WEBINAR VIDEO TRANSCRIPT

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Mental Health in Older Adults

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INA RAMOS: Hello, and welcome to the Minority Fellowship Program webinar, Mental Health in Older Adults, brought to you by the SAMHSA Minority Fellowship Program Coordinating Center.

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During today's webinar, participants will discuss NIMH priorities for research in geriatric mental health, understand the types and effects of serious mental illness in older adults, discuss the growing need for mental health professionals and whole person care for elderly adults living with or experiencing SMIs, and explore funding opportunities for early career investigators.

I'd like to now introduce our speaker for today. Dr. Javier Evans is currently branch chief of the geriatrics and aging processes research branch and associate director of aging and life course research in the Division of Translational Research at the National Institute of Mental Health. The geriatrics and aging processes research branch supports programs of research, research mid-career development, and resource development in etiology and pathophysiology and course of mental disorders of late life, the relationships between aging and mental disorders, the treatment and recovery of persons with aging-related disorders, and the prevention of these disorders and their consequences.

In addition to studies focused on older adults and their particular mental health issues and needs, the branch supports neurodevelopmental investigations of potential risk and resilience factors pertinent to mental disorders and longer range trajectories of change that may involve examining individuals during various phases of the life span as well. Dr. Evans oversees the branch's psychosocial intervention and aging and pharmacological and somatic intervention and aging programs. Both the psychosocial and pharmacological and somatic intervention programs support experimental and observational studies aimed at developing and testing behavioral, psychosocial, pharmacologic, and somatic interventions for the treatment, prevention, or rehabilitation of the mental disorders of late life.

Dr. Evans received his PhD in clinical health psychology from the University of Miami in 1995, completed a clinical internship at the New Orleans VA Medical Center, and did postdoctoral research in geriatric mental health and clinical neuropsychology at the University of California, San Diego. Prior to working at NIMH, Dr. Evans was an assistant professor in the psychology department at Indiana University, Purdue University in Indianapolis. Dr. Evans, the floor is yours.

JAVIER EVANS: Thank you very much. Good afternoon. I hope everybody can hear me OK, and what I wanted to do today was basically talk about how I have no conflicts to disclose, being a federal employee. But I want to give you a brief overview of NIMH and where I work, and then I talk about some, I guess, big issues that affect most older adults.

I'll do a brief overview of the status and current work with regard to Alzheimer's disease. I'll also talk about most of the work that we support with regard to mental health kinds of priorities at the institute, and then I have ended the talk with the different funding opportunities that some of you might be interested in.

So there are a lot of slides, but I talk pretty fast. So I think we'll probably get through this within the allotted time frame that we have this afternoon. And if you have any questions, feel free to ask.

So what I wanted to start with is, as most of you already know, mental disorders are chronic and disabling, and it's estimated that at least 13 million American adults, roughly 1 in 17, suffer from a seriously disabling mental illness in any given year, and that according to the World Health Organization, mental disorders are the leading causes of medical disability in the US and Canada. This is over and above the effect of cardiovascular disease and diseases related to cancer and unintentional injuries.

What's more is that these disorders are associated with lethality in the sense that there are over 45,900 suicides in any given year, in 2020, when we had data for those things. And in context, that's roughly double the size of homicides in that year and more than the traffic fatalities seen in 2020. And in terms of things like excess mortality, a lot of recent evidence has suggested that people who have severe mental disorders have a 10 to 20-year reduction in lifespan. So these disorders are serious, they're disabling, and they have huge health consequences.

So just for context, with regard to rates of suicide among adults in the last year, 2020, you can see that for-- what I wanted to point out here particularly is that the highest rates among men with regard to lethality are for older men over the age of 75, and that if you look among females, the suicide rate is highest for those who are between the ages 45 to 64. So there's a clear need to look at these issues among older people and to deal with some of these aspects to work and to think about ways to either change these rates or lower these rates with regard to older people.

NIMH is one of 27 institutes and centers or the National Institutes of Health, and NIH basically funds research to alleviate the burden of illness. And we're set up, broadly defined, as either disease-focused, body type-focused, or age-focused. And I work at the National Institute of Mental Health, where the mission and vision statement is to transform the understanding and treatment of these disorders through research, paving the way for prevention, recovery, and cure.

So the SAMHSA is the government entity responsible for delivering care among the public health service in the public health of the nation, whereas at NIMH, we're primarily responsible for trying to understand how to improve these things to research. This is a basic schematic of how we're structured, so generally speaking, we start with aspects of trying to define mechanisms of complex behavior, looking at basic neuroscience and basic behavioral science.

This leads to look at translational research, where you take those basic findings to be able to bring them into the clinic to look at aspects of development of new treatments. And then once those treatments are developed maybe in the clinic or in the lab, how do you get them out into the real world, which is the division of services and interventions research primarily.

So we set up, in a way, to follow this kind of translational continuum. And as a consequence, we have divisions that are set up that way as well. We also have a division of AIDS research, which focuses on the full spectrum of research in this regard with regard to AIDS prevention, AIDS treatment. And we also

have a Center for Global Mental Health Research, which looks at ways to develop research strategies that could be applied across both low and middle income countries in other countries across the world.

There is also the Disparities Research and Workforce Diversity Office, which deals with aspects of both, trying to improve the area and the work we do in the space for health disparities, as well as to probably, hopefully, try to diversify the actual mental health research workforce. As I said before, we're set up in this kind of regard to go from basic to public health work, and our strategic plan for the institute is also set up that way.

My branch covers the full spectrum of mental disorders of late life. We cover all aspects of research with regard to mood and anxiety disorder, schizophrenia, and other psychotic disorders, psychiatric syndromes, and behavioral disorders, and dementia, suicide prevention research, and personality disorders. Sorry.

So I'll just talk briefly about Alzheimer's disease and current status of work in Alzheimer's disease, but I should also say up front, I work at the National Institute of Mental Health and not at the National Institute on Aging, which is the primary NIH institute that's responsible for this area of work.

So as you all know, the main clinical features of Alzheimer's disease are progressive impairments of cognition and function and changes in behavior. These impact both people living with the disorder and their caregivers. But with regard to where we are with regard to research, it's important to distinguish between noticeable changes that you might see when someone begins to start to display symptoms in the context of these kind of cognitive changes.

But there's also new work to suggest that there are pre-clinical stages of the illness that may be happening years before anybody starts to show symptoms and that once people start to show symptoms, they might be-- with regard to status, they'd be considered having MCI, or Mild Cognitive Impairment. And that's when you start to see these changes that might affect day-to-day function.

Once these things become limiting, someone's actually clinically diagnosed with dementia, and that if we could do something to actually, say, delay onset of disease, or when you would see symptoms, so from here to here, that would have a huge benefit with regard to kind of public health impacts, cost, savings, and those sorts of things that might keep people at home longer, keep them with their families longer, and those sorts of things.

Most of the current treatments we have right now are usually just for people with MCI, or we don't have any treatments for a cure, but we have treatments to help with regard to symptoms once they are pretty severe. So given where we are with regard to the fact that you can start to see changes with regard to some of these biomarkers years before somebody actually shows clinical symptoms, the idea with regard to research right now is to understand to what degree these changes in these biomarkers are going to be relevant and useful.

So there's a lot of work looking at aspects of cerebrospinal fluid and things you might be able to look at in the blood that would be less expensive with regard to being useful biomarkers with regard to research. There's also imaging or neuroimaging research that looks at aspects of amyloid deposition in the brain and/or tau deposition in the brain that you can see with MRI or PET imaging and those sorts of things. So the question is if we can develop useful biomarkers to either track course of the disease or course of illness, we'd be able to identify people earlier and may be able to develop new treatments to shift that continuum I spoke about before.

So generally speaking, as I said, when you talk to people about where they are with regard to their ability or their performance, people start to notice changes with regard to aspects of thinking, some changes with regard to memory function and performance. But again, this is all still in the pre-clinical stage. There's no clear way to diagnose Alzheimer's disease until someone's actually passed away, and it's confirmed with regard to autopsy. So a lot of this is based on both report or self-report from the patient and/or a caregiver or a family member, who starts to notice these changes.

We do a lot of these tests, as I said before, with neuropsychological tests or other tests of cognition and thinking that are used with regard to general diagnosis, and we can diagnose MCI and prodromal Alzheimer's disease pretty well. The question is, can we figure out some way, as I said before, to identify these things early? And how can we use this information to move forward?

And so right now, the current diagnostic kind of staging with regard to Alzheimer's disease has come up with these kinds of continuums to come up with people either being asymptomatic, prodromal, having mild dementia, moderate dementia, or severe dementia, and that with regard to research purposes, how do you take all the information we talked about with regard to biomarkers, kind of behavioral features, and cognitive and functional impairments to be able to identify people and to stage where they are with regard to the disease?

But given where we are, like I said, there's no real one clear way to think about all these measurement ideas, and are there ways to use new remote sensing or use new technologies to gather this information, so you can identify people earlier, as I said, and to think about, how do you integrate all this information with regard to these blood-based biomarkers and these clinical tests, and how do you put it all together?

So as I said, there have been huge advances with regard to some of this work with regard to research. You can see these changes with regard to amyloid and tau deposition and changes in metabolism in the brain, and that might reflect changes with regard to progression of illness. And it may be useful.

But given-- and this is just a slide of amyloid in the brain. And you can see, as you go from control subjects, where there is no amyloid, to these patients who have MCI and Alzheimer's, you can see a greater deposition of amyloid with regard to PIB binding, with this particular marker of PIB binding.

And the thing is that we, as I said before, there are few treatment options for Alzheimer's. Most of them are to treat aspects of symptoms and not for cure. So there are things like cholinesterase inhibitors to help with regard to cognition.

Antipsychotic medications are given to people who have late stage Alzheimer's disease to deal with the behavioral and psychiatric manifestations of the disorder. There are new amyloid clearing medications that have been recently in the news lately that have been approved by the FDA. And they've been shown to clear amyloid, but there is still some question as to whether or not that amyloid clearance relates to clinical improvement.

And so that's still a big controversy, I think, with regard to where we are with regard to treatment. And it's led to questions around, now that it's been approved by the FDA, will CMS cover the cost of those medications? Because they're going to be prohibitively expensive if you can't necessarily show clinical benefit.

The behavioral treatments I've talked about include things like behavioral treatments in the home or caregiver training to deal with some of those behavioral disturbances we talked about and a lot of research looking at ways to try to prevent the onset of the disorder, as I mentioned before. As the population is getting older, it's also becoming more racially and ethnically diverse. So in 2016, non-Hispanic whites accounted for over 77% of cases of Alzheimer's disease, whereas people who were from minoritized populations accounted for roughly one quarter.

By 2060, this shift will change to include almost 45% of those people who would be considered minority population. So the population's changing with regard to these expectations. And the incidence of Alzheimer's disease varies, again, by race and ethnicity. As you can see, African Americans have an incidence rate around 26%. Hispanic and Latino elders have a rate of around 20%.

And these numbers are going to probably grow, particularly as people get older. And as you can see here, questions around the relationship of these biomarkers to neuropathology don't seem to line up all the time in the same way. So the question is, does the changes with regard to amyloid and the changes with regard to tau mean the same thing across different populations?

Most of this work here is from the health and aging brain study, which Sid O'Bryant is the lead investigator for. And it just kind of shows you what I was talking about with regard to, among people who are amyloid positive, you can see a varying shift with regard to people who would be considered cognitively normal.

Here, there are about 20% of them seem fine. About 12% may have MCI, and 60% have dementia. But that varies with regard to non-Hispanic whites, which you can see a larger percentage here. And pilot data has shown these varying positivity rates with regard to amyloid positivity.

So this is a huge study right now looking at these things across a wide swath of older adults. And the main point I wanted to make here was that these positivity rates vary and that we need more work to look to see how these things shake out within different racial and ethnic categories.

So the biomarkers that we do have evidence here for are differentially prevalent among diverse populations. They're differentially related to clinical outcomes and that there are other demographic and social cultural factors that may relate to define cognitive outcomes among these populations. And we cannot really move forward with aspects of precision medicine without an inclusion of diverse communities to be able to do the work.

So now I can move into what I do every day, and hopefully that will be more with regard to some of these questions. But a lot of clinical problems that have been associated with aspects of life transitions include loss, stress, depression. And that these common clinical issues pop up particularly among older adults. And then we'll talk about treatments that are available to deal with the most common disorders among older people with regard to late life depression and late life anxiety.

So as I said, these issues around stress and adjustments and transitions also interact with aspects of medical illness that may lead to people having depression later in life. I should say that there are both bad transitions as you get older and good transitions. So the things like the death of a loved one, a chronic illness, retirement can be a huge stressor for people as they get older. But there are also good transitions, like the birth of a grandchild or those sorts of things.

So they're not all bad. And if I don't say anything else, I should say that it's a misnomer to think that depression is normal among older people or that it should be expected. Late life depression is depression, and it is an illness that can be treated. And it is not a expected outcome as one gets older.

So with regard to some of these major manifestations of loss with regard to changes, you can have periods of adjustment disorder that may resolve. You may even have issues with regard to mood and anxiety disorders that may require treatment. If there's a traumatic event, you may experience symptoms of PTSD that, if not treated, might develop into PTSD. And if you do suffer the loss of a loved one, the bereavement, if it's extended, could be considered prolonged grief disorder.

So there are all these different transitions, and there are all these different things that happen. If we think about bereavement, I think as you get older, I think it's just to be expected that you might lose people you love. It's to be expected. But the things that distinguish prolonged grief disorder or depression from bereavement is that they're prominent feelings of guilt and worthlessness that may associate with the loss, suicidal thoughts, prolonged and marked functional impairment.

And generally speaking, I think bereavement could be a risk factor for the development of depression. So about one in five people who have suffered a loss may develop major depressive disorder. Other aspects of serious mental illness or serious illness-- pardon me-- may lead to aspects of stress.

Some of these illnesses associated with depression include things like cancer, heart disease, or changes in immune system function as a response to stress. Corticol suppresses immune function, and a compromised immune system function would lead to you being less able to resist aspects of infection and could lead to cancer development among older people.

And that what we have to think about is resources to actually help manage stress among older adults with regard to positive beliefs and attitudes, social support. Do people have a good network of friends and family available to them? And given what we've all gone through, I guess, with the last two or three years with regard to COVID-19, the importance of these social networks and these social connections have become clear.

The feeling of actually having personal control or I think when we were in school we used to say that you had an internal locus of control or that you thought your ability to handle these problems was something you could deal with and manage. Exercise and relaxation are also good ways to manage stress. And mindfulness-based aspects of stress reduction or mindfulness training are also good ways to deal with stress.

When I talk about late life depression particularly, late life depression may not present the way major depressive disorder presents in adults or younger people. Often you can have depression without sadness or those aspects of feeling like there's a marked sense of, I guess, sadness. Or it might present with irritability, anxiety, cognitive changes, where people might complain about problems thinking or difficulty concentrating.

There might be prominent vague somatic complaints or symptoms that people come in to see their doctor with, other health worries that are hard to explain, heightened pain complaints. A loss of interest and pleasure in things might be prominent. So anhedonia without sadness might be a prominent feature among older people. Withdrawing from social interactions or avoidance of social interactions, and aspects of changes in their functional routine that are hard to explain.

As I said before, if you look at research, these things co-vary. A lot of older people who have been depressed report unexplained physical symptoms as their chief complaint. And I think what I'm just trying to say is people won't come in and go, I'm depressed. I think a lot of older adults with regard to aspects of this may also come in and just say, I just-- I'm having trouble concentrating. I'm having these kinds of unexplained symptoms. I'm tired all the time. I have aspects of pain and things like that. But they may not actually identify it as being a mental disorder.

As I said before, medical issues or medical diagnoses are associated with a high risk of depression among older people. A change of environment or those new transitions we talked about could be a risk factor. Personal or family history if the person has a family history of depression or has their own history of depression as a younger adult, and then changes with regard to hearing or vision impairment severe enough to affect day to day function might also be a risk factor.

And this is just looking at prevalence rates of major depression. And as you can see, out in the community, as I said before, the rates are pretty low. So generally speaking, it is not a common or expected thing as people get older that they should have or experience depression. But as you get more involved with aspects of the medical community and changes with regard to things that might be indicative of a chronic medical illness, you can see that the rates go up.

So that among people in nursing homes, for example, they've seen prevalence rates that go anywhere from 6% to 25%. As I said, people who have late life depression, it's seen in 15% to 25% of older adults above the age of 65, with particular higher rates seen in people who've had strokes. So people who've had strokes might also be at risk for what's called post-stroke depression.

One third of Alzheimer's patients exhibit depressive symptoms. That might be evident when they've gone in to see their doctor. And over half of Parkinson's patients might also exhibit depressive symptoms. But the big tragedy here, I think, is that more than half of these people are never formally diagnosed with major depressive disorder. And of those who are identified, fewer than half of those people receive treatment.

So there's a marked need, I think, for people to be aware of these kinds of signs and symptoms. And we need more people, if they're not formal geriatric mental health providers, people who are experienced enough or trained at least enough to be able to identify them and provide care. As you all know, there's a dearth of mental health professionals in the country overall. But there's a marked lack of people who can provide geriatric mental health care.

The good news is that most people can be treated. So that 40% of these people will respond to initial pharmacotherapy or medications within six weeks. An additional 15% to 25% will achieve remission with continued treatment after those six weeks. And that you can also provide aspects of both combined treatment with regard to pharmacotherapy and behavioral therapy or psychotherapy that will improve response.

Acute therapy is about three months. The goal is to have complete recovery with regard to the acute episode. The continuation phase is to prevent relapse, which might take another four to six months. And then the maintenance phase is three months or longer after that to try to prevent the recurrence of a new depressive episode.

A related issue with regard to older adults is that caregivers of people who have either dementia or other chronic physical illnesses might experience symptoms of depression. And it's also often seen in

these people. It's associated with aspects of the changing roles we talked about earlier, increased responsibility, kind of the feelings of being socially isolated, and just grief surrounding the loss of the person they're taking care of.

Most caregivers often fail to recognize this stress or this burden but will report symptoms of fatigue, insomnia, social withdrawal and just feeling burned out. And a lot of these things are complicated by aspects of anger and guilt and ambivalence over their caregiver status.

The most common late life disorder among older adults is actually anxiety and not depression. But it's often missed with regard to symptoms, because it's also seen or masked by other physical illnesses or medications. And you can also see symptoms of anxiety mixed in with depression in late life. And you can see anxiety and agitation symptoms in people who have dementia.

Probably the most common thing to see in older adults is this mixed anxiety and depression kind of presentation. Features of depression co-exists with irritability, insomnia, muscle tension. And it's kind of associated with the worst prognosis compared to generalized anxiety disorder that you might see in most people.

Common late life disorders that might present with anxiety-like symptoms include cardiovascular or pulmonary disorders, people who have a racing heartbeat or changes with regard to stress. And also several medications and over-the-counter drugs can mimic aspects of anxiety features, so racing heart rate and those sorts of things.

Anxiety and dementia or agitation and dementia is typically expressed as motor restlessness, pacing. And it may be difficult to properly obtain details due to communication difficulties with these patients. And nursing staff and caregivers are usually needed to provide an accurate picture. So you also have to talk to staff about the behaviors you might see in a dementia care unit, for example.

Psychotherapy with regard to older adults is usually effective. Most of the common, I guess, approaches include things like cognitive behavioral therapy, interpersonal therapy and problem solving therapy, as well as combination approaches, as I said earlier, with medications. And different stress reduction activities have been shown to be effective.

As I said before, the good news is that most people do improve with either medications, psychotherapy or a combination thereof. It improves outcomes of other medical conditions. And it may be prevented in some circumstances with regard to other disorders among older adults.

So I think I should say that we also support research around successful aging. One third of our longevity is already inherited. So you can't do anything about that. You were born that way, one way or the other. But you do have control over the other 2/3. So how you actually go about your day to day activities may have a huge effect on aspects of your both healthy lifespan as well as your total lifespan.

So research that's looked at people who are 100 years or older has shown that most centenarians have a good sense of humor, a good positive attitude with regard to a sense of hope. They are engaged, both in aspects of their own lives as well as their communities. They have a good way to cope with loss, and they deal with aspects of stress through stress reduction activities such as gardening, exercise, walking and those sorts of things.

So I think the key here is that, if you're engaged and you have this sense of purpose, that there's no expectation as I said earlier that you would have to deal with any of these kind of mental disorders as you get older. And that you can treat people you work with if you're working with older adults to try to get to some of these aspects of better outcomes.

So one big aspect of work, as I said before, that we're doing here at the Institute is to deal with suicide prevention efforts. As I said before, we've moved with regard to more evidence based practices with regard to trying to identify people who might be at risk. How do we involve aspects of safety planning in the community? How do we think about pragmatic trials and health care systems?

And how do we provide evidence-based or collaborative care to address issues around opioid co-morbidity and those things that might put people at risk? How can we better implement what we know that will reduce suicide rates? So we've invested in aspects of telehealth enabled suicide prevention work. And there's been recent work looking at rapid acting interventions, particularly ketamine.

As I said earlier, older men above the age of 75% are at highest risk for death by suicide. And most of these people have died-- most of these men have died, unfortunately, due to firearm deaths. And if we can identify either means restriction or safety planning efforts or safety planning research to cut down on these numbers, that would be a primary goal.

But there are opportunities here to think about, how do you access some of these people? So older military or older veterans at high risk, how do you work with people over the age of 50? And where can you see them?

A lot of people who've committed suicide have actually been seen by a health care professional within 30 days of the suicide. So if we could identify the people there and then if we could identify people who might be seen in emergency departments, that might help lower the risk. As I said before, there's been huge progress with regard to either screening and identifying people.

And so there's work that's looked at the PHQ-9, particularly item nine of the PHQ-9, which asks about suicidal ideation. And it's been shown that you can lower risk if you simply ask this question and look to see if you can identify people with regard to this, with regard to screening. There's an ED-SAFE study that's looked at the impact of universal suicide screening. And it's used in detecting suicide risk.

And as you can see, as compared to treatment as usual, if you do start screening and asking the question, it can lead to changes with regard to lower rates among people who have been screened. The work, though, was primarily done in younger adults. And we need more work to be done among people 50 and older to see if these same things hold with regard to this.

And electronic health record algorithms are being used in suicide research to try to identify people using aspects of big data and computational approaches. But I think the key here is that you can put a lot of information into a computer, and you can come out with an algorithm that might identify people at risk. But for people who actually do day to day clinical work, does it make sense?

Does the actual algorithm allow you to use it clinically? Like, would you be able to identify people based on that and be able to do something about maybe lowering their risk? So there's more work that needs to be done in a way that can lead to precision medicine or improved precision medicine and approaches, where you can actually link this with a treatment algorithm that would help people.

One thing I wanted to point out, as I said before, collaborative care has been used and can be used to help people, both with late life depression and to prevent aspects of suicide risk. And it's an evidence-based practice that is actually supported by CMS.

This was actually started with a research study that was supported by NIMH, the PROSPECT Study, which looked at the use of collaborative care to reduce suicide among older people in primary care. So it's one of those things you can point to as a success story, a translation, going from research to clinical practice. But that was done in older people.

As I said before, some of the rapid acting therapeutics, particularly ketamine, has been shown to not only have really quick effects with regard to depression but also to lower risk of suicide among adults. And so I've covered those sorts of things. And now I just want to briefly provide some funding opportunities for early career investigators that some of you might be interested in.

So generally speaking, best practices are to kind of know your funding options and timelines. Plan. Start planning earlier than you'd think. It could take anywhere from six to eight months once your application is in for it to get reviewed.

So you should plan earlier than you think, and you should contact people like me or the program staff early and often. Because we can help you think about the best particular mechanism that you'd be interested in and the best fit for where you want to go. And NIMH, the Office of Research Training and Career Development has extramural research support available through all the divisions and offices that I mentioned before.

These are the training contacts that you can speak to with regard to your area of work and your area of interest. And we provide all these things here. We can talk to you, like I said, about is it consistent? Should it come to us or some other institute? Does it align with our priorities? Are you in the right place? Is it a good fit?

And we can talk about the funding mechanism most appropriate for where you are with regard to your career. And we can talk about, hopefully, what will be the best set up for you and your future success. But if you don't remember anything else I talked about today, if you were to look for a grant, please contact a program person to talk about your ideas. We support people all across their career stages.

We support graduate students, medical students with fellowships. We support early career investigators or postdocs with career development awards. We also have diversity supplements and the loan repayment program for people who are just starting out their careers. And we provide money both to institutional or institutions for training grants or postdoctoral fellowships, as well as individual fellowships.

The fellowships cover aspects of pre-doctoral work, before you get your degree, post doctoral work. We have specific opportunities for people working on their dissertations. And we provide the support throughout aspects of your early career.

So if you're a postdoc or a early faculty member, there are all these different career development awards or K awards that are eligible to people to apply for that provide money to cover your salary as well as a small research budget for you to collect pilot data and to provide, I guess, career development training to become an independent researcher.

We also have research supplements to promote diversity in health related research. And these are basically provided to diversify the research. I guess the research-- what's the word I'm looking for? Field with people who can provide different approaches and aspects and knowledge and expertise to the research we support.

These are generally applications. So if you know someone who has R01 funding at an NIH Center Institute, they would write the supplement to support you if you are interested in research to come work with them. And it would provide money to cover aspects of your salary. It would also provide small funds to cover research expenses. But our thought behind them at NIMH is that there are many training awards that would lead you to the next stage of your career.

So for example, if you were a postdoc and you got a supplement to work on someone else's study, you would use that time to help develop a career development award. Or if you were a junior faculty person, you would use that protected time to work on an R01 application. We also have supplements to help people who have left kind of a research career to either take care of family members or you've had changes in your family status.

You might have had a baby, and you took time off, and you want to come back. So there are supplements to promote reentry and reintegration into a research career. And we also have administrative supplements to support MD-PhDs through their clinical training if they're interested in those sorts of things. And then I put the link here that has links to all these different training programs. So you can look them up.

I think this is a very nice program that all of you, if you are eligible, should look into. NIH offers loan repayment programs that will provide up to $50,000 a year to cover your loans, your student loans. And I think somebody was thinking pretty well, because it'll also cover the taxes on this money when you do get the money to help pay for your loan. So that's a wonderful thing.

We support loan repayment programs in clinical research, pediatric research and health disparities research. It's a great program, but it's to keep people involved in research. And that's the general goal here, and it is a wonderful program. But as I said before, please plan ahead. You should be aware of the kind of due dates involved.

Once it's submitted, it will get reviewed. That'll take three to four months after you submit it. Another two to three months later, it will go to an advisory council, where there's a second level of review. And hopefully, if things go well, nine months later, we'd make final funding decisions and award the application. And here is a link to help you stay informed with regard to where we are.

If you are interested in research, the NIH guide comes out every Friday with a complete link to different grant policies, guidelines, and funding opportunity announcements. I suggest you sign up for that. It will come directly to your email every week. And has want with regard to the new frontier, we are on all aspects of social media with regard to Twitter, YouTube, Facebook, and the like. I don't know half of this stuff, but apparently it is a big deal among young people.

So thank you very much. But as I said before, if you don't remember anything else I said today, you should reach out to program staff to talk about these sorts of things early and often. As I said, the vision of the institute is to envision a world in which mental illnesses are prevented and cured. And our mission is to transform the understanding and treatment of these illnesses through research. Thanks. Are there any questions, comments?

INA RAMOS: Yeah. If you have a question, I think I saw a hand raised. If you have a question, you can go ahead and unmute and ask your question.

UNIDENTIFIED PARTICIPANT: No, it's a false question. I couldn't lower my hand.

INA RAMOS: Oh.

[LAUGHTER]

OK.

UNIDENTIFIED PARTICIPANT: Sorry. I was trying to clap for you, Dr. Evans.

[LAUGHTER]

JOVIER EVANS: Oh. Thank you. Thank you.

UNIDENTIFIED PARTICIPANT: I just want to say, thank you.

MODERATOR: And I think Keith has his hand raised?

KEITH: Yes. Can you hear me?

MODERATOR: Yes.

JOVIER EVANS: Yes.

KEITH: Yes. Good afternoon. I thought it was an excellent presentation. And I also wanted to ask the question, are there research opportunities for research assistants-- I mean, career opportunities for research assistants?

JOVIER EVANS: Well, not where I am. I'm on the extramural side of the shop, I guess. But there's an intramural research program at NIH and NIMH that is, in a way, kind of like a university. So they do have in IRP fellowships and opportunities for people to come work in the intramural program.

And I can find out who that point of contact is and get it back to Ina. But yes. So they have summer research opportunities I know for high school students. But the intramural research program also does take in-- I think they're called IRTA Fellows, who could be graduate students or post baccalaureate students who want to do research. And you would work in different labs in the intramural program.

KEITH: OK. Thank you. And I have another question, well, a comment too, if I may.

JOVIER EVANS: Sure.

KEITH: Yeah. As you was presenting some of the data, two things came to my mind that-- well, three things, which is my concern about mental health amongst aging adults. And one is alcohol and drugs, and the other one is gambling, and also aging, the aging population with HIV. Do you have any-- is there a lot of research done in those fields?

JOVIER EVANS: Sure. So well, like I said before, NIH is either disease focused or body part focused. So I don't have a ton of research on aspects of gambling and addictions among older people. But that work is supported I think through NIDA, the National Institute on Drug Abuse. And your comments are well taken, because a lot of older people may not have-- I can't even say that.

I was going to say, they may not experience a lot of illicit substance use. But a lot of people might be on pain medications or the opioid medications as they get older. And if you go to any casino, you're likely to see tons of older people in the casino playing slots and the like. So there needs to be more work looking at those sorts of questions and I think those sorts of issues among older people.

And as you point out, people are living a lot longer with HIV. And now, there is work that we support I think in our institute looking at older adults with HIV, particularly I think focused on cognitive outcomes among older people primarily. And is there aspects of accelerated aging among people who've been living longer with HIV, those sorts of things? But they're all, I would say, good questions and in need of more work.

KEITH: Thank you.

JOVIER EVANS: Mhm.

INA RAMOS: And Victoria, I know that you had come on camera and had unmuted your mic. Did you want to have comments for or a question for Dr. Evans?

VICTORIA: No, I just want to say, thank you. It was a great presentation.

JOVIER EVANS: Thank you. Thank you. I know it was a lot of slides, but like I said, I talk quick.

[LAUGHTER]

INA RAMOS: So there is a question. What is the process to become a grant reviewer?

JOVIER EVANS: Ah. Now, there is-- if you go to the Center for Scientific Review or csr.nih.gov, there is or there was a program to help young-- well, I say, young, but I mean early stage investigators who are interested in learning how to review. I think you can fill out a response or a form to say you might be eligible.

But generally, what happens is, of course, if you have a grant or you have a grant that's been funded, if it's even a F30 or a fellowship application or a career development award, once you've been funded, the SROs or scientific review officers may reach out to ask you if you'd be interested in serving as a reviewer. And they'll ask you to-- they'll try you out, basically. And if you do a fairly good job, then you might be asked to come back.

But generally, that's how that works. So if you check www.csr.nih.gov, they actually have a nice setup for early stage investigators, where they talk about the review process. And I don't know if the program is still there, but it might be around how to get younger people or early stage investigators involved.

INA RAMOS: Thanks, Dr. Evans. Well, we have a comment here. I appreciate that you pointed out that depression shouldn't be accepted as normal among older adults and that it is treatable.

JOVIER EVANS: Yes, yes. I think it's kind of a stereotype or ageism in some degree that people just assume that, as you get older, you're going to-- depression is normal. But it is not, and it can be treated, and it should be treated.

UNIDENTIFIED PARTICIPANT: Great. Thank you so much. That was my comment, Dr. Evans. I appreciate it. You were lovely to listen to, so yes, we went through those slides in perfect cadence and perfect timing. Yeah, and I do appreciate that, because I think that we often equate aging with just depression, as aging being a depressive process ultimately. So when you said that, it really kind of was like, oh my gosh, that really resonated with me. And I need to keep that into my life kind of forefront when working with the older populations.

And I also work with older populations that are HIV positive too. So I appreciate you bringing that up and into the conversation. HIV positive people live really wonderful, beautiful, long lives now. And so, yeah, integrating some more research into those fields is necessary. So I appreciate it. Thank you so much for your time today.

JOVIER EVANS: Sure. And then I guess one of the pieces of good news that it's seen that, as people get older, aspects of emotion regulation actually improve. So people are--

UNIDENTIFIED PARTICIPANT: Right.

JOVIER EVANS: Better able to think about positive aspects of their interactions with other people. They're less likely maybe to be as reactive, and it may be a byproduct of just wisdom and age that you can kind of navigate relationships and emotional ups and downs a little bit better than you did when you were younger.

UNIDENTIFIED PARTICIPANT: Love it. OK, great.

INA RAMOS: So are there any other comments or questions for Dr. Evans? OK. Well, hearing none, I want to take a moment to thank Dr. Evans and you, our participants, for joining us on this webinar today. We hope that you'll be able to utilize the information presented to strengthen your work.

In closing, we would like your feedback on this webinar. So upon leaving, a new browser window should open that includes a link to a survey. You may also access the feedback survey by selecting the link found in the Zoom group chat. So this concludes our webinar. Thank you so very much.

JOVIER EVANS: Thank you. Have a good day.