Please stand by for realtime captions. >> on I'm sorry --

I am sorry. >>

Good day. Please stand by. We will begin momentarily.

Good afternoon. Welcome to the webinar titled -- excuse me. Let me start over. Good afternoon. Welcome to the webinar titled Preparing the Mental Health Needs of Older Adults . It is sponsored by SAMHSA and contracted by the national Council for behavioral health.

My name is Kelle . I would like to thank you for joining us today. Before we get started, I would like to go over a few housekeeping items. Today's webinar is recorded. The recording along with the PowerPoint presentation slides will be available on a national Council website at www.the national Council.org and the national website at -- [ Indiscernible ]

The participants only, audio is streamed through your speakers with no need to connect by the phone. Unless it is necessary, that

phone number is listed in the notes section on your screen. If you have technical difficulties, please type your comment in the Q&A pod on the right side of your screen and someone will. Please type your questions for the presenters in the Q&A pod and at the end of the presentation, we will answer as many as we can. We have a short evaluation at the end of the webinar. Please take a few moments to complete that. I would like to thank SAMHSA

for allowing us to share this information and thank you for joining us. I will turn it over to Mr. Peterson who will introduce the speaker today.

Thank you. Today's speaker is Doctor Forster and Nicole. Doctor Forster is the chief of geriatric psychiatry, the director of the research program and an assistant professor of psychology -- psychiatry at Harvard Medical School. He is a medical director of behavioral health and the Center for population health and partnered health. Doctor Forster has treatment response for geriatric depression and bipolar disorder. He is studying treatments for Alzheimer's disease and behavioral complications of dementia. Is the coeditor of the book published in 2017 entitled bipolar disorder in older aged parent -- patients.

This -- Nicole is with the Council of be here for help actually the projects as director and subject matter expert including executing reports , training and technical assistance , grants and contract proposals and supervision of staff. She oversees government grants and contracts to ensure compliance of high-quality relationships with strategic oversight and private solutions of durables. She began her career as a specialist. Shield a master of business demonstration and management and a bachelor of science and education with the University of Connecticut .

With that, I will hand this over to my colleague, Nicole.

Thank you for the introduction .

Good afternoon. On behalf of Doctor Forster , I would like to give you a warm welcome. We are happy to have you join us today to be a part of this webinar.

I am here at the national Council. I will provide a brief overview of the changing landscape with supporting adults with mental illness. I will serve as your moderator and encourage you to ask questions throughout the webinar. We will accept questions via the chat box throughout the webinar which we -- will be answered at the end of the presentation. Let's look at what is happening with the older adult populations in the United States. You may have heard of the gray of America. However, what does it mean to service them? Let's look at the key points. >> By 2050, the US will have experienced a significant demographic shift. Older adults is defined as someone 55 years or older. The significant growth will occur for those 65 years and older. By 2050, it is estimated the older adults will have almost doubled to 83.7 million or 43.1 million in 2012. And 2050, we will be a minority country. We will be ethnically diverse. This will have an implication socially and economically.

Let's take a closer look at what is happening in the mental health space. One out of four adults experience a disorder. This is expected to double to 15 million by 2030.

15 to 20% of older adult have experienced depression. That is one fifth of the adults, 55 in order. Even mild depression can lower immunity and make judgment may compromise the ability to fight cancer and other applications. >> Older men have the highest suicide rate of any age group. 85 and older have a suicide rate of 22 per 100,000 compared to an overall rate for 11 for all ages.

For older adults, barriers to treatment may range from the statement involved in seeking care, access to care and being underdiagnosed. Researchers have confirmed that older adults with evidence of a mental disorder are less likely to receive mental health services and that when they do, they are less likely to receive them from a mental health specialist.

This is due to the coexisting physical conditions. Older adults are likely to seek and accept services in the primary care for the mental health setting. Older adults with depression have a higher rate of ER visits. They have more medications and have more outpatient charges. Many have longer hospital stays . Depression is a treatable condition in 80% of the cases. Unfortunate, depressive disorders are underrecognized and are undertreated or untreated in this population. Finally, people with dementia often suffer from depression, paranoia and anxiety. Healthcare provider skills with the treatments are extremely helpful in these complex cases. 70 eBay -- may be miss diagnosed and may have eight treaty -- treatable conditions. >> This is a key factor in providing successful support as an individual in going through the dementia journey. Now, I would like to transition to my colic you will provide a deeper dive into preparing for the mental health needs of older adults .

Thank you, Nicole, for that helpful overview and summary of what some of us call the demographic imperative.

What I will talk about over the next 45 or 50 minutes, it is to describe for you the mental health impact of the aging ovulation and picking up on the points that Nicole made and focus on three specific syndromes that are common in the aging population . Geriatric depression and I will talk about the prevalence and the impact, the role of population health for integrated care and how different models of

care may be helpful in the primary care setting. I will talk about mental illness such as schizophrenia and other strategies that are studied well in terms of health services that might help outcomes of these patients. I will focus on the growing population with Alzheimer's disease and talk about the symptoms of this illness, the burden that it places upon family members, and patients with the illness and approaches for treatment.

I will talk about at the end, prevention with mental health and we will have time for questions and discussion.

The population is aging rapidly. What was in 1980 -- 50 a pyramid,

it is a small portion of the publishing, now approaching the year 2020, it looks like a rectangle. Most judgment much of this is due to the aging of the population due to the baby boomers which turns 65 in 2011. >>> When you think about where behavioral health conditions are managed, this is not just in the older population but it is true for the entire population. Most patients are not seen in the specialty mental health sector . Whether it is kids or adolescents or adults with depressions, and particularly older adults, care is provided in the primary care setting. Part of the message I want to get across are different models of care that are developed in order to recognize and treat these conditions. If an individual PCP is seen a patient over the course of their practice, they have a behavioral health component. That is staggering when you think about it. I have told for many years that primary carry docs, they are psychiatrist whether they know it or like it or not.

85% are treated exclusively or primarily and non-psychiatric settings. 65% of those get no care. Part of that is not just because there are limitations in terms of the numbers of specialties with mental health providers but resources are not adequate to address the needs. Two thirds of the practitioners , when asked about this report, and inability to brief for patients in a timely manner to outpatient services.

If you look at cost and the common conditions that rank among the top 10 amongst Medicaid readmissions -- this is throughout the country -- there are four conditions in the top 10 in terms of cost of readmission to the hospital with schizophrenia and other disorders been number two dig. Number three, substance abuse disorders and other disorders are number nine. This is a costly problem. >> I will bring out the entirety of this slide.

The other important point to know, people who suffer from severe mentor illness, and many illnesses, they have shorter lifespans than cohorts who do not suffer these conditions. As you can see, the trend in the general population is for a longer lifespan, what happens with schizophrenia and bipolar and substance abuse disorders, they are a risk of my tallies is higher. There is a mortality gap with schizophrenia of between 13 and 30 years of loss life by having the diagnosis of schizophrenia. We can argue why that is but one factor is the severity of illness and treatment that may have side effects. There are also demographic factors. There is system -- health the -- system factors. Members with mental illness have higher levels of preventable complications with stroke. Intervening earlier with better medical care would help prevent some of these problems but the patients are not going for treatment or the treatment they receive for mental health like certain medications may be masturbating a problem. We have a huge problem in terms of early and premature mortality with patients with severe mental Ellis.

Cost of caring for patients is also higher .

That is regardless of whether or not you look at patients who are insured by commercial insurers, to care or Medicaid. If you look at the bottom line which is in bold, 15% of the patients who are covered by one of these categories of insurance have some help here health diagnosis. When the patient has a behavioral health diagnosis in addition to a medical diagnosis, the per member per my cost triples. The individual without the diagnosis , it would be $397,000 per month. It nearly troubles to $1085 -- 1085- --

Let's start out with late life depression. I am speaking as a geriatric psychiatrist . I treat people in outpatient clinics. One of the main points I want to bring out is the preponderance of depression in the primary care medical center where I think a lot of the action needs to happen.

If you look at the demographics in the United States. You heard this from Nicole but one out of six of those who walk into mental health clinics, they had depression.

Not all of that is major depressive disorders defined in the DSM 5. Rates of major depression in older populations are less than they are and younger adult populations which is surprising.

When you look at the patient that we treat in medical settings whether primary care or nursing home settings, or community-based primary care settings, that is where we start seeing rates higher, maybe 20% or 30%.

There are other factors that are important to think about. One is that getting depressed is not a normal factor of aging.

It seems obvious to those -- us but I still hear to this day from colleagues in primary care , from patients, from family members, friends and family of my own, about the way they project their own feelings about getting older. This ageism bias -- where somebody is in their 80s and fell and broke a hip and they -- their spouse passed away and they are in a long-term health clinic. Importantly, that ageism bias can lead to therapeutic and diagnostic nihilism. We do not think to diagnose or treat the problem because we figured that is normal aging. I want to encourage you to treat older adults do not to think as depression is normal aging.

We worry about this because it is associated with a risk of functional and parent. We heard about the higher rates of suicide which Nicole outlined with the demographic

data. It is important to remember that depression can alter the course of medical conditions. 70 with depression and heart disease, the outcome is worse than if they did not have depression in the first place. Also, depression is rarely a one-time disorder that can be treated and never come back. More often than not, it is a recurrent illness that can be treated and diagnosed and needs to be thought of like any other chronic illness. There is another problem that exists which is related to access. There is a severe limitation and availability a specialist who provide geriatric mental health care to care for the aging population. We will never have another social workers and nurses and psychiatrist and neurologist commissary to take care the aging population. We need those in the setting, which is why I enjoy giving these presentations, it is to train colleagues who are in primary care and other places within the medical field to understand how to treat older adults. >> I mentioned before about the link between depression and medical problems and the overall outcomes.

As you can see a slight, patient populations is on the left. Congestive heart failure , those going into the nursing home --

If you have depression plus these , more ability and mortality is more. For example, an individual has cardio infarction and they have depression. Independent of other medical factors with depression versus that without depression, they are were likely to be deceased because they have depression.

For individuals going into a nursing home with depression, the mortality rate is higher than those who come in with the same medical problems without depression.

None of this demographic and clinical information said anything about why. There are series -- theories about why this may be but these are the facts unfortunately.

One major opportunity for caring for older adults for depression is within primary care.

By the way, not only is that stigma from the collisions but also the patient's at this current cohort of older adults, especially the World War II generation -- and even the baby boomers where this is not a topic that was discussed or known more much about and certainly when they were younger.

Going to your regular doctor in your primary care setting was much more commonplace.

This is related to depression.

Have a depression care is provided in the primary care setting.

More than 50% of patients who have a psychiatric disorder are seen by the PCP within the medical setting.

Here is a scary fact which we have no that two thirds of the people who commit suicide had seen the primary care doctor in the previous months. That means depression is quietly -- people suffer with depression quietly. They are seen by the doctors but treatment did not happen.

When this first came out in early 1990s, it was a call to arms. We need to do something about this.

One question is, what is the most effective way that we can organize and deliver mental health services?

Some of you may have heard of what is called the triple aim .

This is a term that was coined by the former secretary of human services. Donna Birbeck talked about the triple aim as being three aspects of the goals of care. The first is to experience or to improve the experience of care for the individual patient. Improve quality of care for the patient while also improving the health of populations of patients and doing that while trying to reduce the per capita cost of healthcare which had been rising substantially .

This is the underlying philosophy behind the affordable care act that passed in 2010.

Some people would argue that this should be a quadruple aim.

Some people have described the fourth part would be the health and well-being of the care providers which cannot be forgotten in this equation. >> I will tell you about a study that started out

over a decade ago and was published in the early 2000's. It is called the impact trial.

The outcomes in cost-effectiveness and intervention --

This was a study which was initially done in primary care settings focused on an older adult publishing which is interesting that this trial which is now leading to 85 other stories that have replicated the findings in different populations with depression populations and also in other illness populations, this model is not only clinically effective and it is cost-effective and it was studied for the first time in older adults. It is the only example where the original data came from an older population and was extrapolated back to the younger adults.

In this study --

I am not sure how much I have but why don't I tell you about the model? The motto is taking -- in the original trial -- they called it a depression care manager. This was somebody who may have been a nurse or a social worker who was embedded in the primary care practice. Instead of the psychiatrist getting individual referrals from a primary care doctor saying would you see Mrs. Jones and do an evaluation and carried for the person within a practice setting -- that is what we call an embedded model were you are referring people with specialty expertise in the primary care settings. In this model, it is a team approach.

The social worker or nurse, what you want to call them, a partners with the primary care physician or nurse practitioner and provided a collaborative care approach. That is the term that is being used. This model is known as the collaborative care model. They show when the doctors referred patients who were identified as having depression syndromes and there may have been psychotherapy or motivational interviewing, some intervention, it is along with the adherence of therapy and communication back and forth with the primary care clinician driving the treatment with the assistance of this team --

They found over the course of a year in 12 months, the remission rate was more than double in the impact group versus the usual care group.

45% responses good. It is not good enough but it is better than usual care which is defined as whatever the primary care dog -- doctor would have done otherwise.

What was interesting and it has gotten a lot of press and it is a reason why this is being supported through codes that CMS has released where you can actually bill for the service in primary care. Four years later, the overall healthcare costs went down.

Those in the impact trial using a collaborative care model had a $4000 reduction in healthcare cost over years per person.

This was interesting because it wasn't in dollars saved on outpatient psychiatric visits. It was saved on the cost of other medical care, ER visits and hospitalizations, etc.

Not only was there a clinical improvement, there was a cost savings. When you look at the impact of this model on other health measures, patient who had cardiovascular disease over eight years were significantly reduced in patients who had the collaborative care impact model. They saw an improvement in functioning and a reduction in pain and suicidal ideation and even after the intervention ended over eight years.

It improved access to preferred treatment.

Keep in mind the collaborative care model. Depending on where you work , you may see healthcare systems --

We are an example one in Eastern Massachusetts that used this in primary care settings to assess and manage patients with behavioral health needs in a practice and reduce the referrals out to specialty healthcare.

For mild to moderate to present , this model works extraordinarily well.

Here is a question. This is a pop quiz which I will answer but I guess -- I have given you the answer. What large population has the following characteristics?

25 shorter population lifespan , accounting for 3% of all Americans and with a life expectancy that is similar to people in Ethiopia and a lifespan that is declining over the last three decades. At -- a disproportional risk of death for preventable things like hypertension and obesity.

Substandard healthcare for chronic illnesses .

Also, this population presents a paradigm for high risk disadvantage for health disparity population. >> This group is referring to the epidemic of premature death in patients with severe and persistent mental illness.

The life expectancy in the United States is increased nearly 78 years and even since the last 20 years, it has gone up almost 5 years. At the same time, we see those with mental illness are dying 25 years earlier.

For those with schizophrenia --

There are studies and it is somewhere in a 13 to 30 year range, depending on study look like -- look at. >> These are people with severe and persistent mental illness like schizophrenia and bipolar disorder.

Why is this happening? Why are people dying earlier and younger ?

Is it because of high rates of medical problems? Is it because of higher rates of obesity and other metabolic concerns like elevated cholesterol? Diabetes? Etc.? Is a because of lack of adequate healthcare and health disparities. Is a related to exposure. Is it related to the medications that we get people to treat the symptoms better? You know the typical medications have an increased risk for diabetes and cholesterol and maybe that plays a role.

What about life -- lifestyle and health behaviors? Maybe there are issues there that could be targets for potential interventions.

One such intervention is the trial. A couple of years ago, when I was working with my colleague , Doctor Bartel was quoted here on the slide. He had been doing this for the last 20 years, a novel intervention with people who are aging with mental illness to reduce bad outcomes and reduce hospitalizations and support. When he found was that when we tried to intervene in patients over the age of six five in community settings, we could not find anybody because they were no longer in community settings. They were in nursing homes prematurely or they were no longer alive. He started doing work and younger populations to try to intervene with mild viable risk factors.

He created a program called the in shape program which is known as the integrated health promotion and change program. Involve business assessment with a health buddy as well as a nutritionist who would evaluate diet and work specifically on weight loss and improving parameters such as blood sugar and cholesterol .

He used management interventions which we show to reduce blood sugar. Also engage the primary care clinicians in terms of accessing the model for their patients. They did a lot of shared decision-making. And -- patients were part of the intervention and it was tailored specifically for the individual patient.

I do not have -- let's go back. -- I do not have the outcomes listed here but what they showed was a were able to show improvement in the risk factors, including cholesterol and blood sugar. They were able to show weight loss and they were able to show engaging in better nutrition.

This prompted my colleague to work on his own and started running long-distance races. I think it reminds us who work with this population to not ignore the benefit that we can have when we try to pay attention to nutritional and physical activities as part of the overall treatment plan .

In the context of what I said, let me tell you about an individual with bipolar depression. Bipolar represents a smaller demographic in the aging population. I will talk more about that but let me tell you about this guy who was referred to see me originally over 15 years ago. I was working in the community mental health center. At the time, he was in his mid-70s. He had his first episode of mania at 27. He was living at his wife -- with his wife. He was working. He became increasingly irritable towards his family, grandiose physically violent , drinking a lot, hospitalized in the state hospital and was discharged into the care of his family.

Over many decades, he had repeated episodes of mania until the 1970s went lithium came out. He was he able to reduce the frequency of episodes but they continued to occur. He came to see me with poor sleep and becoming abusive with his family again. It was a similar pattern for when he would not do well. At the time that I saw them, he was on lithium and at a dose of 900 milligrams per day. And a kidney function which was starting to become elevated in the kidney a renal deficiency range. What was most notable when I saw him and his wife together is that she's darted to take on a lot of the care of basic activities of daily living. So over the past years, was his memory more impaired but he needed assistance with dressing and bathing.

When his mood symptoms improved with treatment, he had psychological testing and was found to have a diagnosis of Alzheimer's disease. This case and many others that I saw of years raised questions in my mind which one I looked into the literature for answers, was really absent. One question is, what is the typical course of bipolar

disorder in the aging population?

If somebody had like this gentleman, media since the age of his late teens or 20s and now it is 50 years later. What do people look like? What is the course of illness? Do they have cognitive problems? Is there functional impairment?

What about lithium?

What if they were on lithium for 30 years? Is that good or bad for your brain? Does it promote neuro- protection and prevent that rain from developing degenerative processes or is it the opposite? Patients are actually experiencing damaging effects? >> In an older patient who presents like this gentleman with mood liability and behavioral this in a bit -- agitation and confusion, how do we tell whether this is mania in somebody with a lifelong history of bipolar disorder or maybe it is delirium? Maybe he is in a visual date from a medical problem like a urine infection or he has another problem that is driving a change or maybe he has underlined dimension and we see behavioral symptoms and a setting of dementia.

We think about it, that is the key differential diagnosis. It if you think about kids, we wonder, do they have the -- ADHD?

We also get confused between bipolar disorder and those individuals with cluster B personality traits like borderline personality and narcissistic personality disorders. There is a lot of them overlaps. In the elderly, this is a differential diagnosis. They can present with mood lability , etc..

What about this? If you have a life time disorder, do you have an increase of Alzheimer's? Is there anything in literature in terms of how to treat people as they get older were mania or other state of bipolar illness? >> A couple of demographic features, bipolar disorder is increasingly common in clinical populations in older adults. If you were to look at outpatient clinics that service older adults with mood disorders, UNC a significant proportion of those patients having bipolar disorder. It may be 10% or 20%. If you look at any outpatient is that in an older population, maybe 6% of all geriatric visit, one out of 10 of those coming in with any mood disorder who is older have bipolar disorder. At some places, I would say where I worked, it is more than 10% of the geriatric unit. Increasingly, we see people with bipolar disorder in nursing homes and people presenting ED. Another clinical -- clinical distinction is someone who has aged with the illness since their 20s or 30s or someone who first develop mania after the age of 50.

There is a difference because when you develop mania for the first time later in life, it may actually be the first sign of an underlying problem. I will mention those in a minute. Given the increase in older adults, we will see an increased price in the older bipolar population.

There is a problem which we talked about, which is the increased mortality risk for patients with bipolar disorder. The ratio of a death risk for patients with bipolar disorder versus those in the general community would be 2 1/2 full for men and 2.74 women. Some died because of suicide. The vast majority cause of death is heart disease.

Substance abuse disorder can increase to the risk. If you see -- for every one unit increase in the body mass index, there is a reduction in response to treatment by 7% . Individuals with obesity and cardio metabolic syndrome are at a higher risk for a worse outcome with treatment response but also suicide. >> To answer the question I mentioned before, having a lifeline is not lifeline history the illness, the answer is most likely, this particular study came out and showed a fourfold increase of desk and people -- I'm sorry. Fourfold risk of dementia with people who had bipolar disorder for decades.

There is an increased risk for dementia in this population.

What about schizophrenia? >> There is less data on his. There are 1 million people in the United States over the age of 55 who have severe mental illness and ectopy schizophrenia or bipolar disorder. Most of this is schizophrenia . This population, again because the aging of the population, it is expected to double in the next 30 years. Most individuals nowadays has spent their lives outside of the state hospitals and 85% are in the community.

This population is largely invisible to researchers and policymakers and service providers. In part because the services that are available are underutilized and fragmented.

When you go into long-term care centers,

most of those are focused on people with physical disabilities and dementia.

One of first things I learned about the population that we treat is that in the long-term care setting, the population is starting to look more and more like what state hospitals have looked like for decades. That nursing homes, they are receiving an increase -- patients US psychiatric illness and a require more care and a come in at younger ages.

One study I was involved in years ago with my cog like, Doctor Patel's was the hope study.

It was helping older people experience success.

It was a psychosocial training program and a preventative healthcare intervention for people over the age of 50 who had a severe mental is. It was defined by diagnosis and functional impairment . The diagnosis included schizophrenia , schizo affective and major depression and they were functionally impaired at baseline. They were randomized for a period of two years to receive what was called treatment as usual and these were patients treated in community mental health center settings. They received this intervention.

We study patients in mental health centers in Boston and New Hampshire and he received intervention plus a year of maintenance.

The intervention included a skills training class that occurred weekly with a nurse and a care manager who taught skills-based training for patients with severe mental illness. They would take into the community twice a month for practice trips, seen the primary care doctor and coaching them through the appointment so they can ask the appropriate questions and take notes on answers. We gave them materials to help them follow their own healthcare and the maintenance was less frequent afterwards. What we found is that this intervention which included skills training. With a sustained improvement in functioning and psychiatric symptoms and the ability to feel effective about their management of care and preventative healthcare screening and advanced planning . >>

It is interesting to be involved in a study like that but the challenges, how do you translate dumping that is funded by the federal government that is really, it is a high and study were you have a lot of care provided that implement it and how do you translate that into the community? I think models like this that show effective outcomes in terms of symptomatic improvement, functional improvement and cost savings can be used as the basis to lobby for ways to receive this kind of funding through less traditional be for service means. This is an example of a great model to think about for caring for this population.

Last part of the talk over the next 15 minutes or so, we will focus on Alzheimer's disease. Many of you probably know that Doctor Alzheimer was a neurologist who saw the first case in Alzheimer's disease. It was a woman who was only 51 in 1906. Her name was against the. She had symptoms that would look like moderate dementia. She had profound memory loss and difficulty with expressive language. She had suspicions about her husband and hospital staff. She died very young.

When he did the autopsy, he found

-- you can see this on the slide -- you can see Dan's neritic plaques made of analyte. This is based within the cell and disrupt the structural architecture of the cell. He solved changes in the brain as well is atrophy. Because she was so young, only 51 years old, he thought this was a rare disease that occurred in the late. When I was in training, we were talking

about senility and you know, senile dimension and we have taken that word out thankfully because it really refers to being older. The main reason we see an epidemic now is because of the aging of the population.

You look at this slide, in the United States today, this data comes from the Alzheimer assassinations -- Association facts and figures and they updated this.

If you look at causes the death, Alzheimer's disease is the sex leading cause of death in the United States. Is the only cause in a graph below that is increasing in terms of mortality. The mortality rate is going to have her breast cancer HIV and heart disease and it skyrockets for Alzheimer's. We have no cure. With treatment that can help with symptoms but we have no way to alter the course of the disease. We have no way to Kurt -- cure the disease. This takes a huge toll on family caregivers, unpaid numbers and friends who are doing the majority of caregiving. There are 15 million unpaid members and now there are $210 million which is the cost of care and it is probably closer to 200 $72 billion. It is expected to rise to nearly 1 trillion dollars by 2015.

Medicare payments is nearly 3 times higher than that of the general population. You want to target a population that is growing in numbers and causes a huge burden on society in terms of care and cost, impacts families, this would be a great place to spend money in terms of novel research to alter the disease course.

If you look at the risk factors on the left memory lies and Alzheimer's disease, there's a big group in the middle. You see in the middle, all but one of these are modifiable risk factors. Impacting these medical conditions, hypertension and diabetes, substance abuse disorder and depression and high cholesterol, we might be able to alter the course of risk for dementia, development or progression when people have the illness.

The one thing we cannot change his age. This increases with advancing age with 5% of the population in the United date and they have a dementia diagnosis and it doubles every five years. By the time you hit 85, you have a 50% chance of having dementia.

That means that you have a 50% chance of not having dementia. It is not inevitable but it increases dramatically with age.

On the left, the risk factors that could be associated with memory loss, if you look at the factors, obesity, sedentary lifestyle, smoking, three of those , we know are associated with heart disease. On the right, there are generic factors that are associated with Alzheimer's disease, family history, and individuals with down syndrome who had three copies of the 21st chromosome, are those are individuals who live long enough into the 40s, they developed the pathology and the symptoms of Alzheimer's. Diabetes as well is known to be associated with dementia.

If you look at what might we be able to do in terms of preventing the onset of cognitive decline? Have other cases are attributable to seven modifiable risk

factors and it includes diabetes and depression, midlife obesity, hypertension, smoking, low educational attainment and physical inactivity.

This low educational attainment is interesting.

There is plenty of data to show again, not cause-and-effect but that people who have had more years of education have a protective effect . It takes more degeneration of the brain to occur before the symptoms of dementia are noticeable. A public health campaign that could achieve a reduction in these factors could prevent 184,000 of the court cases of Alzheimer's disease. A quarter of the reduction of the factors could reduce the overall caseload by half 1 million and by 3 million worldwide. We do not need fancy novel treatments to do this.

This shows another way, for the 76 million baby boomers, the reduction in dementia costs associated with a 10% reduction in body mask -- body mass index and you can see the numbers. >>

One point that is helpful to think about as you treat older adults, when we talk about dementia, we are talking about the end stage of a pathology process that began decades earlier.

When somebody has dementia, we define net by a decline in memory.

There is an impairment in the day-to-day functioning and life. Sunday has trouble driving or paying the bills or as the disease advances, they have difficulty with hygiene and grooming and self-care. Is more obvious when 70 has dementia. There is a pre-dementia stage which is called mile cognitive impairment. They have memory loss but they are functioning really well but the memory loss is not just worried about the memory. They have a decline in memory from a previous baseline but they are functioning normally.

There is a huge group of people with what is called preclinical dementia. These are people who have the pathology of Alzheimer's, the plaques that Doctor Alzheimer's saw. They had this in their brain. They have no symptoms. If you can imagine, people who have heart disease I might have years and years of risk factors like high cholesterol before they start having plaque and their arteries and develop heart attacks. If we could identify this group and intervene there, we could have a huge impact.

Let me tell you about behavioral symptoms and the new techniques.

One of the factors that really drives burnout caregivers is the development of behavioral symptoms with dementia. Mrs. Smith , a patient I treated, in her late 60s and was widowed at the time and lived alone in elderly housing. She has become more preoccupied with this suspicious male neighbor who lives upstairs from her. She thinks he is trying to sing to her and he is trying to seduce her. She becomes frantic and right to him. She hears his voice.

It is disrupting her sleep at night. She becomes very anxious and distraught. She does not feel safe at home. She is more isolated from friends and family. The family comes to see her and they are distraught by what they see. To bring her to the ER for an evaluation when they tell the story, they say for the past couple of years her memory is getting worse and she is relying on other people for managing her activities including her finances .

She had no history of a psychotic disorder when she heard voices. She had no history of depression or severe anxiety but now she is developing the symptoms.

She only has a medical history of blood pressure and arthritis. She had a examination that was normal. She scores a 24 out of 30 on an examination which is the mildly impaired range and she completed 12th grade.

What you think about Mrs. Smith having a number of symptoms, she hears voices that are not there. She is paranoid about somebody upstairs. She is developing mood symptoms and severe anxiety. She has some medical illness like hypertension but not much .

She is getting agitated about things. We did an evaluation, she has a significant amount of cognitive impairment. If you look in the mail, functional decline and institutional placement,

if the goal is to try to improve quality of life and maintain safety and try to improve quality of life and keeping people where they want to live. I never heard from anyone who would love to be a nursing home, the goal is to minimize institutional placement. The best way to do this is to work on caring for the caregivers. It is these deficits outside of the circle, the psychiatric symptoms, they really drive this pattern from functional decline through caregiver burnout to needing premature long-term care placement.

Addressing these symptoms of dementia is important. >> The symptoms are not rare. They are common. They may be universal.

If you see an individual with Alzheimer's disease, they are likely going to have over the course of their illness, some manifestation of a behavioral problem. It could be as mild as anxiety or it could include paranoia or hallucinations .

When patients with Alzheimer's disease develop psychoses or an impaired connection with reality,

these are not the bizarre delusions we often observe in people with schizophrenia. These are simple delusions that are based on the cognitive deficit. Dilution of that's , I cannot find my keys. Somebody stole them. They must've stolen them. Where is my money? Were, impersonation. This is not my spouse. I do not recognize this person. We call that delusional misidentification.

Half of the patients with psychotic symptoms can become aggressive towards others as a result of symptoms. This is not just a body of life problem. It is a safety problem.

This slide depicts a systematic approach that was described by my colleague from the University of Michigan published in this article

of the geriatric Society a couple of years ago. It is a well laid out and systematic approach to describing the symptoms

that one sees in the patients with dementia to investigate the cause and it could be many. It could be the environment such as a patient developing a delusion about this not being their spouse because they do not recognize a spouse or this is not their house and a spouse does not understand and they get into an argument and it escalates. It could be a triggered problem. It could be due to a medical problem. It could be due to a cute medical illness, diabetes that is not properly manage, thyroid dysfunction, etc. A thorough investigation of medical neurological and behavioral influences to the psychiatric symptoms as needed. We create a treatment plan. It includes nonpharmacological innovations as well as pharmacotherapy and we are constantly evaluating the impact of those in -- on the patient. This as well and said and done. You have somebody who is acutely agitated, it is hard to go through this systematic assessment. That is fine. You may need more medication . Unless you go back and start to go through this approach, is very likely you will miss what is driving this behavioral complications in the first place. If we do not come up with an understanding of the cause of these symptoms, the treatment plan will inevitably be insufficient or will go awry because of unnecessary side effects.

When we think about medications , is important to understand the first point which is that the FDA has never approved a angle medication to treat the behavioral and psychological symptoms of dementia or to treat the psychosis of Alzheimer's disease.

There is a couple reasons for this.

What is it that we are trying to treat? When we tell the FDA we would like an indication for a drug to treat X, Y, and Z, it would be helpful to say what that is. We're really talking about a syndrome that can present in many ways.

The other problem is safety. There is a lot of concern with point number 2, which is the effectiveness

that is modest and returns -- terms of reducing agitation and the safety concerns can be considerable. It can be the dangerous side effects that occur early on, especially with quick doses and cetaceans and making people to sleepy or hypertension and naked dizzy and their blood pressure drops. Those things we look for early on. Anyone exposed to that over a longer period time, they may be exposed to Parkinson's side effects and involuntary

movement disorder and diabetes and other problems including obesity as well as a high risk of

Reporter: And mortality.

When you're going to prescribe an antipsychotic medication, we need to be thoughtful about why and what the target Dems are and how long we are going to do more and get can that and monitor response to treatment.

The American psychiatric Association

artery with other organizations have published a consensus guideline to the management of agitation with psychosis, using antipsychotics in patients with dementia. It is thorough and I mean thorough assessment of the literature and points in clinical pearls about strategies.

All the strategies make sense for the most part. They support what I just mentioned. It is a very helpful guide for clinicians to be able to refer to when they are prescribing a medication that is off label but does have and if it as well as downsides. The consent process also needs to occur. Other classes of medications that of been getting need to be considered for the management of agitation, and includes the SSRI and CIT A/D study for

Alzheimer's disease. This is shown to reduce agitation. Remeron might be helpful for sleep and anxiety or even and depression.

Certain anticonvulsant with limited data, Depakote . I would say benzodiazepines , all those, they can be associated with acute common events but in a short period time, it becomes considerable with patients when they need to be on higher doses because they develop tolerance. Problems like aching disturbance occurs and confusion also. Many of us of geriatrics the country take people off of medicines that they do not need to be on as opposed to putting people on new medications. I will also mention the experimental therapeutics that we are's guardian here includes a federal funded study of the THC compound. You could think of it as synthetic marijuana and appeal. It was developer patients who had cancer you are undergoing chemotherapy and are getting nauseous and they stimulate appetite. And has an anti-agitation affect. We have experimented for more than a decade with a couple of papers and submissions for grant support of for those people who has aggression and nothing else is working, we are not talking front-line therapy but after multiple years of antipsychotic medications and behavioral interventions to try electroconvulsive therapy. When we first propose this, we got funny looks and say what are you think about? The person has cognitive impairment and this might impair memory more.

It can be very effective for treating agitation in the most severe forms .

I will say something now before we and. This is about where we are going with treatment with Alzheimer's disease.

You have complete -- scene plaques and we have strategies and we can see this building up in a brain and this is building up in the brain before it comes to autopsy without taking someone's brain out of the skull and looking at it under the microscope which is one way to look for pathology which we do not do anymore.

In this slide, I do not have access to a pointer but if you look at the top picture, those are Alzheimer's brains. The bottom pictures, those are normal brains. A PET measures metabolic activity in the brain. It measures the brains of ability to measure -- use

glucose.

This is looking at brain activity.

In normals and, you see the red and orange are the red mostly and it lights up throughout the brain with very healthy and normal metabolic activity.

Under the Alzheimer's at the top, the red and orange is gone. You see a reduction in metabolic activity. Even today or even starting in 2006 when the CMS approved the billing codes, you could actually order a PET scan to look for a difference between the metabolic activity that is typical in Alzheimer's versus what is typical with frontal dementia because the pattern is different. Medicare pays for a PET scan if this is Alzheimer's disease or is it frontal temporal dementia. A decade ago, the first PET scan came out . For the first time, it allows us to see brain pathology, the plaques in the brain before we -- before someone passes away. Now at the very top line, you can see the brain highlighted in an Alzheimer's patient and it is lighting up in orange and red where it is almost completely dark blue and purple in the normal scan below.

What this biomarker allows us to do, we can find those patients who are in that preclinical state that you saw for patients who do not yet have the decline or the functional decline. This is the group were we call secondary prevention and it may make a difference. In fact, if you think about it, it is like measuring the flesh on someone in their 20s and 30s. We have cholesterol in your 20s and 30s, your given statins and they don't just want to see numbers go down but lowering cholesterol in your 20s and 30s predicts better outcomes in terms of reduced stroke wrist later on my. If you start with -- imagine there are treatments that are in clinical trials that reduce the buildup of amyloid plaques as opposed to the cholesterol plaque, if you intervene when they have -- an example of the heart disease -- they had the fifth heart attack and heart is not functionally well. Preventing damage is not helpful. You get them early enough, you can prevent the first or the second heart attack, you can make a difference. That is the whole idea -- behind these therapies . And they hope to reduce pathology in a brain and a subsequent decline in function.

I was going to say a few things . What we can do in terms of healthy brain aging. We can recommend this to our families and patients. Think about the mechanisms. It is important. This is common sense but if I have to say, where the literature is strongest in terms of dietary interventions, and brain health, is around the Mediterranean diet. In some studies come is shown to reduce -- the reduction of Alzheimer's disease as much as 40%. Even in this study that we looked at, low-fat diet with -- they shut down early because the reduction in stroke risk was so much better in patients on the Mediterranean diet. You can see on the slide, those things we're talking about our fish, imago 3 fatty acids and poultry and item E and less on foods with high animal fat like Deary and red meat.

Everything in moderation. It does not mean you cannot have these things but think about moderation especially if you have a family history of dementia.

Recently, we had the opportunity to redo -- review the literature on exercise. It has profound effects on the brain as we get older. Exercise at midlife reduces the risk of getting dementia later in life. What is this exercise? It is not training for a marathon. It is I walking regiment. Is getting your heart rate up for 30 minutes three times a week. That could be a way to look at the kind of exercise that they are showing that if helped in animal and humans. Stretching and toning can be helpful as well. We talked about the aerobics. There is amazing data and there is a growth of neurons as well as blood flow increase in the brain of humans. >> One way to think about putting this together for dementia, like I talked about before with depression, the impact model and a collaborative care model is successful in showing that you can identify and treat depression in primary care. What about dementia? This slide has a lot of information but a review studies that shows care managers who specialized in an organized approach and working with primary care doctors and community

organizations, you can provide comprehensive dementia care. The program that I am most the mayor with is the program by Chris Callahan out of the University of Indiana called the healthy brain aging center where they demonstrate improved clinical outcomes but substantial cost savings. >>

We went over a lot of information. We talked about how the baby boomers are getting older and we see higher rates in depression, especially where there is illness. And this requires a novel approach to thinking about care, including the collaborative care approach.

We see more individuals with severe mental illness that are best treated in integrated settings and we think about ways to prevent those medical problems that lead to a reduction in the lifespan. With the rise of dementia due to the aging population, we need to have efforts aimed at secondary presented, slowing down the disease process of amyloid and plaque pathology and we talked about this as well as novel efforts to manage the behavioral symptoms that often drive morbidity and caregiver burnout and cost.

I think that was the last. There is an opportunity as well for those of you working in inpatient settings. For inpatient settings, to fill a niche, for those individuals who have the most refracting illnesses. Includes patients with psychotic disorders and bipolar disorders as well as patient with severe behavioral symptoms and dementia .

One way to help achieve the triple aim that we talked about is to collect clinical data on every patient. As we are working in systems that have electronic medical records

built into the care, there are ways to collect data on a patient that we are seeing so we can learn from what we are doing. Giving feedback to clinicians on performance around how well the patient is Duma treatment is a very powerful motivator. We need to think about intervention and improve typing so we can collect data on patients when they are not in the office with us. We can use remote technology and sensors that people where to collect data on patients throughout their life and not just those few minutes when they are in our traditional office setting. This requires systematic effort. Collaborative care models are supported by our -- through the codes. I think developing this within the accountable care organization model of healthcare, it will prove to be very effective.

I think Nicole and others , that is the end of my talk and we will open it up for questions.

Thank you. That was an amazing deep diving great information. It is a lot to think about as we look at supporting older adults through different stages that we discussed. We are opening the questions and we will start at the top. We will start with Joseph's question. Are there studies -- are any of the studies taking in the number of Vietnam veterans who are older adults who are still symptomatic of PTSD and depression?

Yes.

Very good question. I cannot list this off the top of my head but I will tell you daddies I was mentioning that have looked at this collaborative care model, some of the studies were done in the VA setting. They are now expanding the collaborative care model to include veterans with posttraumatic stress disorder and one individuals that is leading the researcher's is a gentleman by the name of [ Name indiscernable ] who is based in the University of Washington. We work out of his group . I think that is over the next coming years and we will show efficacy in managing patients like this was similar collaborative care models. I will also say, about the VA, they have been way ahead of the rest of the hero -- healthcare system. Those integrated care models have been established before those of us who work in war commercial systems have. Hopefully, we actually can learn a lot from our colleagues in the VA.

Thank you. The next question is, what type of skills are taught during the study?

Many of you may know that these skills training groups that came out of the University of San Diego for individuals with severe mental illness. They were focused on teaching basically daily living skills. How do you get away with -- around the transportation issues, etc.

The skills that we try to teach and hope study in addition to those, we were focused on healthcare education and management.

The nurses led the groups. We were teaching patients about the importance of following

healthcare guidelines for things like blood sugar and risk for diabetes and high cholesterol and make sure preventative healthcare targets were managed. We were doing role-playing in a groups but also live visits with the patient's to the primary care doctor office so they can learn how to go through an effective and productive evaluation

with the primary care doctor so they can take ownership for following their own healthcare. Again, we taught other skills but in terms of health promotion, in a lot of it was around preventive healthcare and techniques.

The next question is,'s Alzheimer's disease increasing death or are physicians listing on the death certificate more frequently?

I am not sure I know the answer to this question but this is how I understand it. The aging population, we see more people diagnosed with dementia because the longer you live, the more likely you have to have this pathology and the symptoms of dementia. Just by demographics alone, we see higher numbers and higher death because we have no cure. There it -- there remains a problem in terms of appropriate diagnosis. I have been trying to learn -- we have an incredible database. I've been trying to answer the questions which is, what exactly is the impact of a dementia diagnosis on the utilization of primary care visits and going to the hospital etc. There is an under use of diagnostic codes so that it looks like Alzheimer's and dementia is infrequent in a lot of

primary care settings and it has to do with under diagnosis. I think it is not overdiagnosis. I think we need to do a better job of diagnosis and we need to train clinicians on how to become comfortable and not just say screen for it but also provide them something on the backend through a collaborative care model so now that you have the problem and now what do we do about it? I would like to say there is an abundance of diagnosis but I do not think even with more education, I do not think that is filtering down yet to the diagnoses.

Thank you. >> We are skipping through some of the questions I think you have already touched on some and to try to get through. What factors may influence the late onset of mania?

I thought I had a slide but I didn't. There are medical conditions that are associated with mania for the first time in late life. I think the main one -- Inc. of a neurological condition. The prop -- the most common is stroke and dementia. For somebody with vascular dementia, in that setting, because the changes in the brain structure and function and neurochemistry, you may see the development of mania for the first time. It may also occur and it is more common , due to the medications we give patients. We can see patients who are younger who we put on antidepressant medications and increases their chance to have mania. And they are prescribed matter -- medications that can cause mania. Or it could be steroids or medications for emphysema or patients with multiple sclerosis or other conditions that required periodic dosage of steroids can trigger mania. We have to be careful about medicines we prescribe.

Thank you.

The next question, you have any specific recommendations to train caregivers on how to address substance abuse in older adults? >> Question was about training caregivers on how to address substance abuse. The first is that our current knowledge based on substance abuse disorder in older adults is way behind what we know about the adult populations. If you look at at the current cohort of people, this for the most part because the baby boomers are just reaching the stage, they are not abusing cocaine and heroin. They are abusing prescription medications and analgesics for sleep and anxiety. And also alcohol. That is where the substance abuse is happening. In terms of training caregivers, think education helps.

I think having primary care clinicians involved in screening and getting and helping them through these models to engage people with the understanding of -- I have a problem with my behavior. I have to change it and connecting with people, that can be powerful. Cohorts are more willing to listen. I think this is a problem that is going under the radar. We need to focus more on his at the healthcare system more broadly and on a population level. Then we can increase the recognition and management of these conditions. We should have a separate talk about substance abuse with the older population and the impact on caregivers.

That would be great.

Next topic.

That's awesome. Thank you. The next question, is there any evidence that someone who begins prevention -- preventative action and later use may still be able to prevent dementia?

I do not know the answer to that. The question is, when do the efforts no longer serve the role as presenting the

Preventing the onset of dementia . The studies I looked at for exercise was a midlife

study. It seems to me that the study I've seen for nutritional intervention as well as exercise intervention may help for the behavioral symptoms even after the symptoms have developed. It may enhance cognition, especially cognition. These illnesses are very powerful . They have genetic predisposition and medical factors. There are things driving the pathology. The earlier start with prevention, the better. It is never too late. In terms of the symptomatic improvement from nutrition and exercise, that alone might be helpful in terms of darting after symptoms develop.

Thank you. How young can someone have amyloid scans for preclinical markers?

Right now, in United States, there are three that will bind amyloid in the brain that are commercially produced. As a today, there is not a single insurance program that will pay for that. If you wanted to know your status and your genetic status, you could do this. You would have to pay a fair amount of money and your doctor would say what will I do with this information. By the way, the scans --

There are scans that are available but those are almost all in research . The research is a decade behind the research for amyloid in the diagnostics scans and also the therapeutics.

However, there is a Teddy that we are involved with and it is being done around the country called the ideas that he. This is a study which is funded by the federal

government and the Center for Medicaid and Medicare services as well as being associated with pharmaceutical companies. The idea of the study which will include almost 18,000 people is trying to answer a fundamental question which CMS needs to know which is, if you are found to have

-- if you have amyloid or not have amyloid by doing a skin, does it matter? Does it matter in terms of decisions that the doctor may make? Does it matter with your outcome? Does it matter in terms of cost? We're doing@study. It will be done by the end of this calendar year or maybe early 2018 to see if there is data to show it matters. If it does matter, there is a lot of advocacy work to get private insurers and commercial insurers as well as the federal government. If you are interested in her pathology, and you are showing signs of cognitive impairment, and your doctor is not sure what this is, you might be a candidate for the ideas study. I will say one thing. There could be other questions about how do I find out about research for me or loved one or a patient. The Alzheimer's Association manages a website called trial match. That is a single website clearinghouse for studies that are going on throughout the country that relate to anything having to do with Alzheimer's disease or dementia. These are from logical studies and are longitudinal studies. You name it. That is a good place to go to find out about research studies that might be relevant.

Thank you. I think we may have time for two questions. We have a long list but we will go with, do you have any educational material for primary care physicians? Or recommendations you can share? But educational materials around anything in particular?

It wasn't specific .

And -- [ Indiscernible - multiple speakers ]

I'm sorry. It would be interesting

with a diagnosis, if you can point to that because that is so important when you are screening and assessing for Alzheimer's.

For Alzheimer's, there is a mobile application that can be downloaded from the App Store which does what you are asking about. It is a mobile app for clinicians of any kind that allows them to send PDFs of educational material. Excuse me. It has information about -- I am looking it up now. It has information like in PDF format that you can send to a family member when you are in the office. It is called the Alzheimer's Association pocket card. If you just google this in the App Store, probably any App Store, you could probably find it. It is a management curriculum. Has pharmacotherapy management and patient resources and professional resources. It is probably the website that would have a link to it. I would start with the Alzheimer's Association website.

Thank you. I think we have -- we do not have time for anymore but I want to thank everyone for attending the webinar.

Doctor Forster, it was great having you with us.

Thank you for inviting me. It was my pleasure.

Thank you.

I will hand it off to you, Kelle .

Can you hear me?

Yes .

Okay .

I would like to say we did get a lot of questions and unfortunately, we did not have the time to answer all them. We can download the questions and send them off to Doctor Forster and Nicole that they will answer them at eight later time. Thank you so much for joining us today.

I would like to switch the screen over to a short evaluation and ask that you take the time to fill that out to let us know how you enjoyed the webinar. Thank you and enjoy the rest of your afternoon.

[ Event Concluded ]