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Presenter: Uchenna Unchendu, Leslie Hausmann

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Molly: We are at the top of the hour now so this time I would like to introduce our speakers. Joining us first we have Dr. Uchenna Unchendu and she is the Executive Director of the Department of Veteran’s Affairs, Office of Health Equity. And joining her today is Dr. Leslie Haussmann. She is a core investigator at the Center for Health Equity Research and Promotion known as CHERP. That is located at the VA Pittsburgh Healthcare System.

So at this time Dr. Uchendu, I would like to turn it over to you.

Dr. Uchendu: Hello everyone. Thank you again for joining us for this session, Highlights in Health Equity. We will be \_\_\_[00:00:42] the presentation and I have the easy part of the job because Dr. Haussmann will be doing more of the heavy lifting. And just before we get into it we would like to see who we have in the audience. So Molly, if you help us assess who is in the audience with the first poll question.

Molly: Thank you. So for our audience you can see the poll question up on your screen at this time. And we’d like to know what is your primary role? Are you a veteran, researcher, clinician, manager or policymaker or other? Please note if you are selecting other at the end of the presentation we will have a feedback survey that has a more extensive list of job titles you may find your exact title there to select.

Alright, it looks like we have got a very responsive audience. We have already had 70% respond and we see some clear trends. So at this time I am going to go ahead and close it out and share these results. So as you can see the overwhelming majority, 68% of our audience are researchers in their primary role. 5% clinicians, 11% management or policymakers and 16% responded other. So thank you to our attendees. I will turn it back to Uchendu.

Dr. Uchendu: Thank you everyone. I will move us to the initial slide. Sorry, I’m not advancing my slides. I am a little dependent.

UF: I apologize. I am having some technical difficulty getting the slides to resume. Do I need to do something other than to reactivate slide show?

Molly: I think if you just yea, just reactivate the slide show from where you started you should be good. You should be able to click right on the slide though.

UF: That is what I am doing.

Dr. Uchendu: The slide has to do with the purpose of the presentation and if you saw the announcement you probably have knowledge of that. As I mentioned, I will be tackling the first bullet on that slide which has to do with the partnership between Office of Health Equity, VISN4 and the Center for Health Equity Research and Promotion in pursuit of this project that you will be hearing a lot about today. The next three bullets are about describing the nature and intensity, the barriers and facilitators to implementing strategies, the data that came as a result of this project and also some recommendations from the lessons learned will be covered by Dr. Haussmann.

On the next slide I am attempting to answer a question that I get asked very often. I notice we have a lot of researchers. On slide four I believe we have sharing one of the ways that Office of Health Equity Partners. That is a question that I have received sometimes how does your office partner with researchers or others. Depending on the nature of the project we would also go to an MOU which is a memorandum of understanding and for this particular project I am sharing what the content of that MOU was. Basically, CHERP investigators partnered with our office and then in turn with the VISN4 racial disparities project CHERP took the lead on research evaluation of this project in real time. And the intent was that the findings will inform the Office of Health Equity and any others who are committed to advancing health equity not just for the hypertension in question, but some of the strategies that will be applicable to other areas as well.

On slide number five I see the specific aims of this particular project again, reflected in the MOU. I will not dwell on these because once Dr. Haussmann takes over she will tell you about these in more detail. Suffice to say that the nature and intensity of hypertension control intervention is implemented with part of the aims and that in addition trying to figure out how these could become applicable to other projects was also one of the things we are hoping to achieve.

And moving on on the next slide the responsibilities were also spelled out. CHERP has the subject matter expertise for the research evaluation and so took the lead on design. The Office of Health Equity collaborated to bring the over action, overview from central office standpoint, from assistance standpoint. Office of Health Equity funded the CHERP investigators involved in the evaluation and the VISN4 funded the quality improvement activities within their facilities and then within the facilities the staff operationalizes the quality improvement project. Here underscores a cross cutting theme in terms of being able to engage from the top all the way to the front line and that is the beauty of a project like this. And of course the additional piece is that it is based on trying to address health equity in a vulnerable population.

On the next slide if you heard me present before you probably have seen this slide so I won’t bore you with it. It is included here to underscore that the series is highlighting focusing on health equity and action. And when we talk about health equity actions within the VHA we go back to the health equity action plan developed through the office of Health Equity with the Health Equity Coalition. And in the next couple of slides I will make the connections for you. The bottom of this slide talks about the strategy and then I met with the VHA strategy plan and with the Blueprint for Excellence. And the next slide, Leslie?

Here pulling out the sections of the Blueprint for Excellence that this particular project speaks to and they highlight in red the VHA will aspire to the triple aim implementation of a population health program – the sick population was targeted here in a way that could be replicated in other populations with vulnerability. Advancing knowledge and improving individualized population health and one might add to some extent personalizing the health approach to the individuals based on the social determinant that impacts their ability to reach the highest level of health. And then rapidly translate into research findings and evidence based treatment in clinical practice even though this was not \_\_\_[00:07:56] but having the evaluation in real time alongside the implementation made it possible for real time feedback so that those doing the implementation could make the adjustments along the way.

On the next slide which is I think it is almost – I am almost at the end of my section – here there is a lot of words, but the intention was to draw out for you how this project again ties into the various sections of the health equity action plan. The key areas are awareness, leadership, health system life experience, cultural and linguistic competency and then data research and evaluation. I have already mentioned how the evaluation piece ties in having the subject matter experts from CHERP and inform policy and operations develop products that could be more widely used. With regards to awareness, the fact that this project is drawing attention to racial disparity in hypertension and you can substitute racial disparity with any other vulnerable population. You can also substitute hypertension with any other disease and condition. But this is a road map of how this could be done. Leadership I want to underscore the ingenuity and the forward thinking nature of the VISN4 leadership that incorporated health equity in the fiscal years or think of new ideas for what they could do performance target. And then set the stage for the facilities to hop onto a project like this. And then making the connection \_\_\_[00:09:36] necessary partnerships to move this forward. So again this slide is supposed to draw out the items of the health equity action plan as they are linked in with this project. Hopefully people will be able to use that background to tie in other projects.

And the last slide before I turn it over to Leslie I would like to underscore that the MyVA is encouraging all of us to put the veterans first and this picture here is showing you how CHERP, Office of Health Equity, VISN4, VISN4 facilities all those activities all channeling toward the veteran in the center, in the middle first and however else you want to put it. And then again the portions of it link in with the Office of Health Equity advancing health equity among vulnerable veteran populations, partnering with anyone as necessary, supporting activities, \_\_\_[00:10:44] activities, bringing a spotlight to it like we are doing with this series and then funding where necessary or possible. I guess that will be the case. All hands on deck to advance health equity with synergy. As you can see and Dr. Haussmann will be sharing with you how those can be very rewarding \_\_\_[00:11:06] results.

So with that, Leslie, you have the floor.

Leslie: Great. Welcome everyone and thank you Dr. Uchendu: for that wonderful set up. I wanted to first of all acknowledge much like was a theme through all of what has already been said. This really did take a village. There were a lot of partners at the table and a lot of hard working individuals who made all of this possible as shown here. And a disclaimer: Everything I am going to be presenting are my own views and not those of the VA or the US Government.

At this point I have a couple of more poll questions from Molly to run you through so I have a better sense of who else is on the call.

Molly: Thank you. So the first one we have up there are you involved directly or indirectly with managing care for hypertension among veterans? Please go ahead and select the circle next to your answer option.

It looks like we have got some good responses coming in and a pretty clear trend going here. We will give people a few more seconds to respond. Okay it looks like we have had about a 60% response rate. I am going to go ahead and close the poll now and share those results. So 10% of our audience reports yes they are involved directly or indirectly in managing care of hypertension and 90% responded no. Thank you to those respondents.

Want me to go ahead and launch into the next one, Leslie?

Leslie: Go right ahead.

Molly: Alright. So back in September of 2014 we did a cyber seminar titled Partnership in Pursuit of Health Equity and it was a focus on minority veterans. And we are wondering if you are able to attend that session in which Dr. Haussmann described how this project originated. Please select one of the following: Yes and I have been looking forward to this follow up ever since. Yes. But I need to be reminded of some of the details. No. But I am looking forward to hearing about it today. And again, \_\_\_[00:13:20] about half of our audience votes so we will give people a little more time.

Okay. We are right about 60% response rates. I will go ahead and close down the poll and share those results. So it looks like 6% of our respondents were able to view that one and they have been looking forward to the follow-up. About 17% were able to attend and would like to be reminded of the details. And 78% were not able to attend that presentation.

Thank you and we are back on your slides.

Leslie: Alright. Well thank you everyone for tuning in today whether or not you could attend these previous ones. These questions really make me think that a lot of you are on the phone because you are interested in the health equity portion rather than just the hypertension and control portion which means my work is cut out for me because I want the results from this to get into the hands of frontline providers. And for those of you who were not on the call you are going to get reminded of what we have gone through to some extent on the previous call because this really is the meat of the project.

So the outline for the remaining session I am going to give a general overview of the project, go through the evaluation aims and methods in a little bit more detail, \_\_\_[00:14:42] portion on the qualitative findings of our project, run through the quantitative findings and I am going to end with a summary of the future recommendations for other projects like this one based on the – our experience with this effort.

First of all, where is VISN4? We are up here in snowy PA. At the time of this project we had 10 VA medical centers as part of VISN4 now the Clarksburg, West Virginia VA has now gotten \_\_[00:15:14] into VISN 5 but at the time they were included as part of this effort. This gives you a sense of we had 10 major facilities each of which were coordinating with a number of community based outpatient clinics or \_\_\_[00:15:29] so we had a lot of different sites that were touched by this project.

The project really started with VISN 4s commitment to reducing disparities. They included objective to include disparities in the performance plan for fiscal year 2013 and the details of their goals for that particular year were to develop a VISN wide race disparity dashboard. This was basically a method of using data from the electronic health records to stratify performance of a number of quality of care measures to see how the VISN was performing for people of different races. They also wanted to distribute the dashboard to VISN4 facility leaders, use it to identify specific opportunities for quality improvement and implement initiatives to reduce disparities and monitor their impact. So all of that was in fiscal year 2013 and CHERP works very closely with the VISN to try to help them set up this race disparity dashboard.

What you are seeing here is the initial findings once the substantial infrastructure was in place we started by looking at the percentage of black versus percentage of white veterans who were meeting 19 different primary care quality measures. So the data you are seeing here is back from April 20th, 2013. There are a whole bunch of measures here and I’m not going to get into detail about those. What I want to do is draw your attention to the one with the biggest race difference. That measure shows the percentage of white patients diagnosed with hypertension who at their last registered blood pressure was less than 140 over 90 – at the time that was the target level for people diagnosed with hypertension. If they had blood pressure under 140 over 90 it was considered to be controlled hypertension. We basically the 10.7% shows that white veterans, the percentage of white veterans meeting that quality of care measure was 10.7 percentage points higher than the percentage of black veterans meeting that measure. And for those of you who like absolute numbers what this translated to was 80% of white veterans were meeting – just over 80% were meeting that measure whereas it was 69% of black patients.

So this all – given that hypertension was the biggest by far disparity we were seeing in our VISN the VISN came up with some new and more targeted objectives for fiscal year 14. And in that year the objective was to carry out a VISN wide quality improvement effort to reduce racial disparity in hypertension control. They outlined a specific target and that was to reduce the number of black veterans with severe or stage 2 hypertension in VISN4 by the end of fiscal year 14. Now I am going through this very quickly, but there was a lot of thought and discussion that went into choosing this specific target that I don’t have time to go into today. I do want to highlight two things. First of all, some of you may be asking why are you focusing only on reducing the number of black veterans? Why not everyone? And that was the national targets for hypertension control were being that for whites but not blacks at most VISN4 facilities.

And the other question that might be on your mind was why did you focus on stage two hypertension which was defined as having a blood pressure reading of greater or equal to 160/100. And the reason for that choice was that patients with stage two hypertension are at greater risk for vascular morbidity. So from a population health perspective black veterans with stage two hypertension were the most at risk for suffering complications for uncontrolled hypertension and given limited resources we chose to focus on trying to reduce the black/white disparity in hypertension by focusing on this extremely at risk group.

And that really is the outline and commitment to that set of objectives for fiscal year 2014. The VISN4 hypertension racial disparities project was born. The VISN appointed a project lead and that was – that person was a VA Pittsburgh physician with past experience in proving racial disparities in hypertension control in another network. His talks was to coordinate efforts across the VISN to march towards that goal of reducing the number of black veterans with stage two hypertension. Facility project leads were also appointed to each of the 10 VA medical centers that were in that map earlier. The project leads were all involved in primary care delivery but their specific role varied. So it varied from nurse – registered nurse at one facility all the way up to chief of staff and director of primary care at other facilities. It was really a range of different people at the various facilities who got tapped with leading this effort locally. And they are tapped to oversee the project activities not only at their VA medical center, but also at their affiliated CBOCS.

The first step that the project VISN charged the facility project leads with was what was called a GAIR analysis. This was a process by which facilities were walked through steps to identify the factors underlying the black/white hypertension disparities at each facility. And the GAIR in this GAIR analysis stands for four potential contributing factors as to why a patient may not have their hypertension under control. The G stands for providers use of current clinical guidelines. Is the patient currently prescribed the recommended regimen of medicine based on the current clinical guidelines. Another contributing factor could be patient adherence or lack thereof to medication and lifestyle modifications that have been prescribed. There is also the chance that provider clinical inertia or lack of urgency in treating patients with hypertension to be the reason. And this basically is – inertia and guidelines is easily confused, but inertia applies specifically to getting patients to come back. So are they getting scheduled for follow up patients and are we engaging them as urgently as we should given their disease status?

And finally, patient resistance was the last potential factor and this is – the provider is using the clinical guidelines, the patient is taking their medicines, they are getting followed up on a regular basis. Are they still having uncontrolled hypertension? And patients who fall into that category the reason for their hypertension was categorized as resistant and basically they are just – their body is resistant to standard medication management.

The project lead in the VISN provided facility project leads with a hypertension racial disparity project toolkit which would help them figure out what was going on at their facilities and devise an action plan. The first page which I am showing from screen shots over the next several slides. This first screenshot shows that every facility or every VA MC included in these numbers were the VA MC and surround CBOC patients. Basically it was populated for the facilities using the race disparity dashboard showing how many black and white hypertensive patients were in that area, how many didn’t have controlled hypertension according to the 140 over 90 criteria and then going a step further how many had uncontrolled hypertension according to the more \_\_\_[00:23:36] stage two hypertensive definition.

Each facility had at their disposal a GAIR audit worksheet. They were given instructions and guidelines for doing chart reviews on a sample of patients at their facility with uncontrolled hypertension predominantly black patients whenever possible going through the charts to try to identify our patients taking the recommended medication are they adhering, are they filling their medications, are they showing up for appointments, are they being scheduled for appointments and despite all these things are they still uncontrolled. Facility project leads needed to go through their group of patients at their own facility to try to identify what types of reasons might be responsible for why those patients still had uncontrolled hypertension. At the end of that chart review process each facility had an audit summary sheet which is shown here showing the number of patients that they included in that chart review who fell into each of those four categories. And what I have here is the summary of so we had six of the VA medical center project leads \_\_\_[00:24:53] and share their findings with us. You can see here the results. The dark blue solid lines show that almost all the facilities had at least some of their patients fall into all four of the categories. These were things that were really identified as contributing to uncontrolled hypertension at the facilities. The striped line however shows that the largest contributing factor at facilities did vary. So one facility it was clinical guidelines that was the culprit the main culprit. Three facilities, it was patient adherent and two facilities it was clinical inertia. And the reason that this is important is that the types of strategies that like they use to tackle the problem with their own facility should be directly informed by the problems that were identified for that facility.

The toolkit included a tab for each of the GAIR factors to guide the facility project leads through the process of devising an action plan to address each of the guidelines – each of the four factors. Here is just one example from a facility and it is showing the guidelines. Again, the facilities were supposed to come up with an action – positive action plan for each of the factors that showed up for them. And this action plan worksheet has the facilities reflect on the barriers that may be preventing that particular factor from being achieved and then identifying resources that might be available to them to overcome this particular barrier and then also different levels of action steps – concrete measures that can be taken.

That GAIR now \_\_\_[00:26:46] a substantial undertaking that the facility project leads completed. And the second step was really once these local action plans have been devised implementing them. And basically implementing the local action plans is what took the rest of the fiscal year. To carry out the implementation the project leads served as a model and provided support, encouraged facilities to implement strategies to fit their local needs and resources and were driven by their toolkit analysis. The VISN those who worked on setting up the racial disparity dashboard provided additional tools to generate the list of patients with stage 2 hypertension. This will come into play later.

The performance metric for this and all of the list of patients who fell into the stage 2 hypertension category all were defined as having their average blood pressure over the six months prior to their last visit has to be over 160 over 100 for them to be categorized as a stage 2 hypertensive patient.

The list VISN provided to generate with patients – to generate lists of patients who fell into that category these lists are sorted by rates, the last blood pressure measurement of a given patient, the provider – there are really a lot of different ways that the facilities can sort and use these lists. Again, that was intended to enable the facilities to do things that made sense for them. And then the VISN also distributed monthly progress reports throughout the year to show progress at each of the facilities and the VISN overall.

Here is a screenshot from the April 2014 report from the VISN and I am only showing to just give you an idea of the kinds of information that was sent back on a monthly basis to the facilities to show their progress.

So all of this it was going on the VISN was doing this with or without an evaluation and CHERP is then at the table since 2013 when we tried to assist with them setting up the race disparity dashboard, but the VISN, CHERP and the Office of Health Equity recognized the golden opportunity to really learn form this large and vicious network wide attempt to reduce disparities. Dr. Uchendu spoke earlier about we partnered on this and working together was absolutely critical to being able to pull together all of the information that I am sharing with you today. And I really do think spoiler alert – I feel like we learned a ton from this opportunity so I am really grateful we were able to pull it all together and conduct this evaluation.

Briefly, the evaluation names there were three the first of which was simply to document the development and roll out the dashboard because that has a tremendous undertaking in and of itself. I covered that in a previous cyber seminar and I won’t be covering it today, but it is in a final report for anyone who is interested. The second evaluation name was to describe the hypertension control intervention strategy, implement it in the four facilities and the barriers to implementing those strategies. And finally, to assess quantitatively the impact of those intervention strategies on disparities in blood pressure control among black and white veterans with hypertension in the VISN.

With a mixed method evaluation that contains both qualitative and quantitative pieces the qualitative component was really largely based in having a CHERP qualitative expert documenting every project related \_\_\_[00:30:31] we could get our hands on so to speak. There were three different kinds of calls that we tuned in for. One type of call was the VISN wide calls. These were \_\_\_[00:30:41] excuse me, the VISN wide project lead, all of the facility leads were encouraged to tune into those meetings, eight of those meetings were held from October 2013 through December of 14. There were also quality assurance huddles with the VISN and these were calls that the VISN project lead held on on one with each facility if the facility wanted such assistance. And these were really so the VISN project lead could be of service to help trouble shoot individual problems that were coming up at the facilities. And seven of the facilities had one or two of these types of meetings in February and April of 2014.

And finally we tuned into formal, local project meetings and two facilities had very frequent meetings and we were able to sit in on eight of those meetings, two facilities. One facility had one formal local project meeting and the remainder facilities carried out their implementation of this in much more informal ways. And so there was nothing for us to tune into other than you know a conversation in a hallway or what not. So we got the data that we could from the organized meetings and from the other meeting – from the facility and the knowledge gaps that we may have met from these particular types of meetings we also conducted semi structured telephone interviews with facility project leaders in September of 2014 and we did that for all facilities so we could really check to make sure what we had gleaned from the meetings matched what the facility project leads – also perceived as being what was happening in their facilities and also the facilities that we have less contact with that gave us an opportunity to probe more deeply into what we have missed that had been going on there.

And these meetings all the notes from the interviews and the meetings were coded for barriers and strategies using a modified grounded theory approach.

The quantitative portion of the evaluation used data abstracted from electronic medical records to assess changes in blood pressure control for black and white veterans with hypertension over the fiscal year. And to the extent possible we used multi level modeling to examine how intervention strategies that the facilities use were related to changes in blood pressure and disparities in blood pressure control. Launching into the qualitative findings there are going to be three parts. The first one is something that Dr. Uchendu eluded to earlier and it was really critical I believe to the success of this whole endeavor and that was the formative evaluation.

I mentioned that we had a CHERP expert embedded in all of these calls and the evaluation team was frequently discussing in between all the calls what was going on at these meetings. We had noticed several very large potential deal breaker barriers that were being voiced on these calls. \_\_\_[00:33:46] the project we assembled a summary of the challenges that had been identified early on and we reviewed them with the VISN project lead. Very briefly, the types of things that we covered in that formative evaluation, the challenges included major turnover in leadership of the facilities. So the people that had been appointed kick off and may have done the GAIR analysis many of them left the project and somebody else took over for them. There was some process loss due to the turnover and it made it difficult to initiate and sustain project related activities. There was also a lot of confusion and concern about the performance metric. I mentioned we are using stage two hypertension as based on an average over the past six months. People were afraid that it was not going to be as sensitive measure that no matter what they did it wasn’t going to move the measure. And they were not – it wasn’t clear which visit would count towards the measure so there was just a lot of anxiety and confusion about that.

There was discomfort about focusing special efforts on a subset of patients. So as I mentioned we thought it made complete sense to focus on black patients with stage 2 hypertension but from a provider’s perspective when you are asked to do this and you don’t’ have the bigger context of being in all the project meetings it seems kind of odd to only focus on a very small subset of patients when there were lots of patients who needed good quality care. Finally, there was a universal perceived lack of resources. Time is tight. Resources are tight and this was definitely competing for other attention and resources at all the facilities.

So in response to this formative evaluation the VISN project we created a very thorough frequently asked questions document where he addressed every major challenge we had identified in a comprehensive and thoughtful way. He reviewed this document and held a quality or excuse me a Q&A question and answer session at the next VISN wide call. And he really, really redoubled effort to engage facilities to help troubleshoot. So this seems sort of like a pivot point where he reached out to the facilities who are struggling and tried to encourage them and help them get back on track.

So the remaining findings the next part that I am going to talk about is barriers to implementation. These include both the things that came up early on but also things that came up over the remaining course of the project. Overall, 19 different barriers were identified across the facilities with a median of four and a range of facilities from two to nine. They fell into four categories each of which I am going to go into in more depth.

So project implementation barriers were those related to overall implementation of the VISN for hypertension racial disparity project including those impeding local action plans. For the most part these are things that I mentioned in a formative evaluation, provider discontent, lack of understanding of the metrics, turnover and project leadership and just provider resistance or lack of project buying for various reasons. And eight facilities had at least one project implementation barrier.

\_\_\_[00:37:09] barriers to hypertension management were those related to patient’s personal, social, environmental and economic characteristics that may get in the way of them having good blood pressure control. The specific barriers are shown here. The most frequent was getting the patients to attend multiple follow-up blood pressure visits, medication non adherence was a barrier, patient resistance to changing their hypertension management plan came up and also patient burden for having them come in for more hypertension related care. At least and I won’t go through the ones that came up less frequently but at least six of the facilities had at least one patient barrier.

Provider barriers to hypertension management included healthcare provider skills, attitudes and/or behaviors regarding hypertension management. And the most common barrier was providers not taking or logging blood pressure properly or the appropriate number of times. So that came up again and again having providers to do extra stuff with their hypertensive patients was a bit of a challenge for some of the sites. The others were provider knowledge, provider variation and effectiveness, management, managing BP, blood pressure and also just difficulty engaging providers through email about the projects. And five facilities stated at least one or more of the provider barriers.

Barriers to hypertension management were healthcare system characteristics such as policy organizational factors and structural factors related to hypertension management. The most frequently cited barrier across inadequate time and resources. Something that came up early on and continued to be a struggle across the whole project. There was also barriers in the form of a lot of lack of team work or care coordination, staff continuity, who is in charge of this patient’s hypertension – is it the pharmacist? Is it \_\_\_[00:39:13] who is it? There was some difficulty there. Others included the computerized patient records systems CPRS not having the right tools, inadequate staff or expertise on the \_\_\_[00:39:27] and also diffusion of black patients across providers. So we were focusing on black patients but if each provider only had one or two that means a lot of work for each and every provider to reach those few patients. And six of those facilities stated at least one of the system barriers.

Lots of barriers were cited in our evaluation. The facilities were extremely creative in coming up with strategies to reduce the disparities and to overcome these barriers that I talked about. We identified 22 specific strategies across the facilities. The median number of strategies that a facility did engage in was six ranging from four to 10 so facilities were very busy in trying multiple strategies. They fell into seven broad categories which I am going to run through quickly. The first strategy category was provider education. This included any activity to provide information to DHA providers via email or face to face. You will see here that nine facilities, all the facilities engaged in some form of provider education although the number – excuse me, the focus of the education did vary by facility. So six facilities had provider education about hypertension definitions and these were things like the \_\_\_[00:40:55] 7 and 8 guidelines and also how was hypertension being defined and stage 2 hypertension being defined for the quality improvement initiative.

Although five facilities also educated providers on how to take blood pressure readings. Like I said before that was a big barrier and there were education efforts to get providers up to speed on what was accepted for that. And then also there was provider education at five facilities about recommendations for blood pressure management in terms of medication, lifestyle changes and target level of control for patients. Nine of the facilities had at least one type of provider education.

The next strategy category was using the list of patients with stage 2 hypertension and this category included any way in which facilities created and used a list of patients with stage 2 hypertension to facilitate blood pressure among their own patients. There were three levels of using these lists. The first two, eight facilities have generated and gave the lists to providers on a somewhat regular basis. At least they were printing them out or putting them on a shared folder somewhere saying hey these are the patients we need to focus on. Four facilities took it a step further and had someone either in the pharmacy or the head of primary care or nurse case manager review the lists prior to giving them to providers and gave the providers both the lists and specific recommendations for how to change the patient’s blood pressure management regiment. You can see eight of the sites used these lists. They were well utilized.

Patient outreach was another category that included how facilities engaged patients in new and unique ways to improve blood pressure management. The nature of outreach for facilities contacted veterans by phone and then contacting by mail was used at one facility and then another facility used – discussions about non compliance with diabetic patients as an opportunity to also discuss medication non compliance about hypertension. And five facilities engaged in some form of patient outreach.

Another patient focused strategy was patient education about blood pressure management and these are strategies facilities use to inform patients about BP and the importance of managing their blood pressure. The type of education varied. Some facilities used counseling from a pharmacist very basic counseling and other facilities used tailored education by a pharmacist as well as the \_\_\_[00:43:43]. At one facility distributed hypertension information packets facility wide and those were distributed by nurses. And then another facility engaged in education about risks and complications by a provider or nurse. And four facilities engaged in at least one of these strategies.

Another strategy and I though this one was particularly resourceful this was trying to increase uptake of existing services and these are efforts to connect patients with existing programs or services that can help the patient manage their hypertension but would not create additional staff burden because these were already services that were there and available if only the patients could get connected with them. The type of – only three facilities tried this approach. One facility referred patients to nephrology, hypertension clinic, another patient referred – another facility referred patients to the move program and then there was also collaboration with behavioral health and pharmacy as well as a medication management clinic. And three as I mentioned three facilities engaged in one or more of these types of existing services.

Another similar type of strategy was to establish a new type of hypertension appointment and this was the creation of new clinics or methods such as shared group visits that facilitate sufficient follow up with patients regarding hypertension management. And two facilities actually created new hypertension clinics specifically to carry forth the goals of this project. Other facilities that refer patients – started referring patients to pharm bb and another set up shared visits pertaining to hypertension and two facilities used one or more of these types.

And the final strategy category was using CTRS to prompt action and the strategies here involved anything working with informatics to create CTRS reminders or user friendly processes that usually facilitate follow up. And only two facilities engaged in trying to change CTRS because it is a daunting system that can be difficult to change if you don’t know what you are doing or who to engage. But the types of changes that they were successful in implementing were changing clinical reminders for stage 2 hypertension patients, creating a consult with the nurse or case manager, changing the information about hypertension guidelines and order sets that appear in CTRS, adding a radio button to trigger a follow up with a nurse immediately after provider visit and that was mostly coupled with education about hypertension coming from the nurse. And then adding quick orders to make it easy for providers to prescribe that the veteran go to a hypertension education class, nutrition consult or get a home blood pressure cuff.

Alright, I know I am going quickly because I want to leave a little bit of time for questions. Lots of barriers and even more strategies. The big question is what happened to blood pressure over the course of a fiscal year? What is shown here are time trends in stage two hypertension among black and white veterans in VISN 4. The dark blue bars are the percentage of black veterans each month who fell in the stage 2 hypertension category. The light blue bars are white patients also falling into stage 2 hypertension category. Red bars are the size of the disparity and then the line the red line is the change in the disparity from the beginning of the fiscal year to the end of the fiscal year. You can see the slope is not massive, but it is decreasing. So we did see a decrease over time in the disparity. And you can see that the blue, light blue bars didn’t really change much showing the decrease mostly was driven by the reduction in the target population which was the black stage two hypertension patients and it did not come at the expense of maintaining the control that was already there for the white patients.

Here very quickly I want you to see the same plot but done individually for each of the facilities in the VISN and the two take home points first of all there is a wide variation in the slope of the line across the different facilities but more importantly it is a negative slope for most of the facilities. So there was a lot of variation in how the facilities performed, but for the most part positive change in the disparity or in which case I mean a reduction in the disparity for the facilities.

Now I mentioned that we did some multi level modeling that we are – seems like I showed you unadjusted differences across time. What I am going to breeze through now are the modeling results. So what is shown in this first model is a couple of things. First of all, this model shows that across the VISN black patients were more likely than whites to have stage 2 hypertension so that is what this odds ratio shows. That is no surprise. We knew that going into that and that is why we did the project. This next odds ratio shows the one year change in the proportion of white veterans with stage 2 hypertension from the beginning to the end of the fiscal year. The reason this represents the change in white veterans is because they were used as a reference group. And then finally, this .84 shows that there is a significant reduction in the black/white disparity in stage two hypertension from the beginning to the end of the fiscal year. So that was all very concerning what we saw in the more simplified plot.

Now in the second model what we tried to do is I went through seven different categories of strategies that facilities use and facilities use either three, four or five categories of strategies that we couldn’t model you know from 0 to 22 strategies so we had to do the number of strategies categories that facilities drew from in the efforts they make. And what I want to draw your attention to is first of all the facilities that did five strategy categories had a significant reduction in the number of white patients who had stage 2 hypertension over the course of the year. However when you look at the disparity the number of reductions are all significant, but they get more effective than the greater number of strategy categories that were used. So you can see that the reduction was greater in the four strategy category and even further in the five strategy category than in those facilities that use three strategy categories. So it seems – so in summary there was small VISN wide reduction int eh proportion of black veterans with stage 2 hypertension and the black/white disparity over the 12 month period the reduction was greater for some facilities than for others and facilities that used strategies for more intervention - -with more intervention categories showed significantly larger reduction in black/white disparities over time.

The future recommendations from this project included ensuring that race and ethnicity and other potential risk factors are systematically recorded and made available. Getting that information into the hands of the faculties was really essential to moving this forward and it was no small task. We recommend that VISN facilities whoever include goals to reduce this \_\_\_[00:51:27] annual performance plan because that is what really lit a fire under this whole project. If you are going to carry out something like this it is really essential to provide the structure, leadership and resources to support quality improvement that target disparities because resources and guidance was clearly necessary to keep this project afloat. Allowing facilities to adapt action plans that fit their specific needs is absolutely essential. Designing the performance metrics to ensure that they are acceptable and interpretable to those who will be carrying out efforts may save you efforts in trying to get project buy in later. There was a lot of confusion and discussion about that for this project.

And finally, the formative evaluation I can’t sing its praises enough. I recommend strongly that if you are going to undertake something like this then have some kind of evaluation process in place so you can understand the process, identify barriers early on and address them so to maximize the success of your efforts. I am speaking a mile a minute but that was to leave at least a few minutes for questions. That’s all of my content. Molly, did we have any questions come in over the course of our presentation?

Molly: Thank you, Leslie. There aren’t any questions yet, but a lot of our attendees \_\_-[00:52:49] at the top of the hour. So to submit your question please go to the question section of the GoTo Webinar control panel and click the plus sign to expand it. Then you can type in your question or comment there. We do have a couple of people who wrote in saying thank you for the excellent presentation. Were any of the interventions specific for black patients or were they applied to the whole population?

Leslie: The interventions I’m not totally sure if you are asking if we came up with strategies that were culturally tailored to the black patient population. If that is the question the answer is no. We really according to the GAIR analysis we targeted making sure providers were understanding the guidelines, inertia, medication adherence those were pretty basic reasons the patients could have uncontrolled hypertension. And the strategies all targeted one or more of those. They were not explicitly culturally tailored to be more effective among black veterans than whites. However, a lot of facilities did reach out to their black patients who are on those lists of having stage two hypertension because those were the patients were most in need of additional assistance and support. Hopefully if that didn’t get at your question feel free to email me or try again by typing in a clarification question.

Molly: Thank you. The next person writes, the word research was used in much of the presentation was this study done as research under IRB review or was this done as a QA/QI project?

Leslie: This was done as a quality improvement project and if I let research \_\_\_[00:54:47] talk it is because I am a researcher most of the day. This was done completely as quality improvement.

Molly: Thank you. Does VISN 4 have more black patients compared to other VISNs?

Leslie: I would say I don’t know the racial breakdown of all VISNs I’m glad somebody brought this up, however. We have about 12% of our patient population is black in VISN 4. It varies by facility what proportion of patients are black. But the reason we focus on black/white disparities in both the race disparity dashboard and this project was because we have very few other types of minorities. We have very few Hispanic patients and other race patients. You are going to see a race disparity in VISN 4 it is predominantly going to be between black and white or white and non white.

Molly: Thank you.

Dr. Uchendu: If I might add to that a little bit also. I think that was a part of I think Leslie may have mentioned that earlier too a part of the decision process that was the fact that the white veterans had their blood pressure better controlled and so for VISN 4 not necessarily hitting the target they wanted overall with hypertension the group that needed attention to get there were the African American black patients. Is that correct?

Leslie: Absolutely. So the target at the time was – this is for facility to say they’ve achieved the target hypertension management was to have 80% or more of the patient population with diagnosed hypertension to have their blood pressure under 140 over 90. And we were seeing that almost ever single facility in VISN 4 had over 80% of their white patients hitting that target. In contrast it was 70% or less of the black patients across the different facilities were hitting that mark.

Molly: Thank you both. That is our last pending question at this time. I’m not sure if Uche or Leslie you’d like to give any concluding comments?

Leslie: I put up on the screen sort of a mark your calendars for future sessions. I’d like you to thank Dr. Uchendu for supporting this work and I feel like it was a tremendous opportunity. If anyone wants more details than we were able to cover in this session we do have a very comprehensive final report that I am happy to share.

Dr. Uchendu: I want to thank you too. Leslie started by saying it takes a village and also in the picture that I put together showing all the many layers of people. If you listened to this you saw how many people touched this. So acknowledgement would be difficult to name everyone but the beauty of it was the target was advanced in health equity for one population and like Leslie said we have future sessions on the focus on health equity \_\_\_[00:58:12] the date that is shown on your screen they are all Thursdays from 3 to 4:00 pm once each of the months that are listed in February, March, April and June. The announcement for the February has already started and the other ones will be coming thereafter. I want to thank CHERP again and thank VISN 4 and in addition thank all the other groups that individuals who are partnered with Health Equity to move the dial forward on addressing disparities in vulnerable populations within DHA and beyond. Again, thank you for tuning in and the work continues.

Molly: Excellent. Well thanks to both of you for coming on and lending your expertise to the field. Of course thank you to our attendees for joining us. As Uche mentioned the registration for the February 25th session has begun. Feel free to go to our HSR and D cyber seminar website and you can register for that presentation. And I am going to close out the session in just a second so for our attendees please wait while the feedback survey populates on your screen and take a moment to answer a few questions provided with some feedback which we do look at closely. Thank you everyone, once again and this does conclude today’s HSR and D cyber seminar. Have a great day.