of some of the other elements with regard to pulling and content, some of which may be more appropriate too [Indiscernible] AHRQ, us to buy AHRQ and maintain. [Indiscernible - low

audio] private sector and I think keeping that will be a component of answering your question. Finally, think back to the point, I could imagine AHRQ targeting and even ultimately requiring that part of the research think back to the point, I could imagine AHRQ targeting and even ultimately portfolio would be to actually evaluating uptake of what it actually does to take care of Americans, because I think that ultimately would be a way to leverage some of your research resources to would be a way to leverage some of your research resources to lead to that demonstrated. Those of the ways I would start thinking about.

Thank you, Peter.

Great presentation. I noted on slide 30 that FDA was not one of the Federal Partners would start thinking about.

Thank you, Peter.

Great presentation. I noted on slide 30 that FDA was not one of the Federal Partners listed, and FDA has issued a proposal regarding machine learning based on software as a medical device. That obviously, there is a a trade-off here. FDA is concerned about safety. On the other hand, we could be talking about risk litigation to the part you are talking about promoting if all of a sudden you consider all of these devices. One, whereas FDA in this? Are you coordinating with them? And number two, how are we going to balance this? Frankly, if we get caught time to be a new factor here and it's not if we had to go through FDA and consider, really go with the processes you are talking about as device.

Thank you. I think a couple of things come to mind in terms of FDA involvement. We have reached out to FDA several times involvement. We have reached out to FDA several times and have had folks calling in to work group meetings. There's been a little bit of connection, I would say that I think we're getting there and have 101 a couple more people recently. In terms of FDA guidance it has come up and I work a lot and whether stakeholders a lot, so I think there are two things. One is what about the and whether stakeholders a lot, so I think there are two things. One is what about the things, the decisions we develop within the project? How do we do we use the platform to help others thinking about about the same questions? We'll mention one thing about the repository platform and it is meant to provide a platform for transparency more than anything. One of the biggest moves forward we done is provide metadata structure for representing this. But things went into it? Who did it? How was a credit? Is of the evidence base I what was supposed to work? How did it work in the pilot? I think that will go a long way to answer your question about time I'm work in the pilot? I think that will go a long way to answer your question about time I'm not sure.

[Indiscernible - low audio]

I was curious about how will this translates to prosthetics, like a for example long-term care pick their EHR is really just beginning to be implemented. In acute care they been simulated by Meaningful Use and those kinds of things [Indiscernible - low audio]. Long-term care not so much, but beginning to develop. How does CDS connect so the knowledge transfer is actually used by everybody and not just a select group?

Another good question. A couple of things.One is the use cases our sort of uptake or Lessons Learned we can pick from. Long-term care, I think it depends on who contributes to the repository. There are some within the project within the project but as a platform I would love to see Lessons Learned or folks working of the long-term setting use the repository so they can use to share and get feedback. We're trying to to build in mechanisms we could have better communication from a contributor to a user. I also think where it might be helpful is the standard piece. To the degree there's standards that apply as you mentioned, for that we that we can provide demonstration of how people have used those standards for those settings, again, the platform is not specific to anyone setting without the content.

Thank you.

We would take would take two more q uestions. Emily?

First of all want to speak from community patients family side. This is top I love this idea. I think that when you mentioned what type of [Indiscernible - low audio] would be involved to really make patient and families aware, even the resources there. Sometimes with a great idea out there but they don't know who we might here. If you talk about development and all of the resources, at some population such as chronic conditions, [Indiscernible - low audio] there are not very, I don't know, very good with computer searching on that. I think maybe some type of app involvement so everyone who has a phone can use. Eventually I do not know [Indiscernible - low audio] to that. I think it would be good and easy for people to use and for rural areas and would want to use pick another thing I thought about with stakeholders is in this effort I'm also involved with [Indiscernible - low audio] it University of Washington. I teach [Indiscernible - low a udio]. They got all of the different students and social workers training. From what I hear they have not the level awareness about turning a person as a whole. I think it very important that we engage at the University to develop [Indiscernible - low audio] and to advocate for young professionals from the beginning in their career and integrated two different field working together with certain populations [Indiscernible - low audio]. Another thing I think might be important to be involved with State agencies, medical societies and

specialties to make them aware of this initiative on the horizon. That we can develop policies and get this continuing education also so everyone would be on board and aware of that.
Thank you and I want to allow George because we were coming up with a break. One last comment. Quickly, and the response what do you think of the public private were coming up with a break. One last comment. Quickly, and the response what do you think of the public private partnership model? Obviously critical part of that our software vendors. Fortunately there are a few of t hem. -- medical societies and specialties to make them aware of this initiative on the horizon, that we that we can develop policies and continue education also so that everybody would be on board.
Thank you. Want to allow George since we're coming up on the breaker. Response what do you think of the of the public private partnership model? Obviously, critical part of that are are the software vendors. Fortunately, there are few of them. They a big. There are few of them. The software vendors act as convene yours of Health Systems the delivery systems. The of providing a service for significant financial iteration, and they bring people together to help users understand how they can use the data for just this purpose. Obviously, in terms of public-private partnership the software vendors are really critical. They are competitive with each other, and they like they can use the data for just this purpose. Obviously, in terms of public-private partnership the software vendors are really critical. They are competitive with each other, and they like to hold on to their space and their customers, et cetera, so they are competitive. But they are critical for you to develop good relationships with. I think they would be critical for you to describe what it is your vision is in terms of helping to disseminate this type of it is your vision is in terms of helping to disseminate this type of support quicker to a broader base of Health Systems. So, just the Systems. So, just the encouragement of the software vendor side of your work.
So, one last and someone would be interested, [Indiscernible], any high-level comments or prospective given your 19 strategy of this?
Most of the things I think of already been stated. I do like the comments from George about engaging the software vendors pick a big challenge, and I think the role there of AHRQ -- of AHRQ would be to convene and I literally don't see [Indiscernible] in the same room at the same time. It's almost like of the different folks, but I think the role of AHRQ could be around this, because we really need to have established standardization around this. And in addition to the interoperability across systems, but it's really hard to do to try to get folks in the room. There is very few entities that I can imagine with the convening power of AHRQ. That could pull that off.
No, I think this is exciting work. work. And final comments would be that AHRQ has long known been known as a leader developing real-world real-world evidence. I think this now moves into the real-world solutions, taking those concepts those concepts and applications which is always been sort of a hallmark of AHRQ's work is not only answering the wet, but how to meet meet the practice change and the [Indiscernible]. This works very nicely with the portfolio.
With that, thank you everyone for discussions. Great questions. discussions. Great questions. We would take 10 minutes. We will reconvene at 10:00 sharp for the next set of speakers. Thank you.
[The event is on a 10:00 minute break to reconvene at 10:00 a.m. a 10:00 minute break to reconvene at 10:00 a.m. ET]
[Captioner Standing By]
[Captioners transitioning] [Captioner standing by]

We'll get started. Please take your seats. It looks like we're missing two members and we'll get started as soon as they are in the room. Well, we will move forward so I wanted to introduce our next speaker. Leaf is the chief medical officer, the acting chief medical officer and deputy chief medical officer in the assistance secretary for health with the department of HHS. I will refer you to the speaker BIO for the impressive resume. That is on the bottom of page three. Two notes I'll make for that. He has a distinguished show period of service. He has learned to navigate multiple buildings. Apparently in this town, that is an accomplishment. Thank you, leap. And we look forward to your presentation.

Good morning, everybody. I am not typically a microphone person. Can everybody hear me? That is true. I apologize to everybody online. Let me start by saying it is such a pleasure to be here with you. David asked me very graciously after my boss had to respectfully decline. I think most of you may be aware that he recently took on duties as acting FDA commissioner. As you can imagine, his schedule has become quite tight. I am here hopefully to be a good stand-in for him and hope I am not such a bad consolation prize. I generally would be a sitter I ran my first marathon on Saturday, and I don't think I trained appropriately because things just aren't right. It got the best of me.

It whooped my butt. If I am wincing in pain, it is not like I dislike being here with you just because I am feeling my age today. Stepping back, I have been in the acting role of chief medical officer for about a year now and came straight from active duty just like Andrew was saying. In that time, I have been able to be you privy to a lot more senior you level discussions around the priority and ais Is tans secretary for health. The reason David brought me in today was to speak to current activities and kind of frame the perspective that HHS has taken broadly on social determinants as hopefully a good facilitator of developing context or framework through feedback from where art can take action in regards to social determ Nance. One thing I think before I launch into the slides I have is that ARC is an integral and key member in all of the discussions to see around social determinants. I cannot go one step without having them as a stakeholder for a work group or a steering committee. As we all know, it is efficiency and improvement. Obviously, this is -- I'll get you the 80/20 piece. Why it happens outside of the walls of the hospital. There is still role to optimize what does happen in those walls. They do have enough opportunity to do the outcomes of people's lives. The reason I bring that up is that your comments here today are meaningful. They have impact and they will go forward with NHHS. Don't hold back as it were W. that, I'll be brief just so yes can have a good time with discussion so I don't rain on David's papa raid here. So just framing things from the HHS perspective. We all are aware, and this has been the same narrative for decades how spending is rising. The proportion that it takes up is rising. And that does not look like it is going to change based on predictive models that reference historic data. Life expectancy. This is new. So we have never done very well with life expectancy compared to other nations. Alife expectancy either maintained or increased. That has not happened for a variety of reasons. One of those being overdose deaths related to OPIOID epidemic and as we'll talk in a little bit the 4th WAVE of what this overdose crisis looks like. Chronic health conditions. As kind of a public health practitioner, this one hits particularly close to home for many of us, I think. 90% of annual health expenditures could be prevented with upstream known interventions that had a targeted approach if they were utilized effectively. Partially implemented in the clinical space and the healthcare space, but sometimes, you know, outside the walls. And then this is another large consideration, I think, has a bit more of the global security, national security to it with regards to emerging threats with influenza, pandemic flu and you E BOLA response and targeted therapies and hoping effective threat sennensing comparisons in areas of the world that have hotspots that can impact our walls, not just our global partners. AMR and the recent mention I have seen with AMR is how well-positioned the U.S. is Wu regards. Do we have drugs in the pipeline which we do not. Do we own patents? Do we actually own those medications. There is positionening. To AMOCROBIAL development and insuring that there is sustainable to that industry. The last throe. STI, HIV, vaccine-preventable diseases. This say huge Nexxus where ARC as major. Everybody is in the aware of the initiative. I think just going through some of the steps very quickly. Over 50% of new cases and 58 jurisdictions in the United States and African American NSM. Latin NSM and injunction drug users. Those are risk communities that have -- that for generations stand to be on set of the initial epidemic. Language is not received. Same standard of care that others have been afforded. There are obvious opportunities across the landSCAPE from our spending, to life expectancy, chronic disease management and looking towards infectious disease for upstream focus on social determinants that are bounded by the walls of the hospital in the healthcare setting or outside those walls. And I spoke briefly about ways of the OPIOID overdose crisis. Just two points from this. HHS has been obviously very intimately invested in the response. Synthetic have had the great -- and then I think we started to discuss that a bit briefly, and I know ARK is already in the boat with us on this as well with regards to seeing this 2 had the WAVE of overdose crisis such as METH and other stimulants of abuse and how we can take the lessons learned from OPIOD response and translate that to hopefully a framework can be used to curb or mitigate much of the consequences and negative outcomes we have seen with the opioid epidemic. I think this is probably the right group to mention this. We all remember the vital sign. Look upstream and see how is what we are doing now going to impact care 15 oar 20 years down the road. Those lessons are being learned outside of HHS. I know they are being taken to heart with HHS. This is giving more -- what the context of the problem is for HHS. This is theover all American health as it relates to national defense. From the vail of having a ready supply of 2717 to this-year-olds to draw from. Because of history substance use disorder. At least 70% of potential candidates in the age range would not make it past the initial minimum military entry requirements. The that is a will be. A consideration that HHS is faking into account. And so arc, this is a little data. There is going to be glimmers of hope coming out in terms of publicked material in the near future. Not huge wins, but wins nonetheless with regards to rate of increase slowing down or showing decrees in certain communities. But this is from 2017 data is a projected

model just looking at what is the incidence of obesity going to look like in two-year-olds from 2017. And obviously you see that that goes up based on the predicter model to a substantial majority of the country. So these are problems that have upstream predict or thes that can be intervened on it. And this is usually one of the more sober dart charts. If there is anything that gets him on a soap box is inI inquirities and heat maps and seeing the same heat map over 20 years is something that is obviously not acceptable and is reflective of. Desperate action over a number of years that has not resulted in tangible change. When you have increasing healthcare expenditures, decreeing life expectancy and a 20-year discrepancy between the best-performing ZIP codes and the worst performing ZIP codes, there is a huge problem there, and it is a huge shame that we would overlook or just not acknowledge that. That is another consideration that has now been put into the highlight from front and center for HHS. This is more just continuing to drive the narrative home that this is what we are seeing where things can happen and things are not happening. Infant mortality. And this lends itself more to maternal health. That is another developing interest or increasing interest, I should say for HHS. The example that we are giving here is the delta region and APPALACHIA. You have a significant increase in infant that mortality compared to the rest of the U.S. and you have this observed correlation with obesity, smoking status. You can infer a number of things from the status and that is not my slide. I won't claim that. But suffice it to say there are things upstream including poverty rate that influence mortality that can be intervened on that aren't being intervened on in a meaningful way, I should say. This is up here not because we subscribe exclusively to Robert wood Johnson or the RAND collaboration that developed this outcome. But, it is meant to show. I mentioned 8020 before. Well, things funneling into health outcomes, 80% of it is independent of, comes before, or after points with healthcare. I was going to pull this one out, but he likes to inject his international travels into his talks. The reason I left this in is that it is a nice representation of what international partners are doing in this space. Attending the world health, one of the world health assembly meetings last year, I leave, he was able to go through and do a tour with some of the POLYclinics. These are holistic, wrap around service. You know, a way to take these four pillars to the community. So health behavior, genetics, environment, medical care, leading to overall health. Hopefully. Note how small the ban on medical care is. Again, it is just reflective of where are people going to put their equities to put the time and effort into. It is not an unnecessary component. It shouldn't be an after thought, but it is just a recalibration of what we hiss or thely would think of when we think of health. Again, just driving the hammer home. This is just giving you the background onHHS and where we stand. Cancer cases. Preventable. Nearly half could be taken off the books. We would not have the need for the chronic disease management. The CHEMOtherapeutic, the XRT regimens, the decreed lifespan, the decreed quality of life. All of the good public health terminology that we want to use. If we implement those preventive measures upstream that we know prevent cancer well. Try as we might, and you know, and we have all had concerted efforts that, you know, at the bedside, we are going to have these lifestyle measures that we are going to talk about. We're going to talk about smoking and alcohol. There is something remiss in how it has been implemented and one of those definition of insanity things. You can continue to do it, but at the risk. So again, just looking at another example and cardiovascular more it willty. The number one killer could prevent over half of those deaths if we subscribe to the usual things that are kind of soft wall calms. And HHS is as culpable as any of this. Guidelines and recommendations are wonderful but there is something amiss between developing the need for behavior chains. Or improvement of health. This is one of the final examples. This is physical activity kind of rounding out obesity, nutrition, and getting to physical activity, having $117 billion attached to low levels of activity and increasing preterm mortality. All calls of mortality. I misspoke. So we also had -- there is -- everybody is aware of kind of the healthy age ago approach and some of the things we have done in ODPHP in regards to healthy aging sup mitt. It is becoming a more concerted effort for the secretary and other recalibration. There is so much in the research end of drug development and novel therapeutics. And they have obviously taken that proaction, and it is a very robust area, and obviously understanding BIOchemical pathways are important to understanding a disease process and where you might intervene, but I think there has been a recognition understanding from HHS that there may be another way to supplement and August meant that work that is being done in that preventive upstream space. Now, this is meant to just say, also determine they are not skindeep. You these slides I am going to breeze through for the interest of time. Things such as the biologist to having social determinants to policy whether that be hookworm or HIV. Having adverse childhood events affect your brain model and brain architecture and the way you cope with and develop your stress response. Having that result in future poor coping mechanisms. I can speak from experience on that with regards to kind of the, theTSB standpoint. Once that architecture is in place. Once

those pathways have been further emboldened and strengthened, it is difficult to come back from that and can set you up for a lot of those other relevant coordinations and social determinants that facilitate a life that ends much shorter and much more unhealthy than others. And I know this is a controversial one. I won't go into the nuts and bolts there, but think that having some type of external stimulus. External exposure, child abuse, whatever the case may be. Having DNA that can result in differential pathways being reinforced and just a set-up that contributes to and the context of ongoing stressors associated with poor outcomes. The likelihood that life will not end up as well for you and others. Sometimes determined by much more so than what your genetic code required. Typically at this point, sited kind of a so what. We all know these things. We have all seen the outcomes are bad. We know there are digs parties, racial, ethnic, whatever the case may be. Nothing is ever done. The needle doesn't move much. We just kind of go on and live the life that healthcare is going to live. You're not going to focus on public health. You're just going to go on and be ADNASEUM. I don't put this up here because I love the secretary and tow the party line. I think he is a great individual and a wonderful leader. I bring it up which is value-based care. And though it has been present in previous secretaries charged to I HHS actioner I think there is significant partnership in the delegated leadership. The directors, administrators, commissioners have taken this action and internal Xized it into much of the activities and the op tiff and the staff are daily doing. And just to give a couple of examples. This is part of our new strategic plan with regards to the opportunity, transformation, invasion, and response. I'll go into that a little bit more, not much, but just suffice it to say this is a product of my boss that I am taking to heart some of the things that have been -- we have been guided to do with regards to value base. This is a better character Iization of what that looks like for us in practice. So we have a very broad portfolio. Some areas with prevention, with treatment, with frameworks that help us interact with our stakeholders better. But the thing I want to point your attention to is that a critical consideration for every move we make is the health disparities that you see on the left. There are also obviously a large PIR haveOT towards rural health. I can have rural health out there, racial ethnic considerations, gender-based and then age and disability. There is you -- so for all of the areas of interest in on screen, there have been existing process in place that disenfranchise further a group that is at risk and our goal within OASH and HHS is to help bring those folks into the light to receive not equality but the I -- equity thing. I know sit the cheesy picture. The kid with the fence and this is what you call it. But this is where it will help as we come and take shape. So an example I'll give is S sickle cell up there. You may be aware that an opponent at improving outcomes of sickle cell disease. He wants to improve mortality by 10% in ten years. That is built on the assumption that there is something broken in the way that existing modalities to improve outcomes have not been utilized. And the reason I bring it up for the art group is that things like compliance, utilization of hydrology city. Transcranial top already utilization. These are all things that are used in the clinic. These are things to improve outcomes that will keep kids from having strokes and pain crises and from having early deaths. Independent of new crisper meds that can help cure and also cost a boatload of money. It is doing the small things well using well with the tools that you have. That is the reason I bring that up. And then I'll give a mention to cardiac arrest and CPR because it is one of those nonclassic public health things. It is an in-stage of cardiovascular disease. It is about 350,000 of those cardiovascular mortality cases that we talked about earlier. There are significant disparities there. If you are an African American, you have twice the rate of sudden cardiac death, but you also have a 50% less likely. You have 50% less likelihood of receiving bistandard CPR because of the ZIP code you live in. So these are all considerations along the spectrum from genetic conditions all the way to, you know, lifestyle and potentially some genetic contributing factors to a disease state that could be prevented from having such a terrible outcome. And just a couple of slides on current ongoing work, and I'll just read one BLURB here. So this is a national academies contract that was done earlier this year. The goal was is to essentially look at return on investment or health-related social needs. Nonmedical related health needs. Stating the business case to nonmedical noun public. We have taken this for action and one thing offsite is the Surgeon General. He has an ongoing you condition. He has made it for a lot of condition who is going to hopefully release later this year. The whole goal is to start to speak a language of a business community. It is not just having an employee health program because those have obviously shown themselves to be insufficient to actually affect change in the health outcomes of employees. It is getting out into the communities actually investing in the communities that you have your operations going in. Everybody is familiar with healthy people. And common language social determinants and has been readily applied by state, local, public health agencies, healthcare systems. It gets utilized very heavy within HHS and I know it is something that we are basing much of our continuing social determinants efforts around. All that to say healthy people 2030 will be coming out in March

and you all are probably aware that there was a significant cut in the number of objectives. It went from something like 1200 to just shy of 400. The criticism that was received was well, you're kind of trying to boil the ocean there healthy people, and it is one of the -- if everybody is important, nothing is type of constructs. So the reason I am leaving that up is social determinants have not been dropped in that cut of objectives. I am unfortunate to be able to take a look at early documents and there are over 06 social determinant objectives and tags still remaining. These are just a smattering that are still publicly available. But suffice it to say, it is still a central piece of what is going to be the kind of the METRONOME for healthy people going forward. And this is the last slide I have, and everybody is aware of the primary cares initiative. I don't need to volunteer this. I know Sherry laying over there could do this just more justice than I can. It is an example of utilizing CMS to help direct transition towards a value base. The one thing I want to leave you with is that there is -- I was talking to Sherry and David about this. There is so much there would be nice to chat about but I am getting used to the fact that I can't talk about much of the work I am doing. It is so encouraging. It is very exciting. And I think the exciting part for you all in the audience and online is that your comments contribute to these ongoing and are truly valuable and need to be heard. With that, I'll close and thank you for your time. .

So thank you. We'll open it up for some comments and discussions. The first person is don goldman. He had a comment.

Yeah. Hi. Thanks very much. That was a really wonderful presentation literally packed with some great urge sight. You were calling out disparities between African Americans and whites and as well as your emphasis and under the circumstances effect. Sit very advanced thinking.
Just a few comments that are common questions, I guess. Interesting and the global sphere of what other countries are doing about social determinants, and it would be good to hear you speak as to whether we are paying attention to the sustainable self in goals and intend to meet them. People think they are all about African and underhealth regions in Asia. Many of them are absolutely appropriate for the United States including access to a clean and safe border. The second is that a little bit antic. If you don't name it, you can't address it. In all of your discussion, I didn't hear you address structural RACISM. I wonder the degree to when which whether you are having a conversation to talk about what you are going to do about the blatant RACISM in the United States especially structural R ray simple. You showed a lot of heat maps and you could show 30 or 40 more and the worst health outcomes are in a certain region. The southeast East of the United States is always colored red. I wonder what the theory is to why it is that that region of the country always finishes near the bottom in almost every metric.
Thank you. Thank you for all the questions. I will do my best to address those. The number bun, one, the global consideration. Our office. We recently were tasked with adopting one of the centers that came out of the reimagined process here and that is the center for health invasion. Much of what has been informed has been facilitated by ongoing health in Europe in looking at their ability to address in probably a much better way some of the things that we are looking to enact with regards to invasion around the space of value-based transformation and social determinants. That has been one of the largest. In terms of lessons learned in regards to other areas, we you haven't fully implemented the HIV epidemic. There is mention of a CR earlier. Fingers crossed, we'll be able to fund that initiative and continue to go forward. But much of the lessons learned in terms of how to effectively as dress incident cases of HIV has come not from our own lackluster work here in the U.S., but from what has been done on the African continent. So I think there is a role for that kind of knowledge sharing and humbly accepting where we need to take our cues from. Those are two examples. I'll try to take the loaded question of structural race simple. As. Imagine. There is an audible pause whether you start to mention those words. It is because it is still real and it is not going to go away. Ray simple. These are out of the control of HHS. What I will say is HHS won't take the position that they have the cure-all for all social ills. Every condition around social determinants has included justice, education, labor, HUDD, USDA, other partners, if not external in the private sector to help contribute to a holistic look at what the problem is. On that note, I think one of the important contributions I should also say is that there has been more than just an implicit understanding that there is structural RA RACISM in place in the way that government has responded in some of these cases with regards to public ims of the day. I have been really fortunate to go on the listening sessions request Dr. Redfield as it relates to the 58 jurisdictions that are going to be highlighted for the HIV initiative. The goal has not to tell folks what they need to do and how they need to do their programs and not how they need to identify, treat, and retain their members of their community with HIV. But win stead hear what works for them. It is empowering and not telling them what is going to work for them that gets to research to have more

equity in clinical trials and what takes into cant not just those that have the most in society but those who are going to stand to benefit the most. Think of the case of the sickle cell and drug development with some of the curative therapies. I think there was a release about conditional approval from one of the medications when selecting inhibiters. That would not have been brought to bear without African American patients. There is a huge role to understand that everybody is equal but everybody's response medication is not equal. And I think that is huge not just in the genetic conditions but also with the broadly chronic disease. With heart disease, with kidney disease, with high cholesterol and ANEMIA. Just the usual things that we treat with abandon with LIPITOR and HEPV. These things don't work to the same effort as other communities. So these are all things that contribute to why the delta. Why the south? Why certain regions of the country do not perform as well. I think this is because they haven't been invested in and that is reflected over generation. I'll get off the soap box there.

Thank you for that. And I just note that it is a very complicated and undoubtedly longterm effort to deal with RACISNM. Structural racism is reflected in policy. The one thing HHS can do is to get past the point where we have a sudden uncomfortable pause when somebody says racism. And HHS starts using. You can't talk about social determinants without talking about equity. You can't talk about equity without talking about racism. So just changing vocabulary will rid of the really deplorable fact that we have to have an uncomfortable policy.

Thank you. And there is a lot to unpack on this particular topic. Before we open up for broader discussion. Jerry Penso has joined as a council member. I would like to turn it to David mors.

Thank you. Thank you, don, for forcing us right away into the big questions. You have a talent for doing that and we are going to miss that greatly. I am David Myers. I served as our chief physician and began serving as our acting deputy director. Before we get into this debate, just a note, I am not the permanent and will not be the permanent deputy director. We need all of you as advocates and ambassadors for ark to shake the trees and help us find the right person to fill that role. We sent you all the announcement today and any other time, reach out to Jamie. Reach out to me. Reach out with ideas with people we should contact or information you need to help get the right people to apply. That said, we're going to come back to this discussion. As for the new members, especially, I want to set the context that ark uses you, truly, as our national advisory council. We turn to you for information from outside of the DC beltway and outside of our HHS family. To help us select the highest impact projects, the places with the greatest need that we as ark have the greatest chance of creating goodness from. Sometimes, like you heard earlier today, we come to you when a project is nearing its end. And we show off the great work we did which I am so proud for what he and his team have done and ask you what next? That gives you a certain framework to bring to us. But it is different than what we are about to do. STO 8. Social determinants of health, as you heard, is actually not new at ark. We have been doing this for our entire history, but it is taking on new meaning and new importance. And we are undergoing a process of saying what should our role be in moving this forward. As you have heard, our mission is to help healthcare systems and healthcare professionals improve the quality, safe thety, and value of the care they provide for the purpose of improving the health of the patient. We are definitely in the healthcare system. So there are choices we have to make in this larger context of social determinants of health. Frames that we can put together and then focus on where we are. We are turning to you as people who represent healthcare systems. Represent researchers. Represent patients. To say and to speak to us about your experience today of what the community is feeling about this very, very large and complex age. To do that, we provided you some background reading. I want to highlight two parts of that. One came out of the national academy of medicine. And if you read that, you can see there is a tension. Especially for healthcare systems in approaching the social determinants of health. It recognizes that as healthcare professionals, we often approach the individual patients before us. The language that is being used is meeting their social immediates. Everyone has social determinant. It is a universal phenomenon on multiple dimensions. But individuals have needs along those continuums and an ability to understand what a person's need is. To adjust the care plan or address those needs is something we do on an individual level in healthcare delivery.

Is a second side that says as large organizations employing many people, delivering care, having relationships in communities whether they are insurers, entrepreneurs, health systems all can be involved with changing policy, creating new societyAL structures that address social immediates and actually get at the root route causes of social determinant creation of inequities in health. I they called that advocacy. We could at AHRQ be anywhere in multiple places along that spectrum. Aim going to ask you a series of questions over the next 45 minutes, but I would like to talk you through an order. First starts as, as

people out there, what are you experiencing? What are your organizations thinking about? Is it this even on the radar? How are you thinking about issues of social determinant on the individual delivery or the societyAL level. What are your pain points when you For preventative health and human services. We gave you a hand-out to show you. We broke down two conferences. To answer questions. The healthcare professionals then turned the group to ask the question what do you see. And those activities -- activities you would like to take. That is why I want to thank again Dr. States for providing you an overview of what AHRQ is doing within the department of health and human services. We gave you a hand-out that just briefly, at the highest level shows you some of the activities we are already involved in. We had many more familiar examples, but we broke it down into AR AHRQ's three competencies. They invest in developing new knowledge in health research. We answer the questions that people don't know the answers to. We create tools and training to help healthcare Sams and healthcare professionals implement changes and put it into practice. We have thepy to cuss on data and analysis and measurement that drives both research and practice improvement. So within any of those areas, our final conversation is where do you see the greatest gaps, the greatest potential for impact, the most feasible places to start? Makes sense. Mostly seeing people shaking their heads. So with that, and we would have loved to invite you for a whole two or three-day symposium where we could have impacted how to use language. What is the current knowledge. What are the larger things AHRQ beadvocating. What should HHS be doing outside of AHRQ. But given that we have limited time, we're going to focus on those three things. Y'all telling us what does this really mean to you in your world? What is your perspective? What is already happening out there that we need to know about both working and not working? And finally, where do you see the greatest opportunities for AHRQ in the space. And around the room, that is really exciting for me to be able to be the facilitators here, but there are many thinkers and doers from all of AHRQ's divisions that are already actively in this area. We're going to listen to what you say and we're going to take it back. That is what you do. You will see over the next two to three years the fruits of what you have done as we put it into action. So thank you. Andy.

So thank you. Excellent for what I hope will be an in depth granular discussion. There are three of the council members I would like their perspective on just as a starting point for the first question. What is our, in terms of the system level approach and philosophy on how we tackle a very complex issue of social determinants of health. And one person I still practice part-time and hospital medicine. What I would ask both for some comments. Being a front-line nurse is a very complicated job. In what ways are your staff dealing with -- and that has direct implications on how they interact with patients and the discharge process, the communications with families. To what extent are your frontline nursing teams and frontline care aware of this. How do you frame the problem for it?

I think it goes back to keep in mind, I am from a critical access hospital, and it is rural. So I just want to start with that as part of the conversation. It is having the caliber of nurses who can care for people in rural communities that are of a higher acuity that don't have direct access to acute care hospitals. We're fortunate enough to have that access. However, because of the load at the hospitals and the volumes they are experiencing nigh want us to keep our community members home. The other variable is people from our small communities don't want to go to the city. They want to stay home. It is making sure we have the education and the resources in the rural communities to provide that care. Rural communities have a higher sense of evaluation. In our rural communities, people do not have the education they have in the urban areas. How do we do that? I was very glad to see rural was at the top of your list because I think there is a huge gap there. I think the gap is on both ends of the continuum from the aids patient to the newborn instant and instant mortality. So it is on both ends of the spectrum. So from a nursing perspective, we have to be a generalist in a critical access hospital. We have to provide that cure as a general list and in today's world, being a generalist is not always the popular thing to be. Everybody wants to be specialized. Our primary care -- we saw those numbers drop as well. Those are the things that we have to work on, and I think we have to look at nurses as part of that continuum as we are looking at. To help support primary care and rural communities across the continuum of care. So that is how I see it.

We see a marker of quality of care. It doesn't matter if we have the list right. If they can't afford the medication or access the pharmacy to get those filled. There say recognition. It is much more basic. Many are peer-to-peer interaction, not necessarily medical care. I think that is an opportunity in terms of empowering our workforce to start to recognize those things and prioritization. The other two people I would ask for comments from would be from Chris and Barbara as organizational leads in patient safety. To what extend is the social determinants of health conversation a safety factor and how does it relate to adverse events and how is your organization trying to incorporate.

I am from MEDstar health. We have ambulatory sites. The issue of social determinants is on everyone's radar screen. It is everywhere, every day. I am doing some research right now with our primary care providers getting them to diagnose and treat patients with hepatitis C virus in their practice, and it is a work flow issue. It is interesting that our case discovery form didn't have enough social factors on it when we got the groups together to talk about cases. It always reverted back to the social history, the social determinants of health that were impacting the capacity of the individual to receive treatment, to follow up on treatment, et cetera. I think in the patient safety space across the board, I mentioned that social determinants are on everyone's radar screen. We run the risk of doing really great things and not knowing what to disseminate. What is generalizable? You know, we're living byOTES. People that are really passionate about doing the right thing. We are trying to tease out how these factors impact patient safety. So we look at our patient safety events and are beginning to statty by which patients are impacted by patient safety events. You know, we have great capacity to drill down to zipcodes, to drill down into some other data that says why is it? Why is it that inner city hospitals and in our rural hospitals, patient safety events of similar types might be more prevalent than they are in, I'll say, our -- some of our other hospitals. Bedon't have the answers to that yet, but I would say I see us thirsty for the capacity to begin to organize our efforts and learn from other folks that are doing similar pieces of work. I think the notion of researched to understand what is generalizable and what is not, we have really strong community partners. ,HC, community health centers, housing and urban development groups. We have a goer growing Kawedly of community health workers. Talk about a powerful group of support staff that are real will I helping us bridge that gap. But they come with more questions than answers. So tied to patient safety, absolutely. How? I could list a thousand ways and I don't know if they are one offs or if they are really something that is worthy of its food, its -- it's food. It's medicine. It's money. It's education. It's substance use disorder. It is instability to get a job. It is legal services. We have in our Georgetown ED, we have legal services there because what we find often times is that what brings people to the ED is that there is stuff going on where they need some other kinds of help. So I am excited to listen. I don't know that I have much to offer at this point other than I think this is the place forA AHRQ and others to really begin to focus deeply.

From the perspective of patient safety advocacy group, how do you frame this up?

So actually, thank you very much. So I think it is often thought of as an advocacy group. We do think of ourself as advocate. We are a state agency and the mass chew set safety agency. So we play a role in research and in convening, and dissemination. Not unlike our very mini version of AHRQ but on a state level. We are a big consumer. [Captioners transitioning]

In Massachusetts and across one of the first must center areas, it was the first legal services have a nice way to go about this with her healthcare experts here. The other thing I want to mention is that we are in the process of convening a statewide consortium on Massachusetts healthcare safety and quality consortium that is working with safety for Massachusetts for the strategic plan. Based on the four pillars I will not go into details here. Where the close of 40 organizations and the state hospital association and the medical society to help put a variety of consumer and patient groups here. But in convening that, which is always very energized group hour making good headway. But it was interesting to me that the artist or rather hardest organizations get to the table with those representing many of those formal populations. Part of it is a lower necessity issues in general. Part of it is when their thievery healthcare. Has some of them are population-based organizations. Oftentimes that issues access. We don't need to worry about quality and safety for can even get access. And that's not where we can spend our time. So we understand that the voices had three of the table. The question is a challenge in regards to the capacity of many of the communities there most affected by this to engage and whether or not there is some way that we can affect that. I don't think anyone has the answer to that. So the bottom line becomes very much what exactly we do here?

Peter L gets you just moment. To the counts members have not had chance year from yet have any thoughts on this? What you hear when you work with medical groups in terms of resources? How are the practical medical groups engaging this problem. Than from Tina's perspective how can technology helps solve this? A thoughts along those lines?

I will start. Excuse me as I have to whisper through this one. I would say this also very top of mind for many of the medical groups and healthcare systems moving the value-based care. Because then you understand that if you want to get the best outcome and lower costs he had to go upstream and address the social determinants can't get good outcomes for those with diabetes advocate gets their opponent appointments or afford their medications look you are sort of forcing those discussions going on. A huge variation on how they are beginning to address. I would say we are at an early stage of screening. That is one of the biggest challenges. What is the best way to screen and how can you understand and use the data to formulate your

own programmatic responses? In addition as he mentioned many of the groups are already taking action and working with community partners. Many are working with transportation companies like Uber and Lyft to work on a transportation issue. So one of those issues is the effectiveness of these programs. And how are we going to measure effectiveness? Those of the issues on the table.

Thank you. I would say you hit on something very important here. There is a variability amongst city, state and regions in terms of what you might have with family Massachusetts. But what they have access to with the social support services may be vastly different than other states. In terms of solutions to movements that phase I think trying to figure out ways to address that variability in level the playing field is a complex court appointments here. And they going to stick with it.

Several of us are coming from the American medical informatics meeting. There was a large track on technology and dramatics to capture, assess and present this information. There are a lot of issues right now with both capturing the data at point of care, other validated questionnaires to capture? Is it from the patient? Is it the clinicians interpretation? There over a lot of other information's here other than PR oh. There is interesting discussion the how you bring that back to the patient. What type of technology can use that the patients can see where they fall in the spectrum. I think that was also an important ongoing conversation in our meeting. A lot of those that I've been following your been going down to the clinical observation. It can be a rich source of the data but there's no standardization on how to capture that. How do you use a and incorporated into clinical analytics? So I think there are a lot of gaps would definitely movement in this area. There was a whole track on this topic. So was integrated and all of the sessions. Again lack of standardization and metrics were tools to capture it with is going to be a bottleneck.

With disclosure that I went to medical school and I did some training at regions Drive, the county hospital is the simpler here. Peter?

That is great. I agree with everything that has been said. A few notes with the questions. I will try to be brief. Critically important, working with our partners like Richard and Eskenazi Health, really for a lot of focus was put on here going back almost 3 years one of the for strategic initiatives that I got to, was essentially a complements what we've been doing for the bulk of the history of the last 20 years. A lot of work with the health information activities and now we need to pull together traffic and help healthcare data across and storms. Asking how we reply this and as is been said very much in item up for discussion on how you can do this. Is hard as it has been able to do an healthcare system when out literally dealing with everything. So becomes very thorny. That much more promise potential and excitement. Because we can really start to get a view of the entire person in this movement from healthcare to human care. Were not even necessarily talking about a patient anymore. We have to start thinking about it that way. We all recognize that this factors in. A few concrete examples on what has been enumerated here. On the research front is a lot of informatics be done. A lot of activities on how we traffic the information, collected, stored in exchange it. Bringing it to the right person at the right time to make the right decision. How do you incorporate the technical and policy implications. What is that mean for the system and incentives and connections to what health systems are doing? What we are seeing as we begin to interact in the for instance in Indiana with the safety net hospitals and with the large cells of systems what we are looking at there is increasing recommendations that need to be trafficking information. They start to just make decisions about investing systems that allow them to even be able to capture some of the information. And then be able to connect to organizations that can deliver what is necessary. But they all recognize that we are in the early days and but they have to recognize that they cannot wait for to be perfected. Were starting to determine how to make it better. We are looking at shoe according our information and pulling the data sources and which thankfully we have a lot of robust resources to be able to bring via decision-support other tooling. And I thought about this with the tedious work they could totally be applicable here. Had we bring that precision to care and individuals so that as we have a project called options retake the data and provided back at the point of care to inform wraparound services for those that come to clinic so that we know, as we prescribe and refer not only the indications for follow-up visits but also to financial services or the transportation services or food services when they go home. And we are starting to see changes that more research is needed to see how those applications and resources can be applied. Oh and by saying I think we are starting to recognize and convening locally with the importance of connecting between our government agencies and traffic at the state and regional level. And our community-based organizations as well which vary wildly with their capabilities and the capacity to even create much less consume this information. They all need to be there at the level of data and systems for the technical component on how we traffic here. Then also global governance clear from the community-based organization side what they need to be part of the information flow that is then going to enable the kind of back-and-forth necessary. There is a long road ahead. But there is very deliberate activity happening. And I think it starts to inform some of the work the HR Q can support.

I think disclose the loop on the first component of your questions this is clearly a problem regardless the stakeholder perspective. The people are bringing to the table here. I like to move and take comments in order here. Let's move over as Peter covered some of this with specific examples of where we are active in solving this problem. It is a concept the top of mind issue. Now we get into the how.

One of the things I wanted to use you introduce the idea of technology solutions potentially. So that is one of the house. But I did once to put a plug in here especially with the arch role around technology and solutions in the space. I think there is a ton of potential look at the technological solutions. The challenge is that there is very little clarity just as Peter said we are just going have to go and start to try some things. I think we can truly understand the most effective interventions. Is a digital medical site and they're trying to wrap their heads around what the research roadmap might be around understanding here. The potential in the plug and wanted to put in was run equity specifically as we look at the technology solutions. I've a couple of great examples here of the potential to decrease the equity gaps. Think about as best and Mitch have what telehealth book think about a company like unite us which creates an EMR for social services. At the same time there is potential to increase those equity gaps. Think about things like artificial intelligence and baking bias into your own algorithms into those groups and nobody just believes here. I think it's a very particular about creating a research roadmap around the technology interventions.

Thank you.

Okay. I would like to suggest is a lot of the folks focus on statistics. The standardization of data. It is all terribly important. But I think you should do the thought experiment on what the methodological questions that need to be answered. And this ties into the research roadmap here. I would also like to suggest you not just do it in the context of health methodology or in space. This issue is at the forefront of methodology in the educational space as well. Students come to class without breakfast. How are they learning? There is a huge focus and educational hierarchy for example that Michael brought to bear here. On a handout you talk about small area estimations. Where you are barring strength against geographical areas. I'm just saying that as he set of data systems you have to think about how it will ease methodologically when he gets the inferential questions were swimming want to go. So I am recommending you do not allow yourself get too focused on the present. Maybe it is the workshop think about where we could rule the world what would the systems are quite to row for the best inference. And there is a lot that can be brought here from across a wealth of different areas.

Thank you. I think Greg was next.

Hello. So thank you. I'm just going to say again I think setting matters. I'm a big proponent of long-term care. I believe that nursing home assisted living community health studies for people are living along portion of the end of their lives and being cared for by people over time really provides an opportunity for us to understand this social determinants of health and the impact on the stoop of the long-term. So the individuals in those settings are impacted by the decisions made to support the settings. Mention technology so technology in the settings I believe is as important if not more important including telehealth for those people in acute care and amatory care. In order to develop a system that can do this across all of the systems with long-term care reducing the burden of documentation we need to make sure that they are inoperable and at this data points be consistently collected and measured. As an example there's a project is the national demonstration project for CMS. In that project we are utilizing different types of social determinants like transportation nutrition and access to care as well as insurance. Looking at those variables and how we can utilize them to help facilities adjust accepting that increase risk of a patient is having a change in condition. The ultimate outcome is to reduce avoidable hospitalizations. They needs understand what sort of issues are really important here. And it is important for the long-term health care setting and the hospital. That is just a valuable example here. I think there will be new for long-term care. Okay.

Thank you. I like the last diagram that shows patient control. Did you have a lot of input on how this proceeds and how to do this. I understand the diagram shows overall the disparity in social determinants with how they affect a person's health overall. Different communities also have difficulties. I don't know how to think through this with her there is an overall arching goal and regional as well to address special disease populations the family impatience is most important thing is how I am doing. Whether I can get needed medications or have to spend most of my income to pay housing and healthcare and children's care. Whether I can get that medication in these things. So I'm just thinking that in this picture not to forget the variety or the differences among those different communities. Another thing that I was thinking about was about the measurements. I think with them rolling out everyone is very enthusiastic. But as we go along I really think I would like to see an effort or some plan in place on how to measure the success. One of these private organizations today CUF or whatever, I was out with the safety commission committee and we are trying to address these situations but I don't think it's enough. At some stage and needs to be included in the discussions about how to the measure. Because sometimes you have a good intention but we may have

intended consequences. Or even harm. I've done lots of the workshops in King County area and Seattle. And I know consumers and patients are really creating for the quality data. So that I can get the better care. And I think those measurements will help put the data out there. And it will be available for them to get the best place to get the care in the community.

Okay. Really where I was going to start and others have alluded to this is the critical nature of including the patient's voice on the spectrum. We've done major course corrections. I'm going to say fresh patient here with advocates to become part of the organization without realizing it. We don't realize it either until a patient that just comes into our system goes in there. The other thing that and this is a big wish but it's world we live in what we come up with needs to be simple. There need to be simple tools and guidances. I see Jeff to put us through some hoops and terms of the what was developed. But it was when we got to the info graphic if it's on a postcard that conveyed to the primary care providers and patients how they might committee get better together. That some of the folks that we worked with said I've been working with the migrant patient population for 10 years. All of a sudden they're telling me things I never knew. Because the questions have become simple and based on what they said was important to them. Building into all of this the voice of the people that we want to serve and making it simple.

Just building it's that elegant simplicity concept none of the solutions whether it is technology or data work in isolation. There's a very simple solution with the community health worker model. What addresses this health is a ride to the doctor help with food and even your visits. Peer-to-peer conversations can reduce this. Reason is a complex problem is there multiple lovers yet to flit. The last general comment I will allow tenets make and then I want to close the discussion with any specific thoughts you have moving forward.

One thing I want to bring to everyone's attention is that this is very sensitive data. You to keep in mind who uses this data and where it is going to go. If you bring your child into pediatrician and he said there's physical abuse at home how will that information be used? What is the responsibility of the clinician. Does that person have the possibility of going to social services and losing their child? I think there needs to be a structured conversation about how this data will be used. Otherwise will not be reported properly. What are the particular questions that we want to recapture this data. Within keep in mind how sensitive this information is for these physically vulnerable populations.

In the final lightning round everyone throw something out there. We will figure that one out. Tell us what you most want. What is the thing that your organization if it was provided would move you the furthest? What is the thing that you're missing that could be produced? Whether it is evidence or tool or analysis? What you want? And if you guys want to join in the police you.

Okay. Let's go around the table. That start with building on what they said here. When you do interviews it drills down in sub dreams. Different demographics a socioeconomic a different patient characteristics. Need number two is the research funding mechanisms. It arouse rapid cycle information. Which can generate restless problems.

I would say both secondary data which comes out and is interpreted by provider across the continuing versions of healthcare. Plus what Chris was alluding to with the primary data that comes from a patient. And that is critical in the rural areas have that primary data.

You like tools to help you get and analyze secondary data and make sure that you are collecting firm the primary properly?

Yes.

For me it would be research that requires an in force enforces research questions about the sharing of data around social determinants of health and the standardization and use of those so that we can properly identify how they can be used including and long-term care.

For me it is very important to know what we patient and family can do as part of the creation. To resolve this problem. And where can we get the best care and high-quality with less cost and without the insurance restrictions.

I guess for most standpoint there is a lot of variation in the country. Just raw in terms of healthcare and how we are providing it. There are pockets in the country that are very aggressively pursuing the determinants of health/population health and etc. But there elements and regions probably in the country that are not pursuing those concepts. Just trying to deal with the immediate issues that they have. And to try to help those areas that are not able to progress as quickly as other parts of the country would be important.

For me it is always about the data. The biggest attribute that would advance it is granular data from diverse popularization's and diverse healthcare settings. And even outside of the healthcare system we can pull the information from the census data but it is not linked to anything we can use in the healthcare system. So really just the granular data is huge.

I think for my numbers and the health systems just the dissemination of what is currently going on now people are addressing this. What they're measuring the outcomes with and unearthing what is out there it would be helpful.

So unawareness?

And awareness building of what is out there.

Exactly.

So struck by an equation which is a good greater than genetic code which I had not seen and I really like. I think HR Q plays a leadership role here. I'm a statistician so methodology something I think about. There's tremendous focus on methods making very little change. I think the swing should be toward methodology on this problem rather than with the small problems are. I think whatever you can do, at least from our perspective in terms of measurement of the performance would be very useful. The tools of the government uses now are becoming more of a matter of compliance than true accountability or even worthwhile as a transparency for patients and consumers. Coming from what you know it was talking about anything we can do to actually move us toward those measures that are at actually meaningful and not caught up with the current rhetoric just means future endeavors.

My wish is that you put on your policy had and raise awareness among not only funders but policymakers about how difficult this is. About the risks of embedding bias in the latest cure that many of the organization see on the horizon. I think a credible voice needs to point out some of the limitations. I think the other thing from an awareness of the healthcare system I would love a clever collaborative learning opportunity. There is opportunity happening everywhere. An opportunity to learn from and with with others is another important part of the system.

Okay. I am thinking about the research framework and roadmap. Includes what we already know as there is some data out there. And talks about what remains outstanding and what truly can be translated into everyday practice on a broader scale. What I am thinking about is how to charge my team with really figuring this out. I would love to have a framework to do so.

Okay. So being at this edge along the stretch I can pretty much echo what was just said. But to what Chris and I want to just said specific weekly on the data front there's the quality improvement and he needs be able to track and trend progress. To see if what you're doing is actually having an impact. Is you don't want to keep doing that the that are not having an impact. That I could tell you right now I don't think anyone here knows how to do that.

And I can say ditto on that. I would also say that if I really had to focus in and put this in different ways, the development of good efforts would inform best practices with various stakeholders across the spectrum to inform our decisions around investment and implementation as well as policy. Importantly, I don't think we have said it quite explicitly but how this affects for care. And how we pay for health. Fundamental that is not only weaves stop talking about as a nation. But if we don't look at the incentives report appropriately with all the best intentions were not necessarily going to be able to align with various parties that need cooperate and ultimately adopt the practices which SB done with an eye toward what is effective. That is there to help us develop that evidence-based.

Is a sister agency date HR Q HR QI find this very stimulating. Wondering how we can assist you better building on traditional strengths with interventions interestingly we really work the public health partners but we are moving more toward integrating public health with healthcare. So what can we do in the area as an example surveillance? We are very interested in social determinants of health. We are not the original source of data as we get from state and local jurisdictions but we did put it together. We are interested in small area analysis. And we did tie it to other layers of data like what you're talking about. Although I am not new position to commit resources I'm just thinking outside the box. A good chunk of our budget goes to state and local health departments to carry out this interventions. And we're just as interested in making sure that interventions that are used are effective. But also in the healthcare setting. And then on the integration of healthcare with public health which is new for us we are in space informatics. We are introduced with surveillance here instead of collecting the data more traditionally we are submitting with that. As well were talking about the primary data maybe that is one of those that could be helped with a picture of surveillance. And also at the small and local level. If we can use that data and sub minute with what we have maybe we can help methodologically to put together pictures and do the ecologic picture on what is really important with social determinants of health and we can have effective interventions along those lines. So I think there's a lot of opportunity to integrate more closely with the healthcare sector than we have. And that is really how we are thinking about moving forward. Medical records are now being seen as a cost effective way of doing surveillance. So we had to be in an environment of physical constraints. I may find it beneficial to be more partnering on this.

Thank you Robin. And we look forward to helping you with many of these questions. Alaska anyway out and for the rest of the team to think about what do you want ark to do to move your work forward? What is the added benefit here to your from our sister agencies? How can we be more valuable to you as we've created our framework?

Thank you and thank you for the robust discussion. Very briefly from the CMS perspective will be helpful is to be able to deliver and do exactly what was requested here. Ultimately and honestly real improvement is local. And whether not it is just addressing social determinants of health or about patient safety or all of the above we clearly recognize there's not been a one solution. How do we enable the evidence support programs and implementation at the ground level? That is what is key. We have enjoyed in the past is a collaborative approach that we've been able to build on with evidence. Pointing to what the gaps in care are and utilizing our abilities as an information disseminated provide technical assistance and intimate and build the quality metrics they really are meaningful. But meaningful measurement has to be meaningful to those that are actually using them and delivering the care. When all is said and done is about the person receiving the care who is sometimes a patient when they're in that role. But also all of us to provide care and services. One final point we've learned over time how important the tools are that they have built. But is not just a box or gadget. It is what is implicit in the tools and how we change the culture of providing care and some of that we've learned and enjoy the benefits and culture of safety. Even challenges as difficult as social determinants of health and bias if we can make it visible and then illustrate how the culture is because it's about behavior and behavior change. They get back to what it is that you need to extract those kinds of changes in a way that meets the needs of the beneficiaries the you are serving. Thank you for the opportunity to comment.

It is important to recognize that this is not something new at all. I think what you're bringing to the table is getting a healthcare sector involved in something they had not done what they thought was their responsibility. That it was in the public health or someone else's responsibility. As a result it will not be solved alone. And I think the most important role to be taking an area and make some progress in it. Because it is not going to do it the biggest barrier is feeling like it is not something they can be solved. And I'm thinking models of partnerships at a county level are the sort of thing they've done here in Seattle. Around an issue like more maternal mortality. Take something that you know is going to cut across sectors we have to break down silos of what is paid for by the healthcare system system and social services. The issue is that there is a lot of money being sloshed around on these problems. But because of the silos and the cruise and who is responsible, or who pays for what, we're not able to direct it in the way that we think will have the biggest benefits. We've had an interesting eggs example where we have in our system community health worker interventions that have been successful. But we've had trouble scaling them because in our system it does not generate savings that we can capture. So I think that obviously the data and everything else will be nice as well. We are wondering how to collect it. A sort of think of the hospital card infections as the example. Those for the problem for a long time and it wasn't until we showed the area that we were going to measure this and pay attention to it. We thought it was just the price of doing business. I think there's a lot of that same sense of inequality as the poor always being with us. Into show that you can actually find a way to redistribute the resources that are in that system to get a better outcome, I think you always have an uphill battle. But there are opportunities and focusing on a specific one for the VA it is suicide. We are not going to solve the suicide problem in the VA by getting healthcare providers to do a better job of screening. We have go upstream. And we are trying to figure out what that looks like. How we work with the community organizations to go upstream and solve those problems a social disconnectedness and lethal means. And that is not something that there is an economic model to make it viable for us to take on alone. So you think trying to show a business case for the parties that you have to come in and ask to work differently.

I wanted to thank Doctor Stacy Doctor Myers for their presentation they've had majorly thoughtful input in the group for what was a rich discussion and hopefully useful in terms of the future work. We appreciate everyone's input there. I believe we have a public comment here? And I will ask Laura Marciano from RTI for that. Just make sure your microphone is on.

Okay. Think for using my phone to help me to my comment. But I'm a PHC health for mantises at RTI international. Ever working on several initiatives of the last several years including this portfolio. In particular the learning network project. I'm not here on behalf of RTI. As a subject matter expert I'm here to abdicate in support of the notion of them continuing to take the lead in future support. I've served on several work working groups from lots of different perspectives. I am looking at recommendations about a dancing studio and it says is certainly urgently needed. To use the word urgency because working with meetings and FDA representative came and said you understand how bad the data is at the collection level? And we understood that we had to work it from both directions. Despite the intuitive sense of the impact of CDS the up ROI is elusive. And further complicated by the fragmented operation systems that we have with implementation. We really need to improve development and implementation of it and to do this we need to

sustain support systematic access to these resources. And the conversations about a model for doing this would really need to include public-private partnerships. In order to generate the kind of multi-stakeholder engagement that we think is needed to meet the future vision. Thank you for the opportunity to comment.

With that again I would like to thank those members. Ginger Mackie Smith and Lucy Levine at the midtier David Myers for their presentations. I would also like to thank the HR Q staff in the audience who attended in person. And anyone who differences via the webcast. What's more we appreciate the seven retiring members for the service and look forward to working with them down the road on the care quality improvement journey. Before we close and wrap things up are there any other comments about the to topics we discussed today or specific interest owned coming up?

Also just remember for retiring members a group picture is here and that an individual picture as well. Is a sort of the cross divisional conversation was very enlightening to me. One area that I think would be potentially useful is the intersection of NIH and the personalized medicine and then with the implementation science because that is obviously a key area. Have you done a better job of cordoning aligning that work and the other would be in terms of the social determinants of health. Cannot be tied into diagnostics? Very basic things that everyone I think would agree that it could play a role in diagnosis is terms of access to healthcare and interactions with providers. And I think that would be an interesting component to tie into existing HR Q worth to be supported.

Is Don on the phone. Just really quickly and this hopefully will be less controversial but it seems like you mentioned one important thing here. But the action mechanism which is really a potent mechanism for change here at eight has the language of improvement science implementation or whatever you choose to call it. Obviously the federal language system in different. Is going to be interesting to see how a grantee takes it seriously and what the use the full repertoire in their work for. Which increasingly includes looking at implementation outcomes. As specified by the activities in the grant and how the evaluation goes through with their works. Now that we have a high degree of fidelity we is that with the grants that are put out. The other mission critical issue brings collaboration with the public private partnership and I know that they're very interested here but it is difficult. And what will make it more difficult is the pace of development with the platforms by small venture capitalist firms that are trying to grow and get picked up by bigger firms. If you look at the social determinants they are at least three decent platforms that I'm aware of in the sector that are trying to achieve that match between what a patient needs health assessment and what services are available. And increasingly there starting to close the loop on that to determine whether or not those needs are met. Had you keep up with that and evaluated? As it occurs so fast within agitation at lightning speed. What is the right level of partner? It is even harder here to have authentic relationships with these huge companies. Suggest something to put on the radar here.

Okay. I do not see oh wait. Chris. Okay.

Okay. So I don't have it firmly formulated my head but I would like to hear us talk a bit about clinical burnout and workforce issues related to the coming generation of healthcare delivers if you will. And also in our popular populations we talk about women and children. But I increasingly read and I am concerned about the teenagers and the twentysomethings that when we look at them they are being caught up in the opioid epidemics. And I don't know where that fits in the research spectrum but I am thinking about that related to workforce as well. So where there is a place for workforce development in the pipeline for who is going to be caring for me and others in the future if that fits into the agenda?

Maybe reframing and examining the priority evaluation? That could be innocent essential topic. Very good. The next meeting is scheduled for Thursday, March 26, 2000

I'm just wondering if there's any value to think about a community type of survey. Directly from the consumers. About what the gaps in what is missing in this upstream care. When people have different needs met? That would really help the local stakeholders and to implement the plans with the solutions for my community. I don't know what the timeframe would be but I think it is definitely from the consumer side and it is extremely important to shape the future.

Thank you. Okay any final comments? Okay next meeting I will turn it over to Paul one last time for the announcement of the afternoon festivities.

Thank you for being a wonderful chair. And thank you all members for being here today. It has been an exciting session. We we do have now that the session has adjourned a complete I urge you to come back. With a celebration of the 20th anniversary. We will have deputy secretary Eric Hartigan joining us as well as more here at more here at 12:45 PM. Thank you.

With that we will wrap things up. I wish everyone safe travels and a happy and healthy holiday season with friends and family. Thank you we close the meeting officially adjourned.

[Event Concluded]