John Clymer: I'm John Clymer, and I'm Executive Director of the National Forum for Heart Disease and Stroke Prevention. Today's event, Managing Cholesterol and Pursuing a Healthy Lifestyle, is presented by the National Forum and the American Heart Association. Today, you will hear presentations on Million Hearts and Cholesterol, Improving cholesterol Management and Control, the Public Health Role in Cholesterol Awareness, and Cholesterol Tools and Resources. After those presentations, you may participate in a question and answer session, and we will conclude with brief closing remarks.

As we begin, I want to just go through a couple of housekeeping things related to WebEx features, one of which is that you can download the handouts for today – the slide deck and cholesterol tools and resources to which we will be referring during the webinar. To download and save the handouts, go to the File Menu on the upper left-hand corner of the screen, and select Save Document. Please be sure to select the appropriate format to save your documents, whether it's PDF or UCF, and as a reminder, this event is being recorded for rebroadcast that we will be making available online.

As stated, there will be a question and answer period at the end of the presentations, and I encourage you to submit written questions at any time during the presentation, using the Q&A panel that's located at the bottom right of your screen, so kitty-corner from the handout-saving part of the screen. After typing your questions in the space at the bottom hit the Send button, and please be sure to direct your question to either All Panelists – well, send it to All Panelists in the Ask menu. Your questions will not be seen by other members of the audience, and will be addressed, time permitting, toward the end of the session.

Within a week of the event – seven business days – you will receive access to the live recording and transcripts, via the National Forum and American Heart Association websites. A notice of their availability will be sent to all registered participants today. I will begin today with an overview of what we're covering, but I will not be introducing the speakers right before their presentations. Rather, I'll be introducing them now, to facilitate smoother transitions as the webinar proceeds.

So if you have access to the screen right now and can see the agenda, you will see that following me will be Dr. Jennifer G. Robinson, who is Professor in the Departments of Epidemiology and Medicine, the Division of Cardiology, and also Director of the Prevention Intervention Center at the University of Iowa in Iowa

City, Iowa. Dr. Robinson is a very active researcher; she has performed numerous clinical trials that have been sponsored by the National Institutes of Health and the pharmaceutical industry.

She's conducted extension research on a wide range of anti-atherosclerotic and metabolic agents, including lipid-modifying, anti-inflammatory, anti-hypertensive, weight loss, and diabetic treatments, as well as post-menopausal hormone therapy. She is the principle investigator for the Women's Health Initiative at the University of Iowa, as well as numerous Women's Health Initiative ancillary studies. Dr. Robinson has published over 150 peer-reviewed articles in the area of lipid-modifying drugs, cardiovascular risk stratification, and CV prevention.

Dr. Robinson was Vice Chair of the 2013 American Heart Association-American College of Cardiology Cholesterol Guidelines, which were formerly known as the National Cholesterol Education Program Adult Treatment Panel IV. And she is a member of the 2013 AHA-ACC Risk Reduction Guidelines, formerly known as the NHLBI Risk Reduction Working Group. And currently, Dr. Robinson is Chair for the National Forum Cholesterol Initiative.

The next speaker or presenter is Dr. Eduardo Sanchez, who's the Chief Medical Officer for Prevention for the American Heart Association. Dr. Sanchez has, like Dr. Robinson, a very impressive background and diverse set of experiences. Prior to joining AHA, he was Vice President and Chief Medical Officer for Blue Cross Blue Shield of Texas. Before that, he led the Institute for Health Policy at the University of Texas School of Public Health, and previously, he served as Texas' State Health Officer, as Commissioner for the Texas Department of State Health Services, and the Texas Department of Health.

And he's also served as a local health official, Public Health Officer, in Austin-Travis County, and he currently serves as Chair of the National Commission on Prevention Priorities and the Texas Public Health Commission. You will see Dr. Sanchez popping up everywhere on IOM committees, on various boards and expert panels, so I'm sure many of you are familiar with Dr. Sanchez, as well as Dr. Robinson. And our final speaker for the anchor leg is April Wallace, who's the Program Initiatives Manager for the American Heart Association Million Hearts Collaboration.

She honchoes the activities to ensure alignment with the Centers for Disease Control and Prevention Priorities, Goals, and Objectives. She provides support to partner activities in order to

advance the Million Hearts priorities and build momentum and capacity of the national, state, and local levels. And prior to joining the American Heart Association, April was Product Development Manager at the National Committee for Quality Assurance, better known as NCQA, where she managed the development and maintenance of some of the NCQA's recognition and accreditation products from initial concepts through product launch.

So that takes us through the agenda, and sets us up for a very brief introduction or recap of the Million Hearts Initiative, and Million Hearts is, I suspect most people are aware already, is a national initiative launched in January 2012 by the U.S. Department of Health and Human Services, and it's co-led by CDC and the Centers for Medicare and Medicaid Services, and focuses on bringing the efforts of federal agencies, states, regions, communities, individuals, and private sector organizations into action to address a common goal; that being to prevent one million heart attacks and strokes by 2017.

It's an audacious goal, and it's achievable only with the collective efforts of each of us as individuals and as members and leaders of our communities, workplaces, and organizations. HHS tasks CDC and CMS with bringing their collective strength to lead the initiative to ensure the coordination of public health, clinical care, and policy approaches in order to achieve the audacious goal of preventing a million heart attacks and strokes within a five-year period.

And I'm pleased to report that they have been able to generate, with some of us as partners, very robust participation from private sector collaborators, from public health societies, advocacy groups, patient-serving organizations, faith-based organizations, commercial payers, to state and local public health agencies. So what are the cornerstones, what are the foundational pieces of Million Hearts? Well, in order to prevent a million heart attacks and strokes, we know there's work to be done in changing the environments in which we live, work, and play, and to achieve excellence in healthcare.

By increasing smoke-free environments, decreasing sodium in the food supply, and eliminating trans-fat, we would change our environment in ways that keep people healthier and less likely to need healthcare. Were you aware that when communities go smoke-free, there is an immediate decrease in the number of heart attacks seen in those communities? That's taken directly from the Surgeon General's Report.

In addition to changes in our environment, we also need to help patients, healthcare professionals, and systems to achieve excellence in the care that's delivered. In the clinical arena, we can reduce heart attacks by focusing the attention on the patients, help their professionals and the systems in which they work, on the ABCs, which we'll cover in just a moment, harnessing the power of health information technology, and developing testing in applying new models of care that recognize and reward outcomes and value.

As a nation, we can and must do better, and particularly for certain segments of our population where the burden of cardiovascular disease is even greater. As we work on changing the environment and optimizing care, we need to make sure we are addressing the need of those who are disproportionately affected by cardiovascular disease. So you see that reducing and in fact eliminating disparities in hearts attacks and strokes is one of the overarching goals and components of Million Hearts. Now, I said we'd address the ABCs. Again, I'm sure this is familiar information, so it'll serve as just a very brief recap.

The ABCs include aspirin, preventive use of aspirin for those for whom it's appropriate, controlling blood pressure, improving cholesterol control, and finally smoking cessation and prevention. This table provides an overview of the Million Hearts population goals and clinical targets for the ABCs of clinical care, and it can be used by clinicians, and public health practitioners, and advocates to describe the Million Hearts ABC population goals and clinical targets for each measure. And by the way, just as a reminder, the slides are available for download.

You can do that right now, while you're listening and participating, so you have access to all the materials that you're going to be seeing. Now, in conjunction with other Million Hearts efforts, by meeting the population goals for these evidence-based interventions, the U.S. could experience more than a million fewer heart attacks, strokes, and other related events during 2012 to 2016. Each ABCs measure is described in more detail in subsequent figures. Population goal represents the minimum value desired for the entire U.S. population for each of the CDC's measures.

The clinical target refers to the minimum value desired for healthcare systems and clinics as they treat their patient populations, described within each measure. So for example, the population goal for all U.S. adults aged 18 or older who have hypertension, meaning elevated blood pressure, is to have

hypertension control, meaning blood pressure below set rates, recommended rates, of at least 65 percent. This includes people who have access to regular healthcare and health insurance, and those who do not. However, the target for healthcare systems is 70 percent.

In theory, these groups work with a population that has greater access to regular healthcare, and are better-positioned to make larger gains in blood pressure control. Therefore, their target is higher. Today, of course, we're focusing on cholesterol management in this webinar, and on the next slide, you will see just a list of Million Hearts Clinical Quality Measures for your reference. We won't delve into those in the interest of time and getting on to Dr. Robinson's presentation. So if you are already partnered with Million Hearts, thank you. Thank you for your contributions toward achieving the goal.

Thank you for your involvement. If you're not, I urge you in the strongest possible terms to explore becoming a partner. You can do so by visiting the Million Hearts web page, which the URL is shown on the slide. You also can do so by contacting either The National Forum or the American Heart Association, and we would be delighted to work with you to help you get involved in the Million Hearts initiative, in a way that aligns with the purpose and goals of your organization so that it's a good fit. And now I would like to pass the baton to Dr. Jennifer Robinson, who I already have introduced. Dr. Robinson.

Dr. J. Robinson: Thank you, John. Well, here are my disclosures, and I've first – whoop, I'm overly zealous on the clicking, so let's go back one slide. First I just want to set the stage for what we're talking about here, because we need to think about what the best intervention, depending on where people are at in their life course in terms of developing atherosclerosis. And so this is just a picture of the artery; unfortunately for Americans, as most of us age, we go from nice, Teflon, clear arteries at birth, and then by age two start having fatty streaks.

And then in the middle, we start, probably in the 30s, 40s, and 50s, are getting advanced cholesterol build-up, which eventually goes on to develop a clinical event. So I think there are two important points to be made here. One is we would love everyone to be engaging in healthy lifestyle habits from birth, and maintain ideal cardiovascular health throughout the lifespan so this never happens. But since so many of us have not had that opportunity, we really need to think about the most effective interventions later in life.

So that often drug therapy is needed to effect the progression of atherosclerosis, on top of lifestyle measures, just because lifestyle measures alone are not enough. So Dr. Sanchez is going to talk about ideal cardiovascular health, and I'm going to really go through the drug treatment of cholesterol, which was the focus of our 2013 ACC-AHA Guideline. Now, this Guideline was supported by reports on lifestyle, risk assessment, and the management of overweight and obesity. I won't specifically talk about these, but they are excellent resources for you.

So what we recommend – this is our algorithm for initiating statin therapy based on the patient's level of risk. And again, healthy lifestyle habits are the foundation for prevention, but there are groups of patients who will experience a net benefit from the initiation of statin therapy to prevent heart attack, stroke, and death. So the first one of those patient groups are people with clinical atherosclerotic cardiovascular disease – heart attack, stroke, et cetera. Up to age 75, they should get a high-intensity statin, unless there are contraindications.

And then if people are over 75, are not a candidate for high-intensity statins, moderate-intensity statins are recommended. And again, this is based on a large number of randomized trials showing benefit from statin therapy. The next critical group here are people with genetic high cholesterol, and we've made it relatively easy to remember. 190 or greater is too high at any age, and should be treated with a high-intensity statin. And often these people will need the additional LDL-lowering drugs to get acceptable levels to their blood cholesterol.

The third high-risk group of patients are those with diabetes age 40 to 75, and we didn't have clinical trials specifically in that group. But certainly high-intensity statins would be indicated for the higher-risk diabetics, and certainly moderate-intensity statins are strongly indicated for patients with diabetes. And then finally, the group – it gets a little more complicated for primary prevention because we recommend risk stratification, and I'll show you the app for that in a minute. But basically, predicting or estimating the patient's risk puts them into a group, and both 7-1/2 percent or greater have a strong net benefit from statin therapy.

But so do people with greater than 5 percent risk, but again, the margin of benefit is a little narrower, so it's not as strong of a recommendation. And certainly there were lots of other patients who weren't in clinical trials, here in white, who also could be considered for statin therapy. But following risk assessment for primary prevention, clinicians and patients should involve a

discussion on the merits of starting statins, the potential benefit – there's some other characteristics listed here that could be considered.

The safety issues, assessing lifestyle, managing other risk factors, and finally and most importantly, the patient's preferences for preventive therapy. And on that basis, deciding to initiate statin therapy for primary prevention. Now, I'm not going to go through in detail. Y'all known we got rid of the LDL goals and really talked about a risk-based approach and using the appropriate dose of statin therapy. And you know, the main reason was if you use a good treat-to-goal approach, you keep adding drugs for which there was no evidence after statins when we made our recommendations.

And you really can't estimate the benefit to the patient from the addition of the drugs. So we really decided it was time to move away from LDL goals, and really focus on the intensity of statin therapy. Now, I want to show you this second important figure, and this is you still need to check LDL levels. You still need to see your patients. We said that. I'm not sure why people miss that. It's part of an ongoing therapeutic relationship, and certainly people should be encouraged to adhere to lifestyle and statin use, managing statin intolerance symptoms. We don't have time to go into that, but did address that in the report.

And then there are selected patients who may benefit from adding a non-statin therapy, and of course, now we have it proven that showed that adding ezetimibe to background statin therapy further reduced events. So there is a role for people who can't tolerate a high-intensity statin, or perhaps had a less than 50 percent LDL reduction with the addition of non-statin therapy. So you know, we put out our Guidelines. They were, you know, people were skeptical. But when people have gone to their data sets, really, this new risk-based approach works much better than the old NCP based on LDL thresholds.

Indeed, applying the new guideline would prevent 450,000 more cardiovascular events over a 10-year period than the old guidelines, and be cost-effective. So risk-based approach is the way to go for statins, and the problem is when you have LDL goals, not only does it make it more complicated, but it actually excludes a lot of people who are high-risk but may have lower LDL levels, who would still benefit from therapy. And in terms of the 50 percent reduction, that's what we on average expect from high-intensity statins.

And this is just a slide that shows even in those people who have an LDL less than 70, the 50 percent reduction is really what drives the reduction in cardiovascular risk reduction. So really, focusing on getting people on maximum statin therapy. Now, most people, even on a high-intensity statin, only half will get a 50 percent reduction, so those may be people who you would consider adding ezetimibe for further risk reduction. And certainly people who are on moderate-intensity statins who are high risk, the addition of ezetimibe would be considered, too.

But of course, this will be dealt with in future guidelines, but in the meantime, that may provide some guidance. So back to primary prevention. We do have an app, and just search for ACSBD Risk Calculator, and it's kind of a nifty thing. You can put it on your desktop or your phone, and you enter the patient's characteristics. It estimates the ten-year risk, compares it to the risk with optimal risk factors, and also estimates lifetime risk, which might be something you want to consider in younger patients to tip you one way or the other. There's also a lot of background supporting information on the other tabs that can help you as well.

Again, fraught with controversy on its release, but subsequently, this risk calculator, the pooled cohort equations actually worked very well in a general population. They were validated in a large study called REGARDS, which is 30,000 randomly-selected African-American and white individuals in the U.S., and it performed very well. So use the pooled cohort equations. There may be some low-risk groups, like health professionals, people with high socioeconomic status, Chinese, East Asians, Mexican-Americans, who are a lower risk group.

Or you could start with the Risk Estimator and then downgrade the risk estimate on that basis, and again, use it to inform the clinician-patient discussion. So we hope with our new guidelines we can really address very serious treatment gaps in cardiovascular prevention, and these are fairly recent data. Half of women with cardiovascular disease, and more than a third of men, are not on a statin. More African-Americans and Hispanics with cardiovascular disease are not on a statin. 80 percent of people with familial hypercholesterolemia are undiagnosed and untreated. Terribly a tragedy – this is basically a curable disease.

And finally, half of diabetics are not on a statin. So again, we hope we made it easier, and that we can get patients on statins to reduce cardiovascular risk. So those are my comments, and I'll pass on to Dr. Eduardo Sanchez, who will address Public Health Role in Cholesterol Awareness. Dr. Sanchez.

Dr. E. Sanchez: I'm on, and now I have control of slides, and so let's get going. Pleased to be a part of this webinar. A couple of things to repeat. One, Dr. Robinson mentioned heart-healthy lifestyle habits are the foundation of cardiovascular disease prevention, and I'm going to be kind of starting from that place. But also want to remind us all that the focus of Million Hearts is on blood pressure, cholesterol, and smoking, and I'm going to broaden the discussion a little bit to talk about other aspects of heart-healthy lifestyle.

So the American Heart Association has expanded its scope on promotion of positive cardiovascular health in addition to prevention and treatment of disease. So our feeling is promoting health is of value in and of itself, and prevention is a great byproduct of that; but that there's value in promoting health, and we understand that. And we've begun talking about achieving ideal cardiovascular health. Dr. Robinson mentioned that a moment ago. And the way ideal cardiovascular health is defined by the American Heart Association revolves around seven behaviors and factors.

We call them Life's Simple 7. No smoking, healthy eating, physical activity, a healthy BMI, optimal blood pressure that is healthy level, healthy blood lipids, and healthy glucose levels. Those seven things, when optimized, are predictive of a long, healthy, cardiovascular disease-free life, compared to those who aren't in an optimal category or an optimal status for all of those. The other aspect of that is that it reminds us that there are population-level health promotion strategies – John Clymer talked about some of those – to try to shift more of the United States population towards better cardiovascular health.

So in addition to targeting those individuals at increased risk, it is also about universally moving us towards improved cardiovascular health. There's a good evidence base for not only doing the individual focus approaches, which is really what Dr. Robinson was addressing – what do we do with the individual patient? How do we approach that? But that there are health systems approaches which can help what the provider's getting done, how the provider gets those things done to improve health behaviors and health factors, and again, there are population approaches which can target lifestyle and treatments.

Really lifestyle, but can direct people towards treatment opportunities in schools, workplaces, local communities, and other geographic or populational aggregation locations. That's a lot of words, but faith-based communities come to mind as another place where one can target lifestyle and treatment. So here's ideal

cardiovascular health defined. You see Life's Simple 7, the factors on the left. You can see that in this chart, they're categorized as poor, intermediate, and ideal, and again, those individuals who are entirely in the green have not only a better risk profile, but a higher likelihood of a long life without cardiovascular event.

I put in red the cholesterol. You can see here the numbers. These are numbers that are defined in NHANES. This is how this information is captured right now. I'll talk a little bit about what might be an opportunity to make things make a little bit more sense in the future. This is the prevalence of those seven factors in adults, and it's broken up into 20 to 49-year-olds, and then those greater than 50 years old. I'll leave it to you to sort of look it over. It's a little busy, but if you look at cholesterol, what you can see is that the yellow, meaning poor control, and the red, meaning intermediate control, that there is a tremendous opportunity for improvement on the one hand.

And as one knows and one might predict, as we age, we move from ideal into intermediate and poor levels. Some NHANES statistics: 47 percent or so of adults have ideal cholesterol levels as defined by an untreated total cholesterol less than 290. I do want to just remind you that the discussion that was just had by Dr. Robinson would suggest that 190 ought to be our cutoff to think about ideal cholesterol level. And I've taken note of that, and will be bringing that back to the American Heart Association and our notion of Life's Simple 7 to think about that.

According to the most recent data, more than 100 million Americans have total cholesterol that's greater than or equal to 200 milligrams per deciliter. That suggests there is some opportunity to have a conversation and treat, just based on the number. And we heard already that a risk assessment approach is one that has been (a) is endorsed by the American Heart Association-American College of Cardiology, but in addition, seems to outperform the methods that have been used up to now. Almost 31 million Americans have very high cholesterol levels that exceed 240 milligrams per deciliter; that's 13.1 percent of the adult population.

I put the Preventive Services Task Force Cholesterol Screening Recommendations on here for a couple of reasons. One, you already heard from Dr. Robinson, the risk-based approach doesn't mean we don't check and test cholesterol levels, on the one hand. And on the other hand, the U.S. Preventive Services Task Force Recommendations that have an A or B recommendation are preventive services that the Affordable Care Act says will be provided to individuals with no additional out-of-pocket cost, so

there'll be no copays associated with these recommendations and adherence to them in the clinical setting.

I'm not going to go through these. It just says that basically for men and women over the age of 20, the Affordable Care Act is going to cover the cost of screening. But I do want to call attention to the bottom part of this that shows that there are updates in progress. Lipid Disorders in Adults, to come out sometime this year – not many months left – and Dyslipidemia in Children and Adolescents, to be released in 2016.

And some of us on the webinar were talking about our expectation that the new guidelines developed by the American Heart Association and the American College of Cardiology will be included, and will be reflected in what will be the new U.S. Preventive Services Task Force Cholesterol Screening recommendation. The optimal for screening is uncertain; I'll just move on from there. You've heard enough, but I think there's value in periodically testing cholesterol levels and/or doing assessments, and I'll get to that in a moment.

This is just to reflect the age-adjusted trends and prevalence; I'm going to move on from looking at this. The next slide is material that was already covered by Dr. Robinson, so it's just to remind all of us that the guideline is out there, and this is just a summary of that. Initiating statins in individuals with clinical atherosclerotic cardiovascular disease was discussed, so I'm going to move on from there. I just want to note, again, that if LDL cholesterol is above 190 milligrams per deciliter, that's opportunity to intervene and treat.

And as we heard before, the Risk Estimator is the tool that we as clinicians should be using to determine whether statin therapy makes sense in individuals who do not have atherosclerotic cardiovascular disease. Again, I'm going to move on; we've already discussed this, and I want to come to what is my terminal slide, which is the things that we need to do as they relate to high blood cholesterol from a public health perspective. Focusing on the promotion of positive cardiovascular health makes the most sense, in addition to prevention and treatment, when indicated.

Health behavior and health factor optimization should be emphasized, so even if that individual is somebody who's going to get started on the statin therapy, as we already heard, healthy lifestyle is the foundation. So tobacco, eating, physical activity, healthy weight, blood pressure, and blood glucose should be part of the overall not only discussion but treatment plan or intervention

plan. And then lastly, I just want to say that maybe the newest thing is to encourage discussions with one's physician to determine ten-year risk using the AHA-ACC Risk Estimator to determine whether even without cardiovascular disease, one might be a candidate for statin therapy at the very least.

And so with that, I am going to pass the baton, if you will, to April Wallace, who's going to talk to us about cholesterol tools and resources.

April Wallace: All right, thank you, Dr. Sanchez. As he mentioned, I will just take a few moments today to highlight some of AHA's tools and resources related to cholesterol management. So we'll start with our online tools. We have My Life Check and Life's Simple 7, and our Heart360. So as Dr. Sanchez mentioned earlier, AHA has identified seven health factors and lifestyle behaviors that support what we consider ideal or optimal heart health; it's called Life's Simple 7. My Life Check is an accurate assessment of how you're doing in these seven areas.

And once you've taken the My Life Check assessment, it generates what's called your heart score, which will help you understand what simple steps you may need to take to improve your heart health and improve your quality of life. From there, you'll be directed to specific action plans that will teach you how to manage your behaviors and get you closer to your individual health goals.

Now, the My Life Check is now integrated with our Heart360 platform, which allows you to record and track your health numbers online, and directly connect you with a provider that you can share these numbers so that the provider can help you monitor and assist with improving your actual cholesterol levels. Heart360 also provides education for users about their conditions with relevant and educational content, and also helps you to gain a better understanding of heart health information as you're guided to more specific action plans that are suited for your individual needs.

Next we have our Interactive Cholesterol Guide, and this guide is filled with video quizzes and trackers that really help you to learn about risk factors, treatment, and measurement of cholesterol, along with helpful tips for daily living. And as mentioned a little bit earlier by Dr. Robinson, and both by Dr. Sanchez as well, you have the CV Risk Calculator, and again, it uses the information from the findings in heart studies to help the providers and patients predict risk for heart attack, and also lifetime risk for atherosclerotic cardiovascular disease.

So this tool prompts you to enter specific information related to race, age, and gender, and also provides reference material for both providers and patients related to therapy and monitoring and lifestyle. So next we have our downloadable tools here, and as referenced by Dr. Sanchez and Dr. Robinson, we have our AHA-ACC Guidelines for ASCVD, and so that's downloadable for providers. These downloadable tool kits provide information on guidelines and materials on enrollment in the platform I mentioned earlier, Heart360.

This includes pocket guides to help initiate dialogue with patients on high cholesterol management, and also guidelines for treating high cholesterol. Some of the educational materials we have, we have over 80 brochures and awareness materials, including infographics and videos and tool kits that patients, caregivers, and healthcare professionals can access. Many people have questions, so they've asked us about tests and drug treatments, so we also have some downloadable sheets that include examples of some of the common questions.

Some of our other educational materials include Cholesterol Personal Stories, so we have real patients who have experienced this and they have adopted healthier lifestyles and lowered cholesterol, as well as recipes that provide some healthy living choices. And then our Healthy Living Resource Guide for Seniors. And for any of the information that I have mentioned, along with other new sources about cholesterol, including Understanding Cholesterol, Understanding the Risk, and Prevention and Treatment, you can find this information on our website at www.heart.org/cholesterol.

And lastly, I'd just like to mention that the American Heart Association and the American Stroke Association have a support network that was launched in October of 2014. It's important that we provide a place for patients and families and caregivers to receive support and improve their own health and impact the lives of others. And so we are proud to share that; as of August of this year, we have about 7,900 members who access the support network. So again, for more information on cholesterol management tools, please visit the American Heart Association website at www.heart.org/cholesterol.

And you also have a downloadable file that includes resources that can be found on our website. At this time, it's my pleasure to return the presentation back to John Clymer, who will facilitate the Q&A session, and I will pass the ball – John?

John Clymer: Thank you very much, April, and thank you, Dr. Robinson and Dr. Sanchez. I hope I'm not going to cause any heart attacks at the moment. I'm going to try a slide change here that I haven't practiced before, so we'll see. Okay, it worked. I want to get back to this slide from Dr. Robinson's presentation to highlight one key point she made, among many. Even though you and I probably haven't had an opportunity to meet personally, I think I know one important thing about you.

And that is that if you're tuned in to this webinar today, if you're participating, then you, like each of our speakers today, have a really strong commitment to improving people's health. To helping other people carry out the ABCs in their own lives and reduce their risks for heart attacks and strokes. So when you see the information on this slide, you see, one, a really bleak picture in terms of the current state of affairs on cardiovascular health. But you also probably see tremendous opportunity. You see that there are huge gaps between where we are today in controlling cholesterol as a risk factor, and where we could be as a nation and as communities.

So there's some data here that Dr. Robinson shared that I think is startling, and we can use that to our advantage to help bring others with whom we work, other partners in our community, in our practices, and so forth, onto the band wagon with us to address uncontrolled cholesterol, and to help to achieve the Million Hearts goal on this. Now, to me the other exciting thing was shown by both Dr. Sanchez in slides like this one. It's not just a matter of us facing a really daunting challenge. The exciting thing here is that there's something we can do about it.

There are known actions that we all can take in our various settings, and most of them are evidence-based. There's solid evidence about things we can do, things you can do tomorrow, in order to help reduce cholesterol risk in the populations you serve or you address. And so I want now to switch one more time to one of April's slides, and see if I can do this – here we go. So this is just to make clear that there is an easy-to-use URL, a website to go to, to access many of the tools that Eduardo mentioned, and that April highlighted in her part of the presentation.

And again, if you have not downloaded the handouts from today, both the list of tools that are available and the slide deck, you can do so. Go to the upper left of your screen, where it says File. Click there, and follow the directions. So we have a number of questions here, and I want to cover as many of those as we can. First, many of us may be aware that there's been a lot of attention, increased

attention, to cholesterol, and particularly LDL, or bad cholesterol, in recent weeks, as the Food and Drug Administration, or FDA, has recently approved two new meds to help certain people lower their bad cholesterol.

And not only does this mean there are new therapies available to help people, but it also means that there's new energy around the overall topic of cholesterol control, cholesterol risk reduction. So I'm hoping that all of us can take advantage of this increased attention in the media and in the medical community and public health community on cholesterol control, and leverage it to carry out some of the actions that have been shared by our speakers today. So in that vein, a question for Dr. Sanchez is are there cholesterol-lowering therapies available today for people who can't tolerate statins, or for whom they aren't sufficiently effective?

Dr. E. Sanchez: Well, I think that question is a more fair question to Dr. Robinson. Yes, there are newly approved medications available. I'm going to leave it to Dr. Robinson to talk specifically about those. I do want to make one clarification. The 190 number that I referred to is an LDL level number, and the NHANES trigger points are total cholesterol, and there is a difference. I just want to clarify that. But the good news is, as you mentioned, that there are medications for individuals who don't tolerate statin drugs. I'm hoping Dr. Robinson is on and can speak about those specifically.

But I think the other thing, just to underscore, that you mentioned, John, is that never mind the people who don't tolerate statins. There's a bunch of folks out there who need to have that discussion with their physician, and they need to get started on healthy lifestyle regimen, and very likely on statin drugs, based on that one slide you shared. So we have two sides to be thinking about; the side that's not yet under any treatment whatsoever, and then the other side, of people who are being treated, but for whom the treatment is not the best option at present.

Dr. Robinson, I'm hoping. I'm back on; it's Eduardo. Yeah, Jennifer.

Dr. J. Robinson: Am I – oh, okay, I see some voice sounds emanating from my phone on the thing, so. Yes, ezetimibe is one of the non-statins that was recently shown to decrease cardiovascular events, and there are a number of other things as monotherapy that have been shown to reduce events. But what I really want to say is, you know, most people aren't statin-intolerant. We have found actually in blinded, randomized trials, that people who have said, we have

documentation that they can't take a high-dose statin, they can't take another statin at any dose, so we put them in a trial.

20 percent have symptoms on a placebo. We put them on – one of these trials, actually they were randomized to ezetimibe, one of these new PCSK9 inhibitors they were talking about, and atorvastatin 20 was the third arm. Two-thirds of the people who said they were really statin-intolerant could take atorvastatin 20 with no symptoms whatsoever. So I think this kind of brings back that most people can take a statin. It's almost more of a trust relationship. You need to explain the potential for benefits from the statin, and that you will work with your patient to find some dose of some statin that they can tolerate.

And I will say for people who truly are statin-intolerant, even a dose of, for example, rosuvastatin, 10 milligrams once a week will lower LDL 25 percent. So some dose of a statin is better than no statin at all, so I think really getting people on a statin. And then perhaps considering adding ezetimibe or one of these other new drugs, if they're a high-risk patient.

John Clymer: Thank you, Dr. Sanchez and Dr. Robinson. So at this point I want to return to one of Dr. Robinson's slides. Rather than testing, I'm taking too much risk here and messing up…maybe we won't get there. Here it is. Dr. Robinson, your graphic about the progression of atherosclerotic disease, I think it really presents a stark picture of what's happening in people's bodies, and what cholesterol does. I'm wondering, is atherosclerotic disease reversible?

Dr. J. Robinson: Well, that's an excellent question, and we've actually written an article on this. We would hope. We know from animal models, actually; of course, mice aren't people; but if we can use cholesterol drugs early in the course of atherosclerosis, that maybe we can reverse it. I know there's a trial going on in children, looking at an ultrasound regression, and we've also proposed one in younger adults as well. So that would be neat, because in a way, we have a pretty clear understanding what causes atherosclerosis. We know what to do about it, and it really is a preventable disease.

But again, we're just starting to get there in terms of when's the best time to initiate drugs on top of lifestyle therapy.

John Clymer: So if I'm hearing you correctly, you're saying that, first, atherosclerosis *[break in audio]*; second, if one already has it and it's detected and treated, at least the progression of the disease is preventable; and third, it maybe even be possible to reverse it. Is that correct?

Dr. J. Robinson: That's an excellent summary.

John Clymer: Well, I think that represents a huge opportunity for those of us who are in the prevention business, so very exciting information.

Dr. J. Robinson: Yeah, I just wanted to echo that, John. I mean I just gave my cardiovascular prevention lecture to my students on Monday, and you know, we've had massive declines, exponential declines in the rates of death from heart attack and stroke over the last three decades, and we're only halfway there.

John Clymer: Yeah.

Dr. J. Robinson: So it's really an exciting time, I think, for cardiovascular prevention, 'cause we've got a good handle on what we need to do. Now we just need to do it.

John Clymer: Yeah; exactly. So a tremendous opportunity out there for the taking, and it's going to take all of us. Everybody on this line, and all of our *[break in audio]* to move the needle in the right direction, so thank you for punctuating that point. Another question that we've received from a participant is would you still treat with moderate or high-intensity statins if a person has a very high high-density lipoprotein level? So high level of good cholesterol.

Dr. J. Robinson: Right. Well, actually, there are some people with genetically high HDL levels that are at increased cardiovascular risk, so I wouldn't kind of feel really good about a high HDL level unless that person was 80 years old. So short of that, I would treat people based on the statin benefitter group. Clearly, if they already have cardiovascular disease, their HDL didn't protect them. If their LDL is 190 or greater, HDL can only do so much in the face of that really high cholesterol level. And diabetics, if you run them through the risk calculator, they usually have hypertension and other risk factors. They're still going to be higher-risk, and I would still use a statin. So HDL is not as protective as one might like.

John Clymer: Great. And that's a great clear and concise answer to our final question today, so thank you, Dr. Robinson. And I want to thank Dr. Robinson, Dr. Sanchez, and April Wallace for your presentations today, for participating. I want to thank everybody who was online to participate with us today. Reminder that we are in right now, in September, National Cholesterol Month, Cholesterol Awareness Month, and so this webinar is one way that the National Forum and American Heart Association are supporting and taking advantage of National Cholesterol Month.

And again, a call to action to everybody participating today, to do your share and seize the moment to help achieve the cholesterol goal that's part of Million Hearts ABCs. There are a lot of heart attacks and strokes that can be prevented in your community or your practice. I also want to thank Julie Harvill from the American Heart Association and National Forum, and April Wallace, for their huge and, to a large degree, unseen roles in organizing today's webinar. It wouldn't be working without them. It wouldn't be happening without them.

So thank you very much, Julie and April, and thanks again to Johanna, our moderator, for this WebEx. A reminder that you can download the slides, if you haven't done so already, and you should be receiving within seven business days a message from the National Forum letting you know that the materials and the recording of today's webinar are available online. They'll be there for your use if there's a section of it that you want to refer back to.

And we also hope that you will share the link with some of your colleagues, so that more people who didn't have the time in this particular slot to join us today will be able to take advantage of the great presentations and information shared by Drs. Robinson and Sanchez and April. And with that, it's the top of the hour, and the National Forum and American Heart Association thank you for your attention, your participation, and wish you all the success in the world as you pursue prevention and your share of the Million Hearts goals. Thank you.

[End of Audio]