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]

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To celebrate our 20th anniversary, I'm honored we have withous today, the secretary deputy, Mr. Deputy secretary. That was a slip. Yeah, exactly. It's a deputy secretary sharing his thoughts with us in a few minutes, but first it's time to celebrate. We have cake over here. Mr.Deputy secretary, please do the honors. Again, Jamie reminds me, we will be passing out cake in a moment, right? Please be seated. Thank you, again, and as I said, we are really pleased, and I'm honored to have our HHS deputy secretary Eric Hogan join us, and in a moment he will be sharing thoughts with us. I want to make sure I recognize a few of the people. We have with us, members of the national advisory secretary. We had a meeting this morning, and also AHRQ's senior leadership team. You had a moment to visit with them earlier, as well as many of my colleagues from AHRQ. They are all here to celebrate, and we are proud of AHRQ's anniversary and to enjoy the company and hear your thoughts. I feel truly blessed, Mr. Deputy secretary to be working with some of the finest professionals in the country, and it is their work that has made us successful, and as I go back and look at 20 years ago, the whole journey got started with the leadership provided by Senator Bill Thrift. Joined by Ted Kennedy, representative Henry backsman, and they all saw the envision given the crisis at that time with the health care, there was a need for an agency for health care research and quality the bill signed December 6, 1999, and a lot has been accomplished since then. I can go on and talk about the establishments AHRQ has made, but none of them would have been possible without the prior directors, starting with John Eisenhowerburg, the director who set the vision for the agency, followed by Helen Clancy, and they have all taken the great legacy to move to the next level. A lot of work done by the research community across the country, the work done by my colleagues at AHRQ drawing enormous amounts of inspiration from John Eisenburg and the directors before me. It's important to recognize as we look at AHRQ today, we need to think of AHRQ of the future as well. We cannot forget, there's partnerships we are extremely proud of, and our work would not be possible without that total engagement, and later this afternoon, we will be hearing from a couple of panels we have organized, and first one, we will have Lisa Simpson, I think you have met her, Mr. Deputy secretary, and she is off academy health, and she will be joined by -- where is he? There you are Lisa! Thank you for being here. She is a great force behind the work we do in the research community and in the country, and she has been a great supporter of AHRQ, and we also have Bruce Seagel. Thank you, Bruce, a former chairman of, pleased you are here, thank you, sir. Another discussion where we have invited former staff members and leaders from AHRQ Amy, are you here? Claudia, thank you for being here, and John White, and they have come from outside and traveled all the way to be here in D.C. today so we can be celebrating together AHRQ's 20th anniversary, but we are here to listen to all the deputy secretary has to say and hear his thoughts and his vision. Eric Hogan is the deputy secretary of department of health and human services. HHS is promoted to enhancing the well men of the American people, the largest department in the federal government, an annual budget in excess of $1.3 trillion and over 80,000 employees across 26 divisions. As the deputy secretary is the chief operating officer and is responsible for overseeing the day-to-day operations and management of the department, in addition to reading policy and strategy development. Since joining AHRQ, I had the great honor and privilege of working with the deputy secretary very closely. I have respect for him, admiration for his guidance and our agency, and I'm really excited that he has a special passion for data, innovation, and value-based care. With that, Mr. Secretary, please join us. [APPLAUSE]

Thank you, Bill, and good afternoon, everyone. It's an honor to join you here had in celebrating AHRQ's anniversary. It's an important milestone in our broader effort as a nation to improve and reform the quality, safety, and value provided by the American health care system. I'm pleased to see so many AHRQ staff members and members of the national advisory council. I now the outgoing chairman could not be here today. I would like to thank him for service on the council and also recognize Andy Maskicak standing in the as the chairman. Terrific to see the external leaders here. Hi, Lisa, who have been great promoters of AHRQ's work. Because of the effort of staff members past and pleasant and leaders like Don, Lisa, and so many others, the agency has had impact on patients far greater than I think could have been imagined at its launch 20 minutes ago, and in marking the anniversary for ARHQ, we remember the first director John EISENBURG. Obviously it's recognized in our main conference room, and GODFRY building. The main room is down on independence avenue. John cared about enhancing quality of medical care. Better quality care leads to better health for patients. Better health is the fundamental goal of the vision for the administration for the health care system, and that's why the importance looms as large as ever. The President and his administration has a particular vision for health care. The system with affordable personalized care, the system that puts the patient in control, providing peace of mind and treats patients like human beings, not numbers, and now ironically, of course, I'm here at AHRQ, and I think you are all in a sense of viewing patients as numbers. You are, in fact the number crunchers, the people who view the data, so in some sense, you view them as numbers. Unlike the way things often feel in the health care system,

those of you here at AHRQ, and the researchers you support care about the human beings behind the numbers. The secretary laid out three cross-cutting platforms where HHS is working to deliver on the vision and they are following the three high-level buckets. First ask reforming the financing of care. I used to hear in my day as a private lawyer, money enables the mission. In this case, finance is obviously a root of many of the issues we have in the care delivery system, and second, deriving better value from the care, and third, improving health and specific impactable areas where we can think we can move the needle the from a health care point of view. I think AHRQ is uniquely suited to help us deliver on all these platforms. Enhancing the interest and focus on AHRQ in this administration, and for the past 20 years AHRQ has been a leader in bringing innovation to the delivery of health care in the United States, and having to focus as it does not on specific diseases but improving the delivery of health care itself, and as all of you know, the agency does not foster particular developments of specific medications to treat disasters, instead improving how patients access and use health care services and how the services are provided or as Paul likes to say, cure and care are two sides of the same point. We need science and research to discover new cures, but we need science and research to improve care as well, meaning ultimately AHRQ's work is the ultimate goal of better health, a crucial piece of the secretary and President's vision in the area. AHRQ's core competency is vital for what we are aiming for. What Paul is talking about in my focus, particularly on data and innovation, all of those things very much ring inside of AHRQ's sort of areas, and all of those, that's hence the reason why I'm here, that's the reason why I was at the academy health event, selling AHRQ on the 20th anniversary and why we talk a lot about the issues. All the issues in different areas, they are specific areas that I have taken on or the secretary has tasked me with in terms of what we are doing at the department more generally, and so, so hence the focus, and the scope of or ARHQ's work over the last 20 years, is as Paul mentioned impressive. Nearly 3900 grants to 3,000 principal investigators, and that's $3.1 billion spent in areas often not being spent across the rest of the health care system research spectrum, and in many ways you all are many times in the field, in areas in which it's not companies spending money in drug research or spending money in areas that are relatively well funded, but areas in which they are both crucial, and we don't see as many entrances in the subsystems and research as I call it. This is a transformational contribution to how health care works in America. We have much less of an idea for the improved financing, and particular health areas without the research that ARHQ has been doing. Today I want to mention a few particular highlights of AHRQ's work in these areas before concluding on thoughts where we think ARHQ is headed next in part, built on trying to track the health care at the level of individual patients, health care settings and systems, to view world trends and in depth research to understand the pressing Sr.s. The flag ship data sources, as you know, the medical expandture survey, who was I just talking to outside? The H-cup health care utilization cost process. Expanding our knowledge base in the sector. We would not know much about what we do now, about finance and the delivery of care in America without H-cup and mems. The data set are tremendous assets in assessing where things go in the future and emerging real time needs of policymakers of health system leaders, local public health officials and others. The field of predictive analytics overall, in many ways has to be based on data and the most richest data is from here, and one example with forward looking look, the data produced a variety of estimates on data which is central to what the President is trying to achieve for American patients. The estimates featured analysis of drug coverage, trends in retail prices, price markups, and trends and out of pocket costs, and insurance coverage, and that's an immensely complicated task, and the world of American drug pricing is not an easy area to understand, to put it mildly, and ARHQ has been an invaluable partner in that work. Perhaps an even more daunting challenge is not just understanding financing and care delivery, but driving changes in medical practice to deliver higher value, better quality care, and changing clinical practices is difficult to put it mildly, and people delivering care need proven methods to apply research to their patient's situations. It's not just driving the care at the point of care, but also justifying why there's a need for changes in clinical care, and in many cases, that's reorienting how people spend their daily lives, not simply introducing a new drug or new something into they're system, and you can say this is better than that. Drug A. is better than drug B. Use drug B. It's changing the methods at which people administer care. It's changing people's habits and customs. AHRQ has been a leader in developing practical, useable tools and resources for health systems and front line clinicians to use in delivering safe, high quality, valued care. The initiative now is one example. One of AHRQ's largest primary care projects to date to implement the evidence to improve patients' heart health. Other examples, particular transformative efforts, earlier this year, I visited Cleveland to the University hospital health system, U.H., and I met with Peter Bronovoce. He's my cochair on the quality engagement we are engaged in right now with ARHQ's invaluable and valuable assistance on the quality summit on getting our hands around both understanding the quality management enterprise in the United States and helping to develop ways to reform it. So, he is my cochair on that, the external group, and I met Peter previously, but had not had the chance to spend time with him and really hear about his work, and in 2004,

ARHQ funded Peter in testing the comprehensive unit based safety program, and a team-based intervention to prevent bloodstream infections in hospital ICUs. I don't know if you know the results, but the success led to the deployment in 1100 intensive care units across the nation. Potentially fatal central line infections decreased 40%. If you can imagine the amount of lives saved by that project by something that seemed very simple. Central line infections was something seen, and he is a leader in this. In many ways, his great reputation in the area, central line infections, that's what I knew about Dr. Pronove when I showed up in Cleveland. ARHQ was successful in the establishment of the program, and I will say the single success of the quality enterprise that has happened so far, the most nonthat you can't sort of dispute, it's the most undisputed success of the quality enterprise, and it is foundational to the concentration of HHS and the health sector overall with the fact we can actually achieve tangible goals by a public health view by concentrating on quality measures. Another example. ARHQ's funding leading Bryant Jack to create the R.E.D. Reengineered discharged tool kit. Now in this crowd, you guys can deal with that, right? Normally I'm not able to go into these details, but you all appreciate it.

Patients who had the red protocol had almost one-third fewer return trips in 30 days, and an average of $400 in lower costs. Because of those successes ARHQ funded training for scores of hospitals to implement the red tool kit. So $400, that adds up. The country of 330 million, tens of thousands of care locations, doesn't sound like a lot over $1.3 trillion, but it's a significant advance. I want to make a particular point about care delivery. As we are moving towards a system where more and more providers are paid on outcomes, rather than procedures, these kinds of best practices will be even more important and even more valuable, and even more invaluable because, as we move to a system, and this is the promise of value-based care. We move to the system of outcomes, and away from a system in which we pay for procedure, line item and line item and procedure, but to a system based on outcomes, meaning we have to have robust outcomes we can trust, and we have to understand what is going on in care delivery to understand what we can establish as outcomes, and what becan expect out of the health care sector, able to deliver the outcomes, and it's absolutely appreciate we have that kind of data and robust quality and the risk analyses of the patient populations going into the system of value based and the outcomes we are getting out of it as we move to that, the kinds of questions that will become much more central to the enterprise of the department and the health care sector overall, and this is my absolute baseline on the importance of this kind of research to be done, and the importance of this kind of evidence, and the increasing importance of this kind of evidence in the health care system. If you think that ARHQ's work on identifying and disseminating the work has been important, wait until we are not just giving doctors information about the tools, but rewarding them, and the outcomes they can get from using them. The final platform for delivering on the President's health care vision is making progress on impactable health challenges, like our crisis of opioid addiction and drug overdose, advancing American kidney care, and in the HIV-AIDS epidemic in America and improving rural health, which is why I'm in the room, in this building, the first part of the day was with HERSHA for national oral health day. Good day for this. Two projects have places very close to what I do and my own focuses and my time here at HHSA. ARHQ has helped identify priorities for the administration. A particular example you may be familiar with. In 2004, ARHQ awarded a group to the University of New Mexico school of medicine to establish and evaluate the first clinic for project echo. This project opened the lines of communication between disease experts at an urban academic medical center, and rural physicians for widespread untreated hepatitis C. in New Mexico that sounds like a specific and particular project, but project echo for those of you who know, has grown, and grown and grown. I just met with Dr. Aurora earlier this month, and I can't remember anymore. Last month Dr. Aurora at U of M., and met with him again in DC, sort of introducing him to other parts of the department. Project echo has been such a valuable partner for so many agencies like Indian health service, being able to reach rural and remote providers through the learning they do, rural health issues, and Indian health services, and a huge array of the department embrace has been more and more involved in. Since then, early beginnings, hepatitis C. rural primary care physicians in New Mexico, project echo has been an international success story for a large number of particularly disease areas, and I heard about the successes in New Mexico, and I will just note that no one who has heard me talking about rural health efforts needs a reminder either. I mentioned project echo about every time I'm talking about the topic. I'm a tireless emphasizer about project echo, and the seeds were planted by ARHQ in your endorsement in that project, and the funding of it 16 years ago, and so, today, additional ARHQ funding is supporting states to use the model for opioid addiction treatment. One of a number of efforts ARHQ has undertaken to combat the nation's crisis. I have laid out the accomplishments that ARHQ has already delivered. We have to look to the future. I know the director, agency's senior leadership team, and staff members and all of ARHQ's partners on the outside are thinking about where you can go next to continue improving the health care system, and that's why I have been so pleased to learn about the three areas, together you have determined are priorities for ARHQ and critical for making sure patients receive 24-hour

health care. Improving chronic conditions, improving diagnostic safety and supporting health care decision making at the local level with greater access to data that create as 365-degree view of the whole patient. Each area is compelling and demands attention, and more than 25% of Americans live with multiple chronic conditions including more specifically for the department, concerning 80% of Medicare beneficiaries. For a particular flag ship insurance program, that's 80% dealing with this issue, and it's very much central to what the department deals with at least on the pay CMS side. Just imagine the impact the conditions have on the financing system and how important it is to get care delivery right for the patients living with them. On the other side, diagnostic, 12 million Americans suffer a diagnostic error each year. Think about what a costly mistake that can be in care delivery, and the impact it has on patients' health. The decision maker too often lack access to timely, reliable data and analytics to make informed decisions, either on the policy side or clinical care side, and think about how that can keep them in the dark about ways to bring down coverses and deliver better value and tackle the particular health challenges, and even knowing what they should tackle, how do you make priorities if you don't know what is going on out there you have to have the data to decide what to prioritize, tackle, and how you can determine what is working or that it worked, and all of these things require a better, more robust data, and above all, we need to make sure we keep the patient at the center of this endeavor. I'm very glad to hear that ARHQ has identified the major challenges. I applaud your work so far, and I'm confident your work will continue to bear fruit for the American people. Thank you again for holding this terrific event, allowing me to absolute ARHQ and each one of you in this administration and the coming years, I know we can make a lasting difference in the care the American people receive, and continue tobuild on the improvement you have built. I continue to look forward to work with ARHQ and all of you. Thanks. [APPLAUSE]

Mr. Deputy secretary, would you be able to take a couple of questions and have conversations?

Sure.

Sure, so I will just have sort of a primary question, so one, health systems has found useful in generating new knowledge and also closing the gap of what we know and how we deliver care. You talk about the bigger HSS portfolio shifting to value-based care what are some ways in which the agency or the department can leverage HRQ to mobilize the effort towards value-based care?

I think some of it just building on the things that are already there, the access to data, and to have a robust, I think it has to be one of the central repositories of data and expertise that we have to call on that is specifically dedicated to the issue of health system and health care reform. There's places all over the department that contribute to this, but it's a central focus of this agency. I think sort of make -- what we are trying to do is make sure ARHQ is in the loop, in the conversation as a department when we are trying to move forward on this. You all have a bench within ARHQ that has a lot of this knowledge inside of here, and I think part of it is just bringing that forward. I mean some of it is what is being done already, and some of it is reorienting. For example, the quality initiative we are working on right now, obviously the Q. You actually have it in the name of the agency, but it has -- in many cases, because it's important to the department, a lot of the efforts have been scattered here there, and everywhere. The notion that we have a central way to bring the information together and use it usefully, I think will be central to that. I am not a total fan centralization. It has to be part of it. There's a lot of strengths of having different people work on it from different angles. That's the strength of the system, a lot of people doing a lot of different things, but ARHQ clearly, because of its very mission, it needs to be just, I think sort of brought forward, sort of brought back, more into the general sort of bloodstream of the department, and kind of -- because I think, as I said, and I admitted very centrally, a lot of the issues we are dealing with, at least in this administration, we have central issues on, I think, as I said, I think ARHQ has a role, value-based care is what I work on. Data, innovation, and data-based care. I look at other things I'm working on like start and kickback HIPA reforms, and regulatory spread part two, all the data liberation things within the department, and the quality summit, and you know, the innovation summit, and all the stuff I'm doing specifically oriented around issues that I think you all -- that ARHQ does that ARHQ works with, and that makes sense. I don't know if I answered that as clearly.

Time for one more question. Steve? .

Research by training, but I became a patient advocate full-time now, because my dad died of medical error, and because ARHQ's efforts over the years have created, you know, improved the quality care and also created a lot of tremendous information for patients' families for engagement, and I have been able to use the information to help myself and to bring back to the community so that a patient's family will be part of the effort to improve the quality care and the safety. There are many issues in health care, big alphas and small alphas, and one of the big alphas in the room, technology care. I was at a patient panel last week in DC, and we discussed what issues in term of, you know, the diagnostic error that is important to patients, and they came and asked a lot of questions, and we hammered down the whole day what is important. My question is,

if you would share some spot on how HHS and the secretary, their commitment to help to reduce to continue to support ARHQ's efforts on the diagnostic error reduction.

Yep, so obviously it's the 20 ant versery of ARHQ and also another 20th anniversary. Error as human, we are talking about medical errors. Diagnostic errors is a large category of that issue, whether you're talk about specific diagnostics like medical technology or talking about diagnostics meaning the analysis by health care providers, about what is the actual state, and I mean there's sort of several things packed into that, I think, about whether the intake is being done, well enough to understand what is going on with the patient. I think that is a subset, in some ways of the issues we have, both with data and innovation, and those are two areas where we, one, the data has been gotten around. Some diagnostic errors are just because it's not being given out. We might have information, but it's not being handed around, and in other words, there's not a sufficient care coordination, and there's not sufficient ability for providers in the chain to share with each other the information that they have about what the patient's state is. Some of the things I'm doing on coordinated care that we are doing on coordinated care is ensuring that there are no blocks or fewer blocks from either the data sharing point of view or a building coordinating or providers so we are reforming AHRQ regulations, kickback, and HIPA in part two to enable greater sharing. That's the data sharing side of things. On the diagnostic side, I think of it will continue reforming at FDA about the ability of us to get better medical technology in place, and the ability to use it better is probably more in your wheel house, I think some of it is for us to know and have a ground state on how much of the error we are seeing, falling into which category, and I think that's probably something that will be useful to us have a good conversation on, what you're learning or what you are all learning more about where we need to go, and for example, on the investment and innovation summit I did, I brought in 15 top investors in the health care sector, and I said, what are we doing that is stopping you from investing in certain areas, there's some areas where there is just no money. The private sector does not invest. Over the last 40 years, you have seen how much change, and I pose this question with 2018, I said 1978, you get a patient in a dialysis, bringing them toward to 2018, what's the difference? Wide screen TV, looking at the smart phone instead of a stack of magazines, chair is more comfortable, other than that, it's the same. Technology is the same. You take a patient diagnosed with cancer in 1978 to 2018, and many forms of cancer have been cured, turned into a chronic condition, or vastly radicates. 40 years ago if you said which is more likely to get resolved, would you say cancer or kidney disease? Which would you say is harder to solve? I know. Everyone would say it's got to be kidney disease. Surely we are going to solve that in 40 years. We will not say whole parts of cancer have been reduced, turned into a chronic condition, you never say that. That would have been -- you would have been laughed at 40 years ago, but that's what happened. You look at under life, changes in medical technology and research, and some of it is where people have put resources, and so I said, why do you all not invest in kidneys? Why do you not invest in dialysis, but invest in cancer and these things? That led to a large conversation about it, but some of the areas we have to look at, where are we investing in diagnostics, knowledge, and why aren't we? Some of the answers are the third part of this, value-based care it only costs money, I will say not from our point of view. The United States, we are still just medicare we pay, but you talk to our international peers, and many cases they will say we don't want more diagnostics because it adds to the cost of diagnostics and the cost of care. That's a tough message, and I have heard it privately from our peer countries about it. I don't think that's where we should be looking at all in America. I think we need more. We need better, but part of that is going to be guided by, frankly, you all coming to a resolution on where, what we are missing, and in the diagnostic area. Where should we be looking? where do we have good? Where is it bad? Is it a matter of technology, we don't have this kind of test, and we need it. We need a better one of these, or is it a matter of the transmission of the diagnoses across the care continuum. That's an area we are trying to address. To that?

Yeah, thank you very much.

It's going to be you all finding out and telling what needs to be addressed.

So we are a little short of time, and I know you are very interested in listening to the discussion, and if I may move on to the next panel, and it is a very interesting topic, something you asked me about, gaps and improving efficiency and effectiveness in health care systems. To lead that discussion I have my colleague Jamie Zimmerman, senior program adviser, and there's a lot of magical things for me. I cannot say enough good things about Jamie. Jamie, please take it from here.

Thank you director and deputy secretary for staying and joining us today. I'm very excited to be celebrating ARHQ's 20th anniversary with two people I consider to be mentors during my 15-year tenure at ARHQ. For those who don't know my history, I started out here as an intern at ARHQ because of Lisa Simpson who connected me to someone she thought would be a good mentor for me, and at the time was Kathy Ken Kendrick. In 2010 when I took over the management of the NAC, Bruce Sea gull served two terms as the chairperson of the national advisory council. I was lucky to learn along with Bruce in how to navigate the

role. I thought I would look around the room and ask my colleagues, how many were here during Lisa or Bruce's tenure or even my colleagues on the NAC, if you were using ARHQ's work at that time, did you know ARHQ at that time? So, now I think you can understand why I'm so excited. Feels like we are among family, although I may like them more than I like some of my own family members. I won't go through all the long bios. They are in your folders or outside on the table, and for those who don't know Lisa, President and CEO of academy health and has since 2011 and other high profile positions ARHQ's deputy director, pediatrician, advocate for research and practice, and Bruce, Bruce has an extensive background in public management and public health. Both are strong advocates for ARHQ, and knowing these two, we are in for a great conversation. Lisa, I will turn to you really quickly, and as you reflect on your tenure here, what do you see as the most important work that allowed the health care system to improve? What has really lived on, and how can we leverage those ideas and accomplishments to improve and make health care more effective like the visionaries would have wanted?

Thanks for the great question, and I'm excited to be as you say, here among friends. Looking back to my tenure at ARHQ, I think the first thing I absolutely have to say, just how much I loved working with the incredible people at the agency, and you know, it's great to see so many of the faces still here today, and I think the agency has accomplished what it has because of the mission and the commitment, mission commitment of all of the staff, and I really want to acknowledge the staff who does the work, and then as I think, I was preparing for this and Jamie and I had had a chance to chat, there's what ARHQ is nonfor and everything ARHQ does. I think AHRQ really gets the credit for changing the national conversation in response to the national academy of medicine back then. The report on to error is human. You helped, that's called enlightenment knowledge on acting a new way to understand patient safety, and then developing the evidence, research, tools, and the translation to actually enable action on the issues. That's probably one of the things we all think about, and then, I sort of -- what we don't spend enough time thinking about, the three fundamental aspects of how ARHQ is developing the tools for health care system improvement. The first is all of the other research that ARHQ sponsors and conducts. I represent over 4,000 health services researchers and organizations around the country who care deeply about evidence in health care, and that's not just the targeted announcements, let's not forget about the investigator initiated research, another critical part of the health services research system. ARHQ has done that I wish it could do more of that. We are always fighting for more money to do more of that and other things, but that's the critical point. The second, you heard both deputy secretary mention, it's just data. It's fundamentalling is understanding what is happening with the ongoing function. The third one I have not heard in my short time arriving here that is still absolutely critical, the training role that AHRQ plays. I'm a proud alumni and graduate of AHRQ as an employee and the T32 program. I am trained because of AHRQ. I think those are the three things, and AHRQ is building the knowledge of health care improvement, the tools for health care improvement, and the work force for health care improvement.

If I could add to that a little bit, everything Lisa said is right on target, and I'm thrilled to be here also, seeing old friends, and new friends, and Jamie does do magical things. She kept me on track as chair. I'm sure it was not an easy task. When I look at the body of AHRQ's work as Lisa laid it out, the other thing you have done indirectly is change the culture of the American health systems, when I look in the perspective of hospitals, large, urban hospitals, the ones we represent, you know, the expectation now is that the work is now part and parcel of what you do. , and part of that is the regulatory apparatus, and also part of it by giving the tools, frankly allowing people to survey their own culture, and also a true change and mind set of health leaders around the country.

I think those are very good points, and we heard from the deputy secretary, he's been challenging us to think about health care from a more population perspective, providing the whole person, 365-degree view of the patient, and we keep hearing from the delivery systems here or in round tables we are holding that people need more types of operational types of research, and how do you see research changing in the future to address that? And what do you see as the current gaps and opportunities from your stakeholders or own experiences?

So I reflect on the question, and that's a question the entire field is asking itself. The world is changing around us. Technology and computing capacity are transforming our building to understand what we are doing and then to develop the tools to address that. I think it's time for a health services research and ARHQ to figure out where we are actively going forward. Tim Ferries joining us for the national academy of medicine round table that the director came to and many others, certainly looking back at the impact of health services research, and also gaps in opportunities, and he gave us a really great grade of collectively the field on research that informs policy. We have done a really good job on that. H-cup data on all dimensions, and all the other research projects, but when it came to information that a health care operational leader can use to drive the value, in care today, it was a more mixed bag, and I think that is what I'm hearing from

health researchers and others who are trying to capitalize, and a messy world of health care delivery and conflicting incentives and priorities, and so, I think we need to get closer to health care systems, and I see Andy Masikaw here. I don't know everyone around the table. Peter and I have worked together on similar issues, and that's an area where the director is moving the agency, and I think it's very productive. The other area you're also engaged in, and I saw Francis earlier. I don't know if he's still in the room. Francis Chesley. You have launched the K-12 learning health systems training program, and again, you have to have the work force who knows how to work with health systems, prepared to do the research in a way that makes it timely and relevant for the questions that leaders need answers to, today, to drive the value, and then the population, you mentioned population health and equity. Bruce will want to comment, and I think it's essential to bring the 360 view to everything that ARHQ does. We all know the importance of the other nonmedical drivers of health outcomes, and I think we have more of an opportunity now because of the push for value in payment than we have had in my career to actually make that happen, to align the health systems with outcomes and population health more effectively.

I want to follow up on that a bit. So if you look at health systems around the country, we are at the point now where they view the social determination of health as part of their responsibility. Hopefully with other in the community, but the days when people say that's not my problem are past us. Let me give you an example. I was at a conference listening to the 15-item question system that established a risk system, married through HHR and using different questionnaires in different areas depending what they think the barriers are to health in the community, whether it's food insecurity, transportation, or something else, is that the right approach? I don't know. I don't know if any of us know that's the right approach. Mondo is grappling with the same issues in Delaware, Wilmington, currently, and we are at this tipping point, and hopefully we are going to tip in the right direction, and hopefully AHRQ will help us tip in the right direction. Understanding what works out there and how do we accelerate it. There's so much going on, and bringing rationality to it, and understanding what effective will be much harder. Another example that I think is a challenge. It goes back to us, and we often treat the social terminates as static items. If you live in this area, your problem will be X. If you live in this area, your problem is Y. If you go to the view of the individual, the person, it's not static, it's dynamic. The challenge today may be, you know, food insecurity. It may be housing 6 months from now. It may be a combination of transportation and other challenges 6 months after that, and we are going to need not just to be able to bring the information in, in a meaningful way, but a dynamic fashion understanding it's not race, ethnicity, and things we consider static. It's dynamic.

If I could build on the point Bruce made about how things are changing, it's an opportunity for AHRQ to think about the innovation at one end the art official continuum and the research that takes 3-5 years on the other end. The question that health systems have of how much evidence is enough to act on it, and you know, the answer to that question will vary dramatically, but I think a portfolio of research and evaluation and evidence is what will help us work together with health systems to answer those questions, and there's nothing worse than spinning your wheels with the health system or actor in the market place, and then finding out it didn't work, and by the way, the health system in another state tried that already, but it didn't work for them either, but no one knew. There's all the opportunity costs of trying innovation that fails. I think AHRQ can play a role in helping us to understand more quickly, what is evidence based and worth scaling or reproducing.

We had a very robust conversation this morning, and I think it's nice to hear that some of the ideas are being echoed by Drew and Lisa. I think --

I mean one thing that I have sort of did, but with regard -- I would love to hear what happened, I mean especially from you all, this agency's point of view it is kind of, we are kind of going towards that in many ways on the outcome side, and when we get that robust set of outcomes we are going by, we move out of the fee for service world, which has artificially kept the element the out of the system, with the 6-year Medicare trustees saying in 6 years the program will start to tip over to say we are going to add housing, transportation, food, and everything to Medicare's budget that was never going to be practical from that point of view. We were never going to add transportation, car payments, not going to happen. When you move to an outcomes based area, and you say to a provider system, how do you solve this outcome? They are much more likely to say, I might go for meals and a gym membership or exercise program, and I will go for diabetes not because they are being exhorted to do it, but because when we have is a good set of outcomes, they are going to gravitate to it, and at that point T may be sooner rather than later, and they want to have the evidence underneath that will be more than, this sounds like a good idea, and like what's the actual importance, when I do the listening sessions on social determinates, I hear an even tone of housing is important, transportation is important, food is important, and family few is important. The interesting thing if there's a robust set of data about this to determine what is important and for which issue. Are these nonmedical determinates not important? I have not said when I deal with people who are coming to us with information, I don't hear

evidence, myself, I'm sure is it's out there. You all probably know. I hear, as I say an even tone of these are important issues, pay attention to these, but which one of these things really works in terms of outside of the medical system? Interventions that will be social determinates? Meals on wheels? Is that more important than more stattens or will diabetes education prevent dialysis? Sorry I didn't mean to take away.

No thank you very much.

I was just saying we are affirming this right now. It's getting to the ground state adds opposed to what a good idea or something that we can tangibly work with.

Giving you an camp. Look at the PCC model out of parkland in Dallas, Texas, and you may have seen that, but there it's a question of can AHRQ help people build an infrastructure like that, social service agencies and hospitals, and it's not about extra payment, necessarily. It's about how do you prioritize resources and essentially have an individual care management plan for a person in the community that has driven out multiple data sources. That's the innovation that would be able to see us take a look at to replicate.

I had a national cancer center come and give a good presentation and said we have one patient in nationally, and they come 1,000-miles to visit us for the first meeting. Go back home, never come back, the cancer, never stick to their plan of treatment, never come back and see us again. Cost similar posed by us, they never come back, and there's human suffering and cost, and if you let us pay for 3 months rent for an apartment, just outside of the gates of our cancer center, we will save you $8 million on our 40 highest cost patients, and we will get you $200,000 back per patient that we would be happy to enter into an agreement, game-sharing agreement with you, and we are like, this is interesting. That's a kickback. Now that's a kickback. You pay for rent for 3 months, and that's easy, and that's with $3,000 maybe, and they get billions of dollars in cancer patients from Medicare. Sounds like a kickback, and the inspector general shows up from HHS and says did you pay for meals? housing? Well, we were revising the kickback regulations, and that's current right now on these issues, and this is an area to watch because housing is a social determinate, but it's also a kickback, you give someone a free meal, and they go back to your hospital, that's a kickback, so we are progressing on all fronts here, both from the I.G.'s point of view, CMS's and program integrity side. They are aligned on this. There's going to be a new pathway open from a regulatory point of view, and it's something. As I said, the evidence, it's cancer center new, and they had something in mind, and they knew what they had to do, and it had to do with housing and meals, and they -- that's one shop, one place, one program they wanted to tell us about, but I can't tell them, you get a one-off go to CMS, we will get a one-off treatment for this thing. It's never going to fly. Anyway, I'm saying the door is -- we are opening the door from a regulatory point of view and policy-making point of view. The evidence is necessary.

We heard a number of really interesting ideas that we look forward to sharing with you at future meetings. So I will shift a little bit, and I will say to both of you, you have heard a lot about ARHQ's future initiatives focused on multiple chronic conditions and reducing diagnostic errors. [captioners transitioning]

There is a lot of work going on now with the health systems, that is where I know that folks are not creating risk models to understand how to manage these people in the most effective way. How to understand that the possibilities of super utilization in the future, and how to begin sort of figuring out how to intervene early on with our clinical and social tools as well as for the of analytics. To understand who is at risk for what. I think again, this is another case for social determinants, where 1000 followers are blooming and were not sure at this point what the right models will be and what the right infrastructure is to support those models. I will also add that a place that we have seen already some hiccups and this is something I suspect people could have predicted, as some of these models appear to use utilization or a proxy of how sick you are, which for underserved populations were undertreated that basically tells you that they are not as sick if they are black or Latino. We've seen a heck up about this recently and it has gotten a lot of press. I think AHRQ's thinking can help inform what are the right architectures for these models and one thing to be careful about because they might perpetuate unintended bias for a complex patient and a complex issue.

We really do not want to increase disparity, we spoke of that earlier today as well.

[Indiscernible -too far from mic]

We spoke about making sure we do not increase disparities in our earlier conversations as well.

I want to echo what Bruce just said on multiple chronic conditions, the reality is that it is back to primary care, that is what most people get most the time for most their problems. More and more with the aging of population we will be in that bucket. I want to focus in on the two other areas a little bit more cow one is your diagnostic focus, I know you call it errors, I call it excellence, it is a different E. Clinicians are feeling put upon Passau putting another error domain might not be the best way to communicate. My cancer treatment was delayed because of a diagnostic delay, when you think about low value care, what my colleagues in the diagnostic excellent area say is if you have the wrong diagnosis, everything after that -- if we push value and high-value cow we have to tackle the low value care which we've updated the estimates in

the numbers of the total waste and healthcare due to low value care. I think it is very important for AHRQ to focus on this. The data in analytics, I have already alluded to. Our world is changing as we speak and I like to quote or paraphrase things, for those of you who have gray hairs, remember with that is, the police, every breath you take, every move you make, the data point. [Laughter] is a creepy song because it is about stocking that I will ignore that. So what does that mean for our opportunity to leverage that data, to the point of the deputy or -- secretary, about diagnostic excellence in all these other areas. And I think AHRQ is dipping up and working with the other partners at HHS and the CTO's office, and again, there are a lot of smoke in nears, the latest app will solve all your problems. But we need to understand the evidence on which technicalogical -- advancements are working and for home. Every change and improvement is a change in not all changes in improvement, AHRQ helps understand what is improvement.

I'm looking at our time and I want to make sure there is enough time for questions, so my AHRQ colleagues, we will take questions, if you have any questions you can come on the site over here come I will ask one more question while you are thinking of questions, I think this is something we think about here at AHRQ, often. How can we work better with organizations like yourselves or even our advisement councilmembers, particularly membership driven organizations or organizations that have constituencies, how can we battle work with systems like yourself to better improve the health care system?

One of the things I was most proud of, having the privilege of being on this was getting the knack engaged as stakeholders, from perspective of their own organizations, industries etc. but halls so -- also who became the best story toilers -- tellers on behalf of AHRQ. People are not always fully appreciated what AHRQ does, they have the broadest mandate in some ways to make the whole system better. It is a $4 trillion industry and the math of 1/100 of a penny of the dollar, that might be a high estimate [Laughter] but having the engagement and I am sure that is here today is so powerful. You need to be able to tell a story common I'm not talking about lobbying but just to educate leaders. We may not understand what is AHRQ about and how this impacts what happens to you when you are in the doctor's office. That engagement is critical. I also think on too many times the end-users of the product don't realize that it is your product. And I think, we would look forward to working with you to make sure people understand that brands make sure that our folks, all of their work is based on project read. They do not know what came out of our. That would be critical.

AHRQ's work is so much of what is going on in trying to get to the recognition is critical. I think, we already enjoy it Academy health a wonderful partnership with AHRQ and your leadership and staff. And we can help amplify your message, and we can also give you feedback, we can hear from you about what help you need to when you are not hearing from the fields are getting the proposals you want, and I think it is very much a by directional relationship where we each have unique roles. Other organizations can do things that AHRQ cannot do which is fight for itself, we are the home of the friends of AHRQ, that is a big part of my job, making sure we can say the things you can't about how great you are.

With a.com are there any comments or --

Before you stop, they wanted to make a comment that I have been around AHRQ when it was HA CPR back in 1997, I came to one of the meetings as a new Masters was interested in health safety and I came up through the training program and I am sitting here and now and has been quite a journey and I could not have done that without AHRQ support. My comment before was that the training programs in the future of our work force and the people coming up after us, this training programs are so important to train researchers to ask the right questions. And I'm so grateful for that and hope that continues.

> I really appreciate all the comments, and I did want to loot back to one of the points you made in terms of where we are as Jamie alluded this morning cow we spent a fair time talking about social determinants and where we need to have there. It can't be overstated on how important AHRQ's role will be on determining how we get there. Even understanding the capabilities and opportunities like we've done in the past 20 years, with regard to healthcare data and how we can better organize and utilize that to inform what we are doing. We are entering into this much larger space with the need for 360 view. I also wanted to go back to Lisa's point about the training and to fill in Greg's point I couldn't be more important. We happen to be one of the recipients of the AHRQ program for health systems, and it is fantastic how we have trainees that are learning as we are learning how to create a learning health system, for instance in Indiana, to figure out how we will make that work how we need to build up the evidence base to teach these folks what they need to be learning. The early ones will be helping us build that evidence base. This fundamentally important that we have training programs like this to create these professionals for the future. What they need to look like and they will look different, then our historical trainings because to create the learning health system Kia will not be only researchers or only those that work in the area of quality or the area of operations. Will also include people were now building this new health him and creating the methodologies, evidence and best practices

and culture of how we actually systematically learn through the activities we are engaged in. We simultaneously need to be training folks and developing the evidence base for what it means and how do we create a true learning health system. So it is an exciting time, I can be more exciting, wrinkly and looking for to where we will go with that. I wanted to and this guys how critical that part is.
Any other comments?
The deputy secretary asked to leave so thank you once again, please join me in thanking him.

,, [Applause]

Of time for one last question before we have to change panels, I will turn this to a topic that was raised by our National Advisory Council as a future topic that someone said they would like to hear about. I'm sure you heard about the growing problem of clinician burnout the effect on the house -- healthcare system. I wondered if you could talk a little bit about this affecting safety in the hospitals?
's problem of burnout seems to be getting worse, at least in the modest amount of data we have around what is going on with perceptions, at least with physicians, appreciating burnout goes beyond positions but many providers. Part of it is probably the greater demands being placed upon them in terms of documentation, reporting and compliance. Part of it, for what we call in sessional -- essential hospitals cow when you were trained by resources and you are strained by capacity, your emergency department will be fuller. In your level one trauma center God there will be higher level of activity as well as the potential for too high of a level of act tivity without the ability for these providers to recover in between. So there are special issues that go to this. It is interesting how when you look at the literature we have now, which there is not much, but one of the things that cuts both ways are these social determinants. It actually comes up here. If people feel that they have the ability to affect that, that is a positive thing for providers. Including clinicians. Because there is some agency gathers the ability to engage in control something. It is the lack of control that leads to burnout. The adverse of that, I will use the example of my wife who was a pediatrician with an underserved population, when she was going through a busy day seeing patient after patient, suddenly she has two or three patients with you that's a huge behavioral health needs or social needs, what was a simple encounter becomes a referral to social services and everything else. When she is backed up by an hour, or two, that is not fun. You can see how that can lead clearly to burnout. I think I anything you can do to move the ball and evidence on that would be great, I think one of the things we need to understand is what is this costing us? What is the cost of burnout and what will be the return on investment on an organizational level to make that different?? Anything else? We are about at times so I will thank you both for coming here.

Happy birthday, one more year and you can drink. [Laughter]

[Applause]

Thank you Bruce and Jamie calmed onto a different conversation. There is another coming up, one that you've all heard me talk about which is the disruptors taking this in the marketplace with mergers and acquisitions and the data we talked about, all defining how healthcare will be delivered. What we see is an evolution of what you call the digital healthcare ecosystem. We will talk about gaps and opportunities in a will be led by my colleague, Chris stomach who is the director of the division of digital healthcare research and technology, this is a new department we created. She is also director of IT, so please take it from here, Chris.

[Indiscernible -too far from mic]

A special welcome to our panelists and former AHRQ colleagues. To my left is Dr. John White, staff of research at the VA Salt Lake City healthcare system. In next to John is Dr. Amy Helwig, she is the chief quality officer of quality improvement at the University of Pittsburgh medical center and health plan. And sitting next to Amy is Dr. Claudia Steiner, executive director of the Institute for health research at Kaiser Permanente. Now, John, Amy, Claudia, your family and you come back to AHRQ to take part of our family celebration today. We are glad you are here to send this back since each of you have gone out into the world, and done fantastic work how we will ask you to share the experience with us. How can we advance healthcare by taking advantage of the evolving digital healthcare ecosystem? We will ask all of you in the audience to tell President Donald Trump create the agenda and Amy Raven in the back will show everyone how.

Hi everyone, if you can go to the link that is at the top, with the polling. If you need intranets, you can go to the HHS visitor. Once you go to the poll, it will show up and ask for your name, but your first name whatever, it is fine. And then press join. For our first introductory poll, we will ask a multiple-choice question and you will be asked to select one choice. For the next few poles, we will do a couple of multiple-choice as well as a word cloud as well. You have the ability to change her answer by pressing the clear last response button located at the bottom of your screen. Let me know if you have any other questions, shall we begin? Anybody need more time?

We will just give it a couple more seconds.

Remember the answer is always C. [Laughter] personal experience.

I am sorry if I did not put your favorite ice cream flavor there. [Laughter]

Great, it is working. I thought we would get started by trying to understand in your organizations what is working well to advance care? What particularly inspires you about that and how does the digital ecosystem contribute to the at -- that advancement of care?? I will start by saying, coming back here in all of the people I am seeing that I worked with not so long ago, and I am honored to be asked to do this and how awkward it is because I know as a collective intellect in here, I will try to say something interest but I kind of know where you all are coming from. I come from Kaiser Permanente Colorado and one of the challenges we had is trying to provide care, yet the more traditional care that you are sitting in the clinic and the patient is coming to you, I am still providing care at Kaiser like I did here when I was at AHRQ. But the demand, by the patients in the members is that the care is no longer so typical. They don't really all want to come in, they have huge deductibles. It is interesting of being closer to the [Indiscernible name] of care. They want access now, the email is really not quick enough. If I read an email to my.com my doctor my answer in 24 to 48 hours and I wanted the answer an hour ago. And I don't necessarily want to make an appointment. I would like to be able to just call somebody. The newest thing that Kaiser has started based on this kind of demand was to do chat, and I was floored that we are having chat with the dog. First of all, it is heavily resource, by physicians. And it is instantaneous. They are literally chatting with their doctor. In the dock and pluck their record and I went from late in 2017 to a couple of thousand all the way up to 100,000 that is occurring in any given year. You have internal medicine, OB/GYN, all departments. Doctors have not necessarily been trained on how to do that, I know I certainly wasn't. How do you know that you are doing a correct diagnosis? Versus a missed diagnosis? How do you figure out who should be answered first in that chat? I mean, if someone puts in chest pain is a coming to the top of the list? I'm not sure this. Is meeting a demand in the Kaiser Permanente members to grab this option, including my children who love it because they are a millennial and if they have an issue they want an answer right now, they get it answered right now, usually for about a 12 or 15 hour period. It is meeting the demands of the patients because it is very virtual nobody wants to be on a video, they don't want to call, they just want to chat. So from the business perspective, how do you do that, it is meeting a demand which is a good thing, if you do it well come are you worried about safety and quality, yes, you know you are meeting standards, mostly. And my question would be QI you can even do that outside of an underrated delivery system. I can pull up the chart and see the mess QI even in a non-integrated system would I be able to do that? It is really interesting. Going to the Traeton thing that they have chatted three times and it did not work out so now they are coming in.

Thank you for sharing that example, Amy how about your organization?
And with UPMC, University of Pittsburgh Medical Center, specifically on the health plan side. UPMC is the second largest integrated delivery and finance system after Kaiser, where based in Western Pennsylvania and the health plan itself has a larger footprint in Western Pennsylvania. We have members throughout the entire state. With a quiet company as we are insurance and we are larger than the clinics and providers themselves. But what I found very interesting, to hear your comments Claudia about what Kaiser is doing with chat nothings you can do in the integrated delivery system. When I was here several years ago after a decade I was a member of Kaiser and gosh, I wish I had that is my health plan in access and availability now. And I don't QI even though we are within an integrated delivery and finance system, it is remarkable having been with Kaiser how hard it is to connect efficiently even when you have all of these wonderful tools. I will tell you a little bit about what I was thinking about in terms of what we are doing well and what is exciting when it comes to digital disruption and analytics. On the health plan side, I think we have made quite a few advancements in being able to effectively integrate all sorts of data that goes well beyond our traditional administrative data. For several years, we integrated and were able to effectively combine critical data from

the HR with the claims data, but we moved on beyond that and it is wonderful that we have working examples of integrating quality-of-life data such as multiple points in time. Integrating frailty data, mending, many different sources of social determinants of health data and the challenges surrounding that and also interesting things that we may not have always thought of before but household data such as interesting questions like how we are accustomed to thinking about how many opioid prescriptions a particular individual may have had. But what of the numbers in the household? So if you have a household that has a Medicare patient or to calm it is interesting in our system that when we cover all of those populations, we can count the number of prescriptions in a household then you could not believe the affects. Somebody could see overdoses in somebody that don't even have that original prescription, but real significance there. What about death? As a payer, we know just what about the trajectory for care that are for the people left? What can we do to intervene, is it possible to or can we change anything? I think some more interesting analytics that we've been able to do.

John?

Thank you for the opportunity to be back here, I walked in the room and I almost wept with joy just seeing the faces around the room and I appreciate the brilliance of virtue for the people who work here. Thanks for the chance come back.

I am a set or two as well or a tear or two as well.

And the veterans health administrator at the Salt Lake City nation, and the associated Chief of Staff for research. It is like being a department chair, I guess. Something like that. With about 160 investigators, that cover the gamut from basic biomedical all the way of through health services and rehabilitation services. I've only been there three months now, I'm coming off five years for health IT where I was the deputy and international coordinator. Some coming from this lovely career trajectory of having spent 10 years kind of marinating in some of the best research on how IT can provide quality and during the marinade God directly into the fire of regulatory and financial incentives. And then I come to the VA, which has some really fascinating things that we can talk about, but I guess what I would highlight how what is working well is that I would say there is enlightened leadership at the VA. The secretary and executive in charge have put their weight behind turning the VA into our reliable organization. And that is a bigger picture saying, but they and everybody involved recognizes that cannot happen with out good information and good information systems. I would say that we've also got some tremendous historical resources at the VA in terms of our information, the VA has been active for years, it was one of the first adopters of electronic health systems, what is underappreciated in some of the data resources that we have. Whether it is the clinical data warehouse, the 9 million veterans that are currently serves, where Vin chica which is the research we source to be able to take a look at the a lot Tronic veterans health data. So there is tremendous resource and play, and I guess the one thing I would highlight is that what I have seen that surprised me, the direct and effective connection between our health service as researchers and operations at the VA, it is an underappreciated part of what happens at the research. The research that gets funded is so vital and critical, that it directly translates into operational outcomes and initiatives. I've seen that, I can go through the list of my investigators that yes have research funding but also significant operational funding that extends not just to our local station but nationally as well. So it is a philosopher queen approach to leadership where they are really letting the evidence guide them in how they are implementing care.

That is great to hear, staying on the topic of research affecting operations, isn't that happening for a large part in Kaiser as well?? Yes it has to because the primary mission and vision if you are sitting as an integrated both parts of the operation, we are insurance and physician calm by definition, the research you conduct must first improve the health and safety and quality and efficiency of the patients and members that are there. Because it is a not-for-profit, the larger community that you serve. See you are not going to do something that you do not think is going to help there. There are two ways that that research happens, obviously the principal investigators are there because they want to work in an integrated system that sits with the research arm. So they are looking to work with the health plan, and maybe they're leveraging money from our core, NIH, FDA, and then they go to the operations to try to bring them into those either the problematic trial or another project in terms of prevention or screening. The other thing is if operations comes to us, they may have questions, the sort of things they need the analytics from a research group in the contest and say with this kind of a question, we don't know exactly how to ask a cow we think it would probably need your research skill, to redo it with one clinic or two, how do we implement? And then you have a project that is driven by operations and honed in by the research staff. It is a lot of fun. For the investigators that come from the University and coming to Kaiser Permanente, they are doing that because they know that theirs in a system similar to the VA, where you believe what you are doing could easily positively affect the healthcare or safety or efficiency of care that is being delivered.

A quick question for you Amy, all the data sources that you have available now, including as you mentioned, knowing all the opioid prescriptions in a household, how is that getting to the point of care and how is that it affecting the point-of-care in your organization?? That is one of the big challenges we have when we look forward to the next 10 years, how do we make sure we don't just have noise and how do we make it meaningful? So we build it how we picked the underlying data, and when we are doing different analytics, we work to integrate it into dashboards with our providers. For example I am working on it dashboard with our cardiologist got the largest cardiology group with ordering too many stress echoes and things of that nature, and the data we can see and the outcomes. We also built it into our population health software in terms of fronts. Managers reaching to members. That is another one of the challenges, the old ways of outreaching to health plan members or patients, is not necessarily as effective in the market people do not get the phone, so how do we outreach to folks and when is the right time and what is their preferred method for doing that?

Another millennial issue, do not pick up the phone.

That leads us to the next item to plan our agenda for the future, let's dream a little bit. If we thinking about it dancing care more broadly, what might be and how might technology advanced the analytics play a role?

So if I had to pick two things to say, I got here in 2004, it wasn't planned but when I walked in, Carrie Hartigan was talking about the great work of AHRQ, and it was [Indiscernible name]'s first project as a project officer, and many of you would know because we put him in Congregational [Indiscernible name] several times. So it is lovely to see that kind of work have impact over time. Not spirit, thinking of what will have impact, as I've watched the rollout of health IT across the nation over the past 15 years, which should be obvious to all of us here in the room is that it didn't quite work out the way we planned it, right? So what are we are seeing is yes when you step back and look at the bigger picture, there are a lot of positive changes that happened as a result. To pick one, you know AHRQ funded the first E prescribe her substances grants that was authorized by the DEA. But when you get up close, all you can see is the really red face of the dog tours that are screaming because they hate using THRs and in essence, what that comes down to, the communists were right -- it's amazing, they didn't teach me this in medical school. So what I would love to see is, more work on how the Information Systems can be fit for purpose, how they can help whether it is our patients or our caregivers or our doctors, nurses, pharmacists, how can it help them do their jobs better and that does not necessarily mean do it faster but it might mean doing it different. And I think we made a start at it in the work that has been sponsored by AHRQ over the years. But honestly cow we need a fair bit more. So that is on the more basic side. On the far end I would say if you look at, I spent a fair amount of time of the last five years, and the really interesting advances in computing technology, we have all seen AI but I would say in healthcare, their real opportunities to use analytics not just on a population data or individual data but I would say there is some really exciting work to apply that to things that matter and that is where AHRQ excels. You could have a great machine learning algorithm but if it does not make a difference for somebody who is struggling with life or death or without an wellness, so I think making that next step how we can do neat things with big computers and how does that impact the lives of the people in this country on a daily basis, day in and day out, I would love to see more work there.

Is bringing about to a point of care in a meaningful way.

When I think about what we need to design for, for the next 10 years, I think we need to do better design for precision medicine at the level of care. I think that is different than precision medicine that we have now in terms of using the right drug or genetic treatment, who will best benefit from that. When I say precision medicine at the level of care, is really developing those next-generation tools to do population stratification so as we have more and more data and a digital explosion of different sources of data and people going too many different places to get their care, in terms of access. In all of the patient generated data, they are interacting with us. How do we synthesize all of this together and really build systems that help us better determine how we intervene, who we intervene on? And when we intervene on them. How we intervene Kaiser remote monitoring? Chatting? An email? And in person or home visit? Will we not figured out is who is the best person to do that intervention. Knowing that we have to go beyond just the decision and advanced practitioners, how do we use community health workers? We are using paramedics to help the social determinants of health. They are easily able to get in the home and can follow up after a discharge to make sure it myths and that's a readmission is prevented. What action do we take? We have all of this data from all of these sources but how do we best take action in the most efficient manner?

It sounds like a good mission for AHRQ, as John mentioned, that is what we do here. How to bring that in a meaningful way.

Will bring up two things that you set out we need to do better with the new management because as we expand all of the ways that people can seek care, both in person and in lots of digital ways, what will be the most appropriate way and can we figure that out so that we can help them manage it as well. In some cases it

is not appropriate that they are chatting. So how do you immediately help them get in the right venue, that has to do with them meeting their needs but you need to know which needs need to be met and how. What is interesting is the data usually comes back, as a PDF or paper, we struggle without a Kaiser but in some cases, Kaiser may have run nods and we can maybe ask whoever we did some genotyping to send it in data and not as a PDF but where do most patients get their stuff right now? They're not getting it from us, they are giving up from ancestry.com and it is a little similar to a while ago, not so long ago because we do not age ourselves. We started having MRIs and they were getting them everywhere and they were finding things we did not know what to do with. And it is a similar kind of thing around the genetics that make it into the broader precision medicine, we do not know what to do with it, the docs have not been changed. And a lot of patients are getting at someplace else and bring it to us and say there's a thing they are calling a varying, I do not know what I am supposed to do with that. Half of the time we don't need her and we do not know how to bring it into the system and that will create a tremendous explosion. If we think we have a lot of stuff now with patient reported outcomes QI utilization, cost, now add all of that stuff in. And you've got a huge database. And you do not know what to do with it.

Now we will ask all of you for your thoughts and Amy will put up a question, describe how digital technologies will advance the health care system. We would like you to provide an answer and if you are going to use more than one word, please use the in between the words where-. Or a- hyphenwe are curious about what you think.

So we will say this and I will actually ask for folks to blow this up into a poster size view that I can frame and put in my office, so now we've done some dreaming college student designing, we talked about what might be, now let's talk about what should be. Given a 5 to 10 year horizon, what are the key items that we should pursue that would have the greatest impact on dancing care? Either what you said or others have hot -- impact on advancing care.

I were not only here at AHRQ but also at OMC, and I understand very well why we are here today in the situation. But I cannot emphasize enough that can't really, how we build systems, where we synthesize the data in a way that is not only meaningful but also usable and usability of the providers. Otherwise, you really literally is just noise and not being served up in a way that is meaningful and trying to be attuned to that. Because you only have great interventions now are great data, being able to bring that out to the frontline providers is an extraordinarily huge challenge. Because they are stretched so thin and so frustrated so I think, what to learn from the lessons, meaningful use, we have almost 100% electronic health record adoption, but let's learn from use of the lady what worked and did not work and try to integrate that into our system.
Usability is really key, the recent national Academy report has a lot to say about that. We need technologies that support clinicians in the work they do.
I would agree with that as well, we have a pretty advanced electronic data system, the entire world is going to EPIC, but for the docs, anything that burnout is sort of the amount of stuff that is coming at you every day and that you are expected to do and a lot of that comes in a digital form. It is not the face to face patient care, but other stuff that you do. You have to think of all of the digital, whether it is data or digital ways that we are taking care of our patients, how do you do it all so that the doctors are feeling like they can do their job in a better way and more efficient way and a patient centered way and not feeling like they just cannot get the job done. In the patient's father will also be can they trust that everything they are giving us and all of the information we are getting is going to stay and be used appropriately because the other piece of this explosion is that there is a lot more packing and and we for this stuff and for the patients, they want to trust that if they give their data, not just their clinical data but they are now providing their genetic data, Kaiser is doing a huge colored, can they trust that that stuff will be stay where it can be used appropriately. Where there will be a withdrawn providing matter wanting to share that.
When we're talking about the providers, we all have smart phones, right? We all use them a lot. Imagine if you had to use your smart phone to do several tasks in your life that may or may not be well suited for. Imagine you had to use it to do your spreadsheets, right? That is a similar situation. Our smartphones are incredibly useful for certain things and we choose to use them for that, but we do not choose to use them for everything we do. Two things, first, something that AHRQ has historically done well, connecting the dots from the research and the evidence to the intervention and outcome. There is a last There, which is consented in our healthcare systems. But may not be incentive and other places, how does it drive the bottom line or outcomes for the organization? That is another beast that needs to be connected but I think having that path, as you think about funding the research and probing the opportunities out there, I think it is important. The second is something you heard often but I will it. That is robust funding. 16 years later, the deputy secretary's

talking about how it's a great success why is that? With $50 million that year for health IT funding how we funded a lot of projects. Maybe 100 research projects, and that year and you do not know prospectively which ones will work. You just don't. Right? And that is how research works.
Especially if it is exploratory research.
Exactly.
You can get these amazing things and frankly for the dollar for dollar investment it is probably pretty good when I compare to other funding streams. So just arguing for a robust opportunity for folks to come in with great ideas and expecting that a high percentage of them will fail, but there will be a couple that will change the world, that should probably be part of the design.
Would any of you like to comment on where -- what jaundice said regarding the trajectory of funding?

[Laughter]

A subject dear to our heart. I would say the challenges with how to do research in health services going forward, as the outside world is exploding in terms of the digital tools and knowledge, the data. As consumerism is exploding and use drown access, not just where to access the cost, and a gross calm is a challenge for AHRQ on thinking how to fund it but how do you build evaluation system that can came -- keep up with the rapid pace? What is working well? Disseminate that, what is not working well and change it or end it. Especially it comes to quality care in the new environment, the outcomes and the patient experience.
I think Lisa has since then alluded to that being an important factor.
Claudia, any thoughts around that?
When you are sitting in the healthcare system and a lot of people understand this, they needed to have their answer yesterday. The funding cycle cow when I show my lovely sides on what it looks like and how long it takes from the time that there is something offered and you come up with an idea, turn it in and how many you have to do. That does not work for the people that we are trying to help improve the health care system so part of the learning healthcare system cycle is an ongoing tension between how quickly things are moving and how quickly they need the answers versus how slowly it just is in terms of getting funding and once the funding occurs, how long it will take to do it right. It is interesting sitting outside of year because I've heard that, when I was here, and you do not understand it until you leave and are sitting in the system where you have a president who says that sounds really nice but it might take a year to get the money to leverage and figured out. But I kind of need to know this next month. So how to balance a portfolio where you are constantly giving answers but cannot give all the answers all the time and at what point can you provide some of the answer where you feel like you can provide that and it will not contribute to an unintended consequence because it was not quite completely correct. That is a tough balance.
Amen.
Finding that balance is tough, taking into account the whole sociotechnical ecosystem in this thing that you are trying to experiment with and where will live. I agree. I think we have our terrific folks working the technology and they are going to ask you to take a boat on what you think the most important technology is in designing the future.
One of the items that would have the greatest impact on advancing care.
Okay, while we are waiting for this cow why don't we move on to the next item, lastly we will ask about the deploying of the design. How do we go about creating what should be? You've all given us some terrific ideas what are the forces that need to be marshaled to do what and when and what should AHRQ's rule be?

One thing that I have been impressed with and it has reinforced stepping out in Salt Lake, and spending time over the past couple of months with the community researchers, was the incredible talent and sharp, fast, hard-working minds that we have in health services research. They really are people that straddle the line between high you know, what is and what can be. And I think the strength we've talked about the training cow we didn't mention, I was not a T 32 grantee but my life would be so different if I had not spent 10 years at AHRQ and the things I learned here being part of the staff and working with the folks here. But, you need to be able to harness that resource and those people, they are there, they are ready for you, how you drive them forward would be worthy of longer than the 32nd comment.

I would say, AHRQ has always been on testing an agency that relied on partnerships and traditional partnerships. Some of the health services research entities, but I would think to ask about some nontraditional partnerships and how you might best leverage those. Speaking of our nonprofit health plan and a region where people do not move much, and as an entity that is taking 100% global risk, that is what

health plans do, we do have risks. As we work to solve the financial healthcare problems by getting partners into the models, there is a lot to be learned. How do we most efficiently pass the knowledge and those tools to the providers as they begin to going to the space with where payment policy wants to go?
Pass the knowledge on is very important.
's impact how when were talking about social determinants of health, that is something that we are struggling with. The whole lifecycle of social determinants, how are we going to collect it, was going to report it to it, how will we put in our database? How will it tell us and when it does tell us what will we do with it? Trying to deploy an entire electronic tool for the doctors to be able to do there were girls, will people tell is something back, I think being able to have those conversations when you are providing funding to test them this cow we are sort of already testing it so some of those partnerships would be really interest them. Because as I was listening to the National Advisory Council, all of that became important in your doing it for the population, the community, is probably all of those. Who is going to do it? Primary care doctor? But the are we burned out? Haven't some of those conversations especially with those of us who have been tear -- here and want to provide input. I think there are some things we are already trying to do that could infer or not.

Thank you very much, I know we will take advantage and take advantage of that we will invite you back to help us along with all of the NAC as well. Thank you for the terrific panel on giving us great ideas and thank you to Lionel, Amy, back there who helped us work the technology that we are using to get your input.

Thank you.

Thank you Chris and panelists, it is good to see you cow what a rich conversation I hope you had an exciting afternoon. With the deputy secretary being Erica sharing his large vision -- being here are and sharing his virgin S vision. Thank you for wonderful ideas cow you have been great partner of AHRQ cow we appreciate your leadership in the community. And of course, the evolving ecosystem is something that is here. We call it evolving but it is actually here and we better start thinking differently. We will and once again thank you all of the NAC members, their AHRQ leadership team and stuff, have a great afternoon and thank you all.

[Applause]

[Event Concluded]