Good morning, everyone in Kentucky. I am so grateful that, through enormous amounts of work on your part and the work of that fabulous AHA team that I'm able to join you at a distance. I'd much prefer to be there in person.

And I want to start with a note of gratitude. First, to the task force—you all have been at this for a long time. Clearly, by the numbers, both the numbers of people in the task force and the results that you're generating, you are doing awesome work. So, on behalf of the whole Million Hearts team, both in Atlanta at CDC and in Baltimore at CMS and other partners, federal and private—thank you for the devotion that you've put into this, the commitment, and as we said, the results that you are generating.

I also want to call out Julie Harvill and Mary Jo and Karma and April for all the work they've done in providing opportunities for Million Hearts to be at meetings around the country, and particularly for overcoming all the obstacles for me to be able to participate today. Bonita and Lana, wonderful to get a visual of you yesterday, and again, thank you for your work.

This is gonna be, I hope, an interactive episode for us today as much as we can make it, and Jill, I wanted to call you out. You are the mobile, global heart disease and stroke prevention action agent. I was thinking this morning you go from Kentucky to Kazakhstan over a weekend—and thank you for trying to be the link between me and you today.

So, I do want to call out some of the things I've learned about Kentucky. One is this enormously valuable care collaborative and the work that you've done. I will call it out on the slide if we go in that direction later, but others that I've discovered, digging into Kentucky, is this Kentuckiana Health Collaborative, and I imagine that many of you in the room have been part of the effort of the collaborative working with the Kentucky Department for Medicaid Services in developing a core measure set. I didn't call out that massive accomplishment on a slide, but I will note that the Million Hearts tobacco measure, the blood pressure measure, the statin measure, and the BMI measure are all included in that core set. So, congratulations if you were a part of the effort. If you don't know about the effort, please check in with them and check out that core set.

Okay. Today's objectives. I know that many of you are familiar with Million Hearts, but I thought I would go through the framework, really, with the purpose of helping tee up opportunities
that might be a good fit for Kentucky, things that you're already working on but that we might highlight a resource or two that you didn't know about or perhaps partners that you could more deeply engage, or maybe new areas that sound exciting to you and again, would be a good fit in Kentucky.

In about 10 slides from now, we're gonna stop and ask you these questions. I'd love feedback on this framework. What jumps out at you? Does something about it scare you? Does it strike you as completely unrealistic, impossible—we sort of major in the impossible in Million Hearts—or very exciting? And if it sounds a little off to you or if it's not a good fit for Kentucky, I would really love to hear more about that.

Second question is, how could you use any parts or pieces of this framework to accelerate the progress in your work in Kentucky? And then finally—really relevant to today's presentation—what parts of Million Hearts 2022 would you like to hear more about? I prepared slides on cardiac rehab and on self-measured blood pressure monitoring, but if neither of those really appeals to you, we can dig into any other part, new or old, in Million Hearts, and that's where Jill has her running shoes on and is gonna help us steer the rest of the presentation in the direction that would be most meaningful to you.

I did throw in some slides at the end about individual and sector types of actions. I know you were meeting in breakout groups this afternoon, and we probably won't go over those slides, but I provide them in case it helps stimulate additional thinking.

So, what are the results of the first five years? I know you all were deeply involved in that. And the bottom line is, we may, by the time the final numbers are available, we think the tobacco target, based on work you've done and others around the country, I think we will hit the tobacco target. But the improvement in blood pressure control and cholesterol were slower than we hoped, about 1 percent per year for blood pressure, 2 percent for cholesterol or statin use.

The trans-fat and sodium policies got out the door from federal agencies, but of course, the implementation timeline on those is lengthy, and the impact is still down the road. But the bottom line is that, when final numbers are available in 2019, we predict that somewhere around 500,000 events will have been prevented during that first five year period. Certainly not insignificant, but short of a million. And I want to be clear that any time I talk about
results in Mm-hmm, I'm not talking about the Million Hearts team or even the fabulous Million Hearts collaborative by itself, but all of the partners, all of the work that’s going on, and all of the work, frankly, that’s going on in the country unrelated to Million Hearts, where we try to shower credit and highlight high performers.

So, what is working against us? This is what’s working against us. For decades, we’ve seen a nice decline in cardiovascular disease mortality, both heart disease and stroke. But over the last six or seven years, maybe eight, we’ve seen a flattening, probably due to the decades of obesity, diabetes, and physical inactivity, hitting, finally, on the event rates. This is what we’re working against, and we think this played a bit of a factor in the problems of achieving the million, but more importantly, it’s a big problem for our entire country, and that’s why the work that you’re doing and your colleagues who are focused, and ours, directly on obesity and diabetes, will help all of us bend this trend back down.

This is a slide that keeps me up at night. I suspect that you're aware of it, but it was really big news for us that, over the last five years or so, mortality rates are—not just event rates, but mortality rates are actually on the rise in the younger age group. When we look at our data, we saw a decline in the 65 and older, but a rise in death rates and event rates in 35 to 64-year-olds. The other thing that this map shows is that it’s not only a Stroke Belt problem, any more. It is Maine to California where heart rate deaths are rising.

Again, this is probably a factor or a product of diabetes, obesity, physical inactivity, and there may be the issues of economic stresses that are playing in here, even though those are very hard to measure. All the more reason to get a collected effort going.

Now, I know you all are very familiar with this map or maps like this. This happens to be avoidable heart disease and death rates, so deaths from cardiovascular disease occurring at an age younger than 70, and you see a real cluster in that Southeast portion of Kentucky, with some higher areas in other places, as well. I'll just leave you with that image. These are data from 2014 and ’16. We’ll return to this map in a little bit.

So, what do we do about this? We did modeling to look, take a fresh look, at what could help prevent a million events over a five year period. We worked with three different external predictive modelers and, actually, it reconfirmed what we focused on in the first five years. This chart takes a little bit of explaining. What you see, of course, are the major factors that we think contribute to
preventing heart attacks, strokes, and other preventable causes of heart disease. And what’s reflected here are the number of events that could be prevented if the targets were achieved over the five year period of 2017 to 2021. Clearly, blood pressure control is the major contributor, with cholesterol management a close second.

What I’d like to point out on this chart is that the modeling was done with aspirin for secondary prevention. In this current phase of Million Hearts, we’re focusing on aspirin for primary and secondary, so you really could increase the size of that bar for aspirin, a greater number of events prevented when you improve aspirin for primary prevention as well.

A note on physical inactivity—clearly, improving physical activity is important for pretty much everything, but the number of events prevented over a five year period by reducing inactivity is on the small side, but this is not meant to underestimate the value of physical activity.

Sodium reduction has its impact through blood pressure control, so you could think there’s a little bit of overlap there in events prevented. And the important thing to know about cardiac rehab is that these are second events that are being prevented, not first events, but still, a very significant number of events. Again, I’m happy to take questions about this later.

So, this is the pictograph of the structure of Million Hearts. Those of you who are familiar know that we used keeping people healthy to indicate the community or public health actions, optimizing care to indicate those actions that can be executed in a clinical setting. We’ve added a third leg, a tripod structure now, with a deep, abiding focus on high burden and high risk populations.

Now, I want to be clear—we’re trying to prevent heart attacks and strokes for everyone, in everyone, but we’re trying to call additional attention and focus additional action on subsets that suffer a particularly high burden. We’ll go over that in a moment.

This next slide shows that same framework with a little more detail. Keeping people healthy up in the upper left corner are those public health or really big levers. We’re sticking with sodium and tobacco and adding a focus on physical activity. Over on the right side in the clinical care area, we’re sticking with the ABCS, because there’s room for improvement, adding a focus on cardiac rehab, and then CMS in particular, you’re, we’re co-led by CDC and CMS. CMS was particularly interested in actions and activities
that engage people sort of initiated in the clinical setting, but then
carried on when that person is at home and in their community.
The major experience for us so far is self-measured blood pressure
monitoring; also, participation in the diabetes prevention program
and cardiac rehab.

And then, down below, are the priority populations that we chose.
First of all, we realize that we may not have chosen one that is
particularly resonant with people in Kentucky or in certain areas of
Kentucky, but we would encourage you to focus on a priority
population based on the data that is most meaningful for you. The
ones we've chosen are African-Americans and blacks with
hypertension, because there's such a difference in control rates by
race, 35 to 64-year-olds, as I mentioned, because of rising event
and death rates, people who have already had a heart attack and
stroke where there remain some gaps in care and in behavior
change following those events, and then individuals who are
struggling not only with a mental illness or substance use disorder,
but also smoke. The current data show that tackling both of those
challenges at once actually is more stressful for that person than
staging them—again, more details available on that if you're
interested.

So, I won't go through these slides in great detail, but I want you to
know that the strategies that were selected here came from the
literature, from subject matter experts, and also from places in the
country that are doing this well. We've set 20 percent improvement
targets for each of these. In the optimizing care area, we've set 80
percent targets for the ABCS. We've done this because we know
it's achievable. We know there are high performers out there that
are doing this. But most importantly, 80 percent is more likely to
get more people free of heart disease and stroke.

Participation rates of 70 percent in cardiac rehab, which is quite a
stretch, and then as I mentioned, we've not set a target yet for
SMBP, because it is more of a developmental activity, but the
strategies that are listed here are things we have gleaned, again,
from those who are doing this well, who've been so generous with
the lessons that they've learned, and you definitely have examples
of that here in Kentucky.

This is just more detail on the priority populations. I won't walk
through the slides, but we were trying to give you more details to
flesh out what could sound like a concept.
And then we'll stop now, and I don't know if you've had a chance to write some answers to those questions or if Jill is able to get some feedback from you on these three, but particularly with that last one, your answers will help decide—will help us decide what direction we take for the remaining minutes this morning. Jill?

Jill: Great. Thanks, Janet. So, we're gonna collect cards, right now.

Janet Wright: Great, and if you think it's right, Jill, I can advance to the next slide, which may help people pick a topic. And I hope you all laugh—I did put in bold where I've prepared slides, but again, I'm not tied to those, and I'm also happy to go into more detail about some of the carryovers from the first five years, if these newer activities don't hit high on your list.

Jill: Okay. So, we're gonna just ask folks to stand if you've got ideas on where we want to head next. Let me ask this question—how many of you are interested in digging a little bit more into cardiac rehab? Okay, Janet, we've got about a half dozen hands.

Okay. How about self-measured blood pressure monitoring? A lot of hands went up for that, Janet.

Janet Wright: Alright!

Jill: Okay. Anything else? Those are the two big ones. Anything else here that is of interest to you? Tanya?

So, Janet, there's a request here to get into more detail into the mental health and substance abuse and tobacco use.

Janet Wright: Great.

Jill: Over here. Okay. More on how to engage the community in heart healthy behaviors.

Janet Wright: Great.

Jill: Other ideas that would be helpful going into your work together, later today? Okay, that's the sense of the room, Janet.

Janet Wright: Awesome! Thank you very much. Well, let's—maybe I'll go back and address the mental health and substance use. At the bottom of the slide, and on the right, are the strategies that we have, again, gleaned from experts, including our colleagues at SAMHSA and
other private sector organizations, that these are likely to have an impact.

And just, in a really broad brush, what the evidence now shows us is that the self-esteem and the mastery that comes from stopping smoking while you are dealing with another substance use problem or a serious mental disorder actually is sufficient or beneficial. It's almost fuel to help the person deal with their second problem.

Again, this goes counter to everything I've practiced, everything I personally would imagine, that I wouldn’t have the psychic bandwidth to tackle two major things at once and I should stage those, and yet, that appears not to be the case.

So, SAMHSA in particular has wonderful handouts, both for individuals and for clinicians and counselors that help walk through the steps that would help someone who’s battling what, basically, is a set of serious dual problems. I didn't put that resource in my list, but I'm happy to follow up and get that back to you all.

You see a strategy here that deals with treatment centers—believe it or not, in many behavioral health treatment places, smoking is allowed. I don't know if you all know, but often, in programs like A.A., it’s okay, and in fact, sort of a place for fellowship for people to go out and smoke, and yet, that turns out not to be doing something good for the behavioral health and strength of those individuals. There are quit lines with tailored protocols for individuals who are suffering from these additional problems, and, as I mentioned, materials available.

So, I know that’s really broad and high level, but I'm happy to follow up with any of you offline.

Let’s do—I’m gonna skip ahead. Please close your eyes while I skip through, just because I know it’s annoying to see so many slides go by. There are cardiac rehab slides here, and we also have a group collaborative that is working on improving cardiac rehab. I will leave you with this map. Again, this is the same map of avoidable premature deaths from cardiovascular disease. The yellow triangles are where in Kentucky there are cardiac rehab programs. Interestingly, you see that red area with a paucity of programs.

I'm gonna get, here, to my SMBP slides. Alright. So, as I mentioned, self-measured blood pressure monitoring is of major
focus for us in the category of helping people take care of themselves. We have a few other things on the list. I think, likely, all of you are familiar with this, but this is a slide that helps us emphasize, we’re not talking about just, individuals just having a monitor. That by itself has not been shown to help achieve blood pressure control and maintain blood pressure control. It is the communion, if you will, of that individual who knows how to operate the monitor, knows good technique, understands what the measurements mean, in communion with the clinician who is eager to get those readings and who generates timely advice back to the patient.

So, we have this wonderful, virtuous cycle of readings coming in either on paper or over the web or by phone or fax and advice coming back with adjustments in medications or lifestyle recommendations until that person’s blood pressure is under good control. And that’s the kind of system that we’re trying to advance in the U.S.

I’m sure you know that the new guidelines from ACC and AHA advocate, recommend, strong recommendation for the use of out of office blood pressure measurements to help titrate for those who’ve been diagnosed, as well as to help make the diagnosis. So, we are now more capable of avoiding overtreatment and undertreatment, masked and white coat hypertension.

So, where are we along the pathway of getting SMBP implemented across the country? There are a number of challenges that remain. One is that there’s still not a single or even a standard definition of what constitutes SMBP. We are seeing places in the country that are developing protocols, but there is not, of course, yet a universal protocol. There may not need to be, but more consistency in how to implement SMBP would be helpful.

In many places, clinicians distrust readings that come from anywhere except in the office, and frankly, this may be a lack of awareness of the newer publications that show that in-office readings are not likely the best reflection of someone’s blood pressure pattern. You need a set of readings that come from more normal parts of that person’s life than a reading that can come in the office. We’ve got a number of health IT limitations getting those readings in, and if you’re on the clinician side, the idea of all of your patients with elevated blood pressure sending you multiple pressures a day could blow all of your fuses, just thinking about how you’re gonna manage all those numbers. So, we need algorithms that take readings in, average and share patterns of
readings, the actionable data with the clinicians who will be making treatment decisions.

Up until recently, patient generated data were not used in quality measures. We know that there is a new measure, a revised measure in the works that will likely incorporate readings from outside the office. That’s been a major obstacle.

Making sure that individuals who need blood pressure monitors can get them, regardless of the economic circumstances, is another burden or obstacle to overcome. And then the clinician time to make sure the person knows how to use the monitor, make sure the monitor is validated, and then interpreting those readings and providing that advice.

These are a major subset if not all of the challenges ahead. The good news is that we’re making progress. As I mentioned, the guidelines have issued that compelling case for out of office readings. There is a new billing code for remote monitoring of blood pressure and several others in the pipeline. The performance measure, as I mentioned—I’d say that the orange and red items here were further away from the goal line on these, but we are beginning to identify exemplars. And I’ll tell you, there are a couple in Kentucky that I’ll reference in a minute.

The transfer, though, what I’d like to leave you with is this idea that, in someone who has diabetes, I think most places around the country have gotten really good at helping that individual understand what those blood sugars mean, how to check them, the equipment that they need, and how to communicate those numbers back. It may not be perfect, but enormous amounts of energy and effort have gone into that.

Think about the difference with blood pressure. Often, when someone comes in, they may not even be told what their blood pressure is. Blood pressures that are elevated are tolerated. We attribute them to trouble in the parking lot or the patient having to wait in the waiting room, and that patient goes long times without getting feedback on those numbers. And the clinicians are in the dark, because they’re not getting readings except the ones that occur in the office.

So, helping individuals with hypertension master their blood pressure, become the masters of their blood pressure, is a challenge we’re vanquishing.
So, the good news here is that there is a national steering committee of experts that we pulled together. They have envisioned the country where everyone who needs it can get SMBP. We've developed a forum for those who are very interested in helping advance this practice. That forum meets by phone quarterly and I have some contact information in the slides, if you'd like to join.

So, what's happening in Kentucky? I feature here three health centers who have been involved in a product who implement SMBP. There's a lot of information on the slide. There's a lot to celebrate, here. Two-thirds of the people in these community health centers who were recommended for SMBP actually used it, and you see the quote from Stephanie Moore—they saw a 5 percent increase in blood pressure control in 6 months. And that translates to 350 Kentuckians with their blood pressure newly under control. This was done in communion, if you will, with a Y that has a community-based program, to get back to that question earlier about community connections, and also, of course, with the Department of Public Health, and you see the other partners there.

The tricks of the trade or some takeaways here are listed on the slide. The beautiful thing is, each of these health centers implemented SMBP largely in their own way, but the bullet points on this slide were done across all three, by choice, following a written protocol—making sure that the staff were trained to execute that protocol, bringing in additional team members (specifically, community health workers) and you see they all used the care collaborative blood pressure log and those wonderful materials.

Alright. So, I wanted to make sure that you got the link to a video which describes the work of these three community health centers. Actually, these are the three health center networks, one set in New York, in Kentucky, and in Missouri. It is a long video, and I gave you the link or the time at which Lighthouse Clinics is featured, but if you have 11 minutes and change to spare at some point, please take a look at this.

This map shows federally qualified health centers overlaying, again, on that avoidable heart disease. And good news is that you likely are already partnering with FQHCs, but there is a fair density of those in that red area of Kentucky. And again, I know I'm not telling you anything that you don't know.
So, I think with that, I might be a shade over time. Let me just say that the next couple of slides are about what Kentuckians might consider doing, and I hope that some of this content might be of additional value to you in your breakout sessions today or in your work that comes after.

The first is really about taking care of yourself. I won’t walk through each of these, I know they are well known to you. Air quality is something new for us, and I realize we all know that it is quite variable across geography, but if there are air quality issues in your area, I put a couple of slides about particulates into the resource section of this slide deck, and I’m happy to talk to any of you about that further if it is relevant for you.

Health care professionals—this is a clip from that optimizing care set of strategies.

Community members and public health experts—really developing the comprehensive tobacco policies in your communities, including e-cigarettes. Many of you likely saw the publication this week saying that e-cigarettes are not being shown to help smokers quit. So, and particularly when it comes to the enormous uptake by youth and young people, our policies certainly need to be modified to make sure that they include e-cigarettes. The other things here today have to do with healthy design of your community and getting access to space and improving awareness of air quality.

This linkage of health systems and community resources—I come from a clinical background, and I think I am a great example of someone who didn’t know any of the resources in my own community, despite 25 years of practice there. So, I am living a life now of trying to make those linkages’ value very obvious and build more of them.

And then health systems leaders—definitely, by setting the expectations for the teams of high performance. The strategies are there. The evidence is strong. It is the implementing of those evidence based strategies that is the challenging and often lengthy part.

One thing we know for sure—people in clinical, clinical staff aspire to take great care of the people they serve. Helping them do so is what this structure is all about.

And then, as an employer, I know that employers have been around the task force table and all of your organizations. So, we
One of the things we've found that's not happening universally is the access to free blood pressure monitors, and certainly, the self-insured employers can do this right out of the gate. Commercial payers are beginning to understand that this is a drop in the bucket in terms of an expense and will have long term returns. We have some references on our website about the cost effectiveness of blood pressure monitors for hypertensive patients, so please make use of those if that may be helpful.

And then I'll close with some requests and some announcements. We have this cardiac rehab collaborative and also the SMBP forum that meet on phone calls quarterly. Contact information is in the slide deck. Paula had a couple of resources, the Hypertension Control Change Package, which includes protocol examples, information about hiding in plain sight, finding everyone who has this condition and might be in your system but below the radar, videos, and guides. And then, we do have a micro-site, which is a way to embed our material on your website, and when we add something to our website, it automatically appears on yours. So, please avail yourself of that, and there's a slide in the deck about that.

In mid-September, we will be releasing publicly a Cardiac Rehab Quality Improvement Change Package. We'll also be releasing CDC's Vital Signs, that shows, by state, the number of Million Hearts events that occurred in 2016 and what we can do about that—what we can all do about that. And then we'll be announcing another crop of champions later this fall.

So, thank you very much. I think we might be at time. Jill, let me turn everything back over to you.

Jill: Great. Thank you, Janet. Can you hear me?

Janet Wright: I can.

Jill: Great! So, first, I wanted to alert you that we'll be playing the—oh, can you hear me now?

Janet Wright: Yes.
Jill: Shoot. 

Janet Wright: Yes, yes.

Jill: So, this worked the entire time until right—okay, now I think you can hear me, right?

Janet Wright: I can hear you.

Jill: Great. So, we have a question from the audience, which is—what is the best recommended praxis for validating home blood pressure monitors?

Janet Wright: Yes, I would refer you to a guide that is on our website. It’s an SMBP guide for clinicians. There’s also one for public health professionals, and it collects the evidence that describes how to validate monitors.

Jill: Okay. Thanks, Janet.

Janet Wright: Sure.

Jill: Okay. Any other questions from the audience?

Janet Wright: You know, Jill, I'm realizing—I hope later in the day or maybe earlier and I missed it, but there are also an enormous number of wonderful resources available through Target BP, the AHA/AMA program, and AMA also has a wonderful video how-to on SMBP that I think has also migrated to the Target BP site. So, hopefully, none of you will have to create any of those from scratch. You may want to adopt it or adapt it for your own purposes, but hopefully, between all of the folks working on this, we've provided something of value for you.

Jill: Hey, Janet, we have another question. I'm sure this is not the first time you've gotten this one. So, cardiac rehaba take a lot of effort and resources to set up, and they're identifying that there's a problem in the availability of these centers to many of these patients. How can we overcome the limitations of things like funding, expertise, resources, et cetera?

Janet Wright: Oh, that's a great question! Bless you, whoever asked that question! What everyone realizes—and this is 30 years of literature on cardiac rehab, is that, one of the things that's well-recognized is, there will always be obstacles for an individual to go to a place one hour, two or three times per week, leaving at home all the
people and all the chores and possibly the work that that individual would otherwise be doing, especially overcoming some anxiety about exercising after an event or a procedure.

And so, there’s tremendous interest and finally action in developing cardiac rehab delivery models that can be delivered remotely or virtually. Kaiser and the VA have run remote or tele cardiac rehab programs for years. Their results are the same as their brick and mortar facilities; they still do brick and mortar delivery as well.

And so, there are a number of obstacles to overcome, but I know that CMS is certainly interested in understanding how to deliver cardiac rehab remotely. They’re interested in telehealth generally, and so, I think the wheels are beginning to turn. A number of commercial payers are now covering tele rehab, or at least a few. We know of a program at Henry Ford in communion with Blue Cross/Blue Shield of Michigan where they are doing virtual cardiac rehab sessions.

So, part of the work of a subset of folks on the collaborative is to understand what actually works and what could translate into a policy that would be able to allow people with Medicaid and Medicare—Medicare Advantage—to receive those benefits and what would help programs deliver this in a really efficient way.

**Jill:** Great. Thank you, Janet.

**Janet Wright:** Yep.

**Jill:** Additional questions? Okay, and then Janet, I also got a note that the video is gonna actually play here over lunch, so everybody will get a chance to see that.

**Janet Wright:** Awesome! I cry every time I watch it.

**Jill:** [Laughter]

**Janet Wright:** It’s just a piece of beautiful story there, so I’m so delighted. And, again, thank you, all for the work that you’re doing. I hope your day is wildly productive. Please let any of us on the Million Hearts team know if we can assist you in your efforts.

**Jill:** Great. Thank you, Janet, and for everybody else in the room, let’s take some time to thank Janet for her time today. [Applause] Have a great rest of your day, Janet.
Janet Wright: Thank you, Jill.

Jill: Bye bye.

[End of Audio]