Announcer: Welcome to the Vets First Podcast, a research-based conversation centered around the VA health care system, its services, and patients. From Iowa City, Iowa, here's your host: Dr Levi Sowers and Brandon Rea.

Levi: Welcome back to the Vets First Podcast, this is episode three. I am Dr. Levi Sowers and, with me, is...

Brandon: Brandon Rea. Hello Everyone!

Levi: Well, Brandon, today we have a very special guest - his name is Dr. Randy Kardon. He's a professor of neurology at the University of Iowa and director of the Center for the Prevention and Treatment of Visual Loss. Before we really get started with his interview, we want to do a brief introduction into what research is at the VA. Today we're going to be talking about the Center for the Prevention and Treatment of Visual Loss (of which Dr. Kardon, Brandon, and I are part of).

Brandon: The center is one of fourteen centers nationwide funded by Rehabilitation Research and Development. Research Rehabilitation and Development is one of four branches of research at the VA under the Office of Research and Development. Research and Development had a seven hundred and thirty-three million dollar budget in fiscal year 2018.

Levi: That seems like a lot of money, which it is, but it's really important because research at the VA is one of three key pillars alongside clinical care, education, and training for Veterans. Throughout its ninety year history, VA research has produced many firsts. They can lay claim to the first liver transplant, artificial kidney, nicotine patches to help people quit smoking, implantable pacemakers (some of the first there), and then clinical trials to show that drugs like aspirin can prevent heart attack. His research at the VA has resulted in three Nobel prizes and is a leader in prosthetics, polytrauma care, and T. B. I. - as well as many others. If we specifically hone in on our center now, the Center for the Prevention and Treatment of Visual Loss, we focus on a multitude of visual disorders that affect the Veteran population.

Brandon: The center is renewed every five years and its focus is to rehabilitate Veterans with visual problems and this ranges from glaucoma research to light sensitivity after traumatic brain injury as well as migraine.

Levi: The center itself is a five hundred thousand dollar per year entity. It's funded for five years and we just got renewed a couple years ago and this is actually how the podcast that Brandon and I are doing right now got started. We needed to improve our outreach to Veterans and we figured that we could talk to them directly and hear from Veterans to get this podcast going. So today, like we said, we have Dr. Kardon and we're about to get started with his interview.

Musical Transition

Levi: Welcome back to the Vets First Podcast. Today, we have Randy Kardon who's a professor of neurology at the University of Iowa and he's the director of the Center for the Prevention and

Treatment of Visual Loss here at the VA, which is a center for research here in Iowa city. Joining us as well is Brandon.

Brandon: Hello, everyone.

Levi: And, as always, I'm here as well. So, Randy, welcome and thank you for coming on. I really appreciate it; a little bit about Randy, he hired me at the visual center about four years ago and he has been very supportive of this podcast and what we're doing with it - in terms of getting it up and running and providing resources for it. So, once again, thanks for joining us. I appreciate it.

Dr. Kardon: Thanks for having me.

Levi: First and foremost, you are very experienced in the field of neuro-ophthalmology, can you tell us a little bit about what is neuro-ophthalmology?

Dr. Kardon: That's a good question. Neuro-ophthalmology is a very sub-specialized part of eye-card and ophthalmology and it deals with difficult problems where the cause is not known for why someone's having a vision problem. It can be an unknown cause of vision loss, it can be very unusual, funny, visual symptoms, or it can be things like double vision, or eyelids that don't blink correctly, or pupils that are unequal. So it encompasses a fair amount of ophthalmology that's often connected to problems in the brain that may not be just caused by the eye or other problems in the rest of the body that show up in the eye exam. These are problems that usually are not that obvious when the regular eye doctor examines a person so it's usually we're the last stop for referral of unusual problems that are not obvious, not only to diagnose but to help with treatment. So it's a lot of detective work.

Levi: Would you say that you sort of overlap with neurology at all?

Dr. Kardon: There's some overlap. As a matter of fact, some neuro-ophthalmologists are trained as neurologists and then do a special fellowship training period in neuro-ophthalmology and the other half are trained as ophthalmologists and then do a special fellowship training period on neuro-ophthalmology. So it's one of the few sub-specialties in medicine where half the people are trained in neurology and half in ophthalmology but they all are focused on similar problems that have to be evaluated by someone who has special expertise in this area. These are problems that the regular neurologists or regular ophthalmologists don't see enough of to really understand completely in many cases.

Levi: So you are you typically diagnosing rarer conditions in people?

Dr. Kardon: Could be rare conditions or could be common conditions that didn't present in a common way. So it could be anything from a problem in the brain, it may have been a stroke that a person has and has unusual hallucinations or funny symptoms, it could be a tumor that's not diagnosed that's affecting the visual system, it could be migraines that are causing funny unusual visual symptoms, or it can be a problem in the eye that maybe is as simple as a dry eye

even that's causing doubling of the vision and the eye doctor didn't realize it was a simple common problem like that but it's presenting in an unusual way. I would say most of the time the problem is that the first line eye doctor just didn't have enough time to spend with a patient to fully understand by talking to them what the problem is so this is a common scenario, not only in the VA system but in regular non VA practices, is that with how busy that clinics are in the limited amount of time the doctor has to spend the patient, they don't get a chance to delve into that problem and listen carefully to what the patient has to say or have time to ask all the questions to really elucidate: “what's the problem”, “what's the characteristics of the problem?” in order to really understand how to focus the exam in what to do next.

Brandon: So the VA, with Veterans, what's the most common eye problem that you tend to see coming into the clinic?

Dr. Kardon: In the V. A. eye clinic, the most common problem is really cataracts and it’s still the most common problem.

Levi: Is that the same for the general population?

Dr. Kradon: Yes yes.

Levi: Okay.

Dr. Kardon: And, similar for other retinal problems like macular degeneration, can present in unusual ways - not just blurring or decrease in vision or diabetes affecting the eye in different ways - not only the retina but the alignment of the eyes. Or glaucoma, which can take away parts of a person's vision in their field of vision, that might be either not even symptomatic or may present in ways that's not obvious.

Levi: Interesting. So if I were a patient coming into the VA clinic and I go see my regular eye doctor with some weird visual symptom and the doctor can't necessarily diagnose what I have, then I would go see someone like you. Is that correct?

Dr. Kardon: Yes, usually the eye doctor or the neurologists would refer to a neuro ophthalmologist. Because the patient obviously doesn't know what an ophthalmologist is most of the time or where to go. So we depend on the referral from the optometrist or ophthalmologist, neurologist, internal medicine specialist, family care doctor. They usually know what a neuro-ophthalmologist does and how much time we spend with the patient. So I might spend over an hour with the patient just talking to them and examining them where a regular optometrist or doctor may only have five to ten minutes to do that. So I don't see as many patients in a day because they're not run of the mill problems that can just be diagnosed immediately and so it takes a fair amount of experience and delving into a problem to get to the root of that.

Levi: How did you get drawn to neuro-ophthalmology versus other areas in terms of medical care?

Dr. Kardon: That's a good question. Well, first when I was going to medical school I was trying to find out what area would be the best suited for the way my mind thinks and what I like to do and practice. So first thing I just eliminated the things that didn't seem to work right so it's kinda like pruning a tree. And then I was getting a little worried because I liked all areas but I couldn't see myself doing that every day. So when I was a last year medical student there weren't too many branches left on the tree. Ophthalmology was one of the last ones and we didn't have a lot of exposure to ophthalmology as medical students. So I started going to grand rounds in the eye department here at the university, because every morning we have a grand rounds where interesting cases are discussed. And when I saw, really what it was all about, I thought this was great because you can see things in the eye that tell you what's going on in the rest of the body or the brain. you can test the eye in ways that's not accessible to other organs. You can see things in the eye that you can't see in other organs. So it, kind of, was love at first sight when I finally saw what was going on and what you could do. So then I decided ophthalmology was for me.

Levi: Let's go back even further, where did you grow up at? Where are you from?

Dr. Kardon: Actually, I'm very homegrown; I grew up in Des Moines, Iowa.

Levi: Des Moines, Nice! Okay.

Dr. Kardon: And I grew up in a middle class family...

Levi: So were you Des Moines proper or were you near Des Moines?

Dr. Kardon: No, I grew up in Des Moines proper and neither of my parents went past high school. My dad was a partner with his uncle for an auto parts store and I worked there every summer which taught me that I didn't want to do auto parts the rest of my life.

Levi: Sure.

Dr. Kardon: I certainly picked up a lot of colorful language there. But not that kind of motivated me to know I wanted to pursue my parents always told me to pursue what you wanted to do and enjoy it and not what I thought they would want me to do. So I grew up in Des Moines, went to high school, applied to a lot of different colleges, and got in different places but I, in the end, decided why don't I just go to the University of Iowa? It's a big school, I knew I could find areas that I'd like to study there, it was easy on the pocketbook and I got a full scholarship at that time so I thought that was just an ideal place to come.

Levi: Which high school did you go to, in Des Moines?

Dr. Kardon: I went to Des Moines Roosevelt. And, so actually, I came here to the university of Iowa as a freshman in 1972; a long time ago.

Levi: I bet your tuition was cheaper back then!

Dr. Kardon: You won't believe that, in fact, a year's tuition was like six hundred dollars.

Levi: Oh my gosh, that blows my mind.

Dr. Kardon: I came in on the scholarship and worked my way through part of college. I did yard work and lawn work for one of the apartment buildings to make sure that I didn't, you know, have any debt.

Levi: Did you come to Iowa with the intention of going to medical school?

Dr. Kardon: No, I didn't know for sure. I liked science and I started pre-med and I had very good mentors in biology who motivated me and took an interest in me that helped me, you know, encouraged me to go in that direction. And then I just knew that medical school would take advantage of the science that could help people at the same time. I did research as an undergraduate and I was encouraged to do that so I finished undergraduate in three years because I went to summer school each summer. I was encouraged to do a combined MD PhD program. Back then, 1975, was the first class of the MD PhD program the University sponsored.

Levi: Yeah, I was going to say that this programs not super old so-

Dr. Kardon: Yeah, so I was one of the Guinea pigs in that program. And also a life insurance company, Prudential, also sponsored a scholarship program for MD PhD's, because they wanted the research to prolong life, which would help their business, and so I won a full-ride scholarship with a research proposal that was sponsored by the prudential life insurance company at that time. So I didn't have any debt when I finished the combined program which took seven years - that combined medical school and PhD and thesis project.

Levi: Did you do your residency here too?

Dr. Kardon: Yes, I went away for one year to a big clinic in Lacrosse, Wisconsin to do a year of internal medicine and then came back here to do a residency in ophthalmology.

Brandon: You're like me; I have been in Iowa my whole career.

Dr. Kardon: Well it's a good atmosphere with collaboration and a value system. I think people's egos are at a low level. They kind of like to do things for the right reasons and so I always found that a hospitable environment to grow.

Levi: How did you first get involved at the VA and research in the VA?

Dr. Karden: After I finished my ophthalmology residency - first of all, during medical school I also did treatment of Veterans during medical school rotations.

Levi: That's a collaboration between the University and the VA, correct?

Dr. Karden: Because back in the 1950s the government built Veteran's hospitals in close proximity to university hospitals, because they wanted the doctors to be shared by both so they

get high quality care for Veterans and, also, medical students trained at both places. So I really enjoyed working with Veterans back then; that was even when we still had World War One Veterans too.

Levi: Oh man, that's wild.

Dr. Kardon: I really enjoyed taking care of Veterans as a medical student and then, during my ophthalmology residency, we also took care of Veterans and participated in surgery and eye-care, so I had more exposure which I enjoyed. Doing a two year fellowship in neuro-ophthalmology after that, I was lucky enough to be offered a faculty position to start here in 1989. At that time I wanted to combine research with clinical work and the V. A. and the NIH had a career-development program where you apply with a good idea for what you want to do in research. You compete, and if you get funded, then they pay for your salary so that you have enough time to not only do clinical work but to do research. I applied to both and NIH and the Career Development Award and, first time in, the VA funded my research. The NIH liked it and wanted me to reapply but since the VA was right up front and was willing to fund me, I took advantage of that and it was actually funded and renewed as a Career Development Award, back then, for a whole nine years.

Levi: Woah, you could renew a Career Development Award?

Dr. Kardon: Back then you could.

Levi: Wow, that's really cool.

Dr. Kardon: And so, you know, almost all my salary was paid for so yeah I could do as little or as much clinical work as I wanted. Since a lot of my research involved clinical work, the two really went hand in hand so I could do both and one fed on the other. So that's how I got started as a VA investigator.

Levi: That's cool.

Dr. Kardon: It was really a great opportunity for me.

Levi: You know, it's interesting, Randy has this eternal optimism about research and I hope to maintain that throughout my career but what do you focus on in your research and can you talk a little bit about that and why it's important to Veterans?

Dr. Kardon: So, in the beginning, I focused on natural reflexes of the eye. In other words, if you shine a light in the eye the pupil gets smaller and that's part of a nerve reflex that you don't have voluntary control over. The advantage of it is that if something's going wrong in the retina or optic nerve or connections at the eye or the brain, the pupil response to light will be less than normal. So you can use the pupil's movement to light as an objective reflex to say whether someone is having a problem in the eye and following its treatment. I was under the mentorship of a famous professor, Dr. Stanley Thompson, here who is well known for diagnosing pupil problems or using the pupil to diagnose eye problems. And so I used new technology at the time

with recording the pupils with infrared cameras and devising ways of analyzing the video with new computer boards - this was 1989.

Levi: So does the pupil change in response to neurological conditions too? So if I have a tumor will that change my pupillary response?

Dr. Kardon: Yes, well, especially if the tumor is impeding the transmission of the light signal from the eye to the brain then you'll see it because the pupils actually react less but, besides things that influence the visual pathways, other things are reflected in the pupil too. For example, if a person has damage to the nerves that go out to the eyes to make the pupil contract from aneurysms or from other tumors not affecting the actual visual pathway but the actual pathways that go out to the eye make the pupil contract that will cause unequal pupil's response between the two eyes because when you shine a light in the eye, the way the system is wired up is both pupils react at the same time with the same amount of contraction. But if something affects that outflow pathway back to the eye it could be unequal and that could be the first sign of a serious life threatening damage too.

Levi: Interesting.

Dr. Kardon: Now, in addition to that, if you get real tired or fatigued your pupils get small and so you can monitor other conditions, neurologic conditions that may cause pupils to get real small or really large that are independent of the visual system. So it's also useful even for testing how well you're performing your thinking or cognitive function. The pupil response when you're engaged in an activity that makes them dilate and if you're giving up on an activity or not interested the pupil's often get small. So that's how I started out and then I also became interested in ways that image in the back of the eye with new technologies that became available in the last fifteen years. thank images of layers up the back of the eye in the retina which can tell you with nerves are being permanently lost because these layers become thinner it's kind of like a sandwich if you start losing the meat in the sandwich that that layer becomes thinner and that's called optical coherence tomography, or O. C. T. and that's a way of noninvasively, imaging the eye so that's a way now of non-invasively measuring the structure of the eye. So a person's response to visual testing is very important, but sometimes those responses are clouded by their fears and anxiety, and they don't respond accurately, not because they're trying to not respond accurately, but sometimes your responses are influenced by how anxious you are. And so if we can develop reflex responses or structural responses that are objective, we can then supplement a person's responses to what letters they see on the eye chart for example and know also what's there or not there, or what's being affected by the subject of reflexes. So it’s a way of supplementing that person's subjective responses to dispense visual tests, to help them know, or help the doctors know if something serious is going on in the eye.

Levi: That's really interesting. Do you have any other questions on the topic?

Brandon: I was gonna say, it's pretty nice going to the doctor if you're feeling anxious having this different test to kind of circumvent the anxiety well being in there.

Dr. Kardon: Yeah I think patients are relieved because then they know it's they didn't do something wrong, or the response was inaccurate.

Levi: So, part of your research, there's there's two things I kinda want to talk about here, is that one; since I joined your group at the at the VA and and been working with you guys now for four years, it's been interesting to see the eye as sort of a window into the brain and your very adamant about making that statement. That's pretty cool, can you just talk about that for a second?

Dr. Kardon: Yes, so also besides the pupil movements and the structure of the eye, the eyelids of course move in response to different things, and your blinking rate, and we can monitor that. And also the eye movements; how the highs are tracking objects, if they're tracking them the same way, if they're misaligned, that's another sign of disorders in the brain. But I think another aspect that you're hitting on, which is very important, is other neurologic problems like; Parkinson's disease, or Alzheimer's disease, or multiple sclerosis does also show up in the eye. And so the eye is becoming very important, in a way, not just to help doctors diagnose these, but monitoring new treatments, because if you can save nerves or function in the eye, that's reflected in the eye from these neurologic conditions, it is a window into modern training new treatments. So not that some of these disorders blind a person, but if they show up in the eye and the reflexes in the structure of the eye that we can detect in a very precise way, that we can't detect with Nuero-imaging like brain scans, that don't have the precision that the eye scans have, then we're way ahead of the game, because if we can detect earlier, before functional consequences occur, then we can intervene with new treatments, and monitor it using these.

Levi: It might provide an earlier window into treatment, right?

Dr. Kardon: Yes.

Levi: That we don't currently house which could be very powerful I think that's, pretty neat.

Dr. Kardon: It's the same thing with migraine. We've found that some of the features of the face, in response to light are very exaggerated you know people are light sensitive may squint, and it's totally involuntary, and we can actually pick up those features, and we're hoping to see if we can use those features, not only to diagnose migraines, even when a person not having a headache, but also can we use it to diagnose and monitor how effective the treatment is for that person, like a personalized medicine response.

Levi: Yeah and something else that I think is really interesting is, being able to, how easily it would be to track this over time, with like a smartphone that can do it or something right? You

can just look at the camera of your smartphone, and have the patients read out for every day of the year or something.

Dr. Kardon: That's exactly right not only that but the same reflexes occur in different species not just human.

Levi: Yeah.

Dr. Kardon: So investigators that are trying to model these in animals to try out new treatments before they know if they're effective, or safe in humans. We can use the same parallel reflexes and structural studies in animal models of disorders. They're directly translatable to using the same things in humans.

Levi: Yeah yeah absolutely can you talk a little bit about why it's important that the VA does research in your opinion?

Dr. Kardon: Yes. Two reasons; first of all there are certain problems, that there are certain problems that are more prevalent or more common in Veterans, that we want to focus on, besides the problems that are also present in the general population. For example, traumatic brain injury. Well traumatic brain injury, obviously, occurs in the general population after a motor vehicle accident, or with a concussion or sports injury. But with military that have served are exposed to concussions and blast injuries and so they have a higher incidence of these types of problems, than the general population. And we want to make sure that we address these and Veterans because we want to not only diagnose it, but try to find better treatments, that not only will benefit Veterans, but also for the general population too. The other aspect of you know Veteran research is that we want to connect with Veterans as a give back to their service to the country. I mean they've put their lives in jeopardy and it served the country in different ways.

Levi: Yeah I think we have a moral obligation to to serve the Veterans in a way right? That's how I look at it.

Dr. Kardon: Yes, and we want to provide the very best medical care. And another problem that the VA faces is access. I mean Veterans sometimes find it difficult to gain access to the medical system in a timely fashion. So we're also devising ways of being able to screen larger populations of patients with some of these objective tests so that we can find Veterans who are having a problem maybe at outlying facilities to know who should be prioritized to see right away who are having a problem we have to find ways of looking at larger populations to funnel them into the right doctor sooner. Same thing in the general population, it's not easy to get access to a doctor. And the doctors would like to see the patients who are having the more difficult problems right away too, it's not just the patients who want to see the doctors, but doctors would like to prioritize and take care of the patients that are in the most need first. So we're trying to develop methods of screening patients not only in outpatient clinics, but even at home with some of these devices that can be done on a smartphone or tablet, that a Veteran could test themselves, you know maybe take some responsibility to get the results right away, so that they know whether they're having a problem that needs care right away, and some visual

symptoms aren't that dangerous or need to be seen right away, but some are. If we had a way of detecting now that would be fantastic for Veterans and VA doctors to.

Brandon: So, Dr. Kardon the center for the prevention and treatment of visual loss here at the VA, is that unique to Iowa City? Is that present and other cities as well as other VA's? How did the center come about?

Dr. Kardon: So the VA office of research and development, they have made it a priority to develop centers across the United States, that will focus on very important VA health care problems, to a group together, experts in the field, of that area. To do research they will directly impact Veterans' lives. And there are three main research branches of the VA and one of them is called rehabilitation, research, and development, or RR&D. And the main branch of research for the VA for RR&D is to translate the research that's done in the VA, to impact, in a positive way, Veterans' lives and improve their function in everyday life. And so they competitively have grant applications to form a center to group a number of experts in the field that are in that location, to propose relevant research that's groundbreaking, that will translate to improving Veterans' lives. And they've funded fourteen such centers in the United States, and two or three Research Enhancement Awards, that are kind of for smaller centers. And so these fourteen centers are in different areas of medical research, there may be one for spinal cord injury, there may be one for muscular skeletal problems, there may be one for neurologic problems. And our center was competitive for studying vision problems in Veterans and also neurologic problems that are affecting the vision. You have to have a number of investigators at the VA, that are already funded in this area, to even apply for this center. And so you propose a five year plan to start out with. That brings together different experts, to focus on some major health care problem in Veterans that you have expert knowledge in. If you're lucky enough to be funded, which we were lucky enough, ten years ago, to be funded. The VA provides four point five million dollars over five years, that's nine hundred thousand dollars a year, to create opportunities for research to get more funding from the National Institute of health, from the department of defense, from other VA grants, from private foundations, to really accelerate the research and bring in more funds to leverage that core funding of nine hundred thousand dollars a year, to create more research and more opportunity. They want to see a center be successful to the tune of, at least a five to one ratio. So for every dollar that they give the center core funding they want you to leverage that into at least five dollars of other funding, to really grow this area of research.

Brandon: So with these centers, is a vet that is interested in participating in research, or reaching out, how big of a hurdle is that? Because knowing research being conducted by the VA, might be news to some vets. How can one get in contact to participate in research?

Dr. Kardon: Very good question, because a lot of Veterans aren't aware of what research is going on, and what I found over the years, Veterans are some of the finest people to step up and volunteer for studies. I mean it's legendary almost, and that's what makes one of the reasons for doing research in the VA so important and so satisfying, is that Veterans are very willing to participate in research. But every major VA that has these researchers that are getting grants has a research office at the local VA. There are easy ways of getting in contact with that VA

office. Most VA centers have their own website, and on that website is a link to the research office, but another mechanism is through these podcasts.

We wanna make Veterans aware of this and our own center has a website too. Not only that we're trying to develop applications on a smartphone, that maybe a Veteran could use to test their own vision, but also are informative about different disorders that may affect their vision, but also has links to our center, so they can see what different projects are going on. We also have researchers that are trying to connect with Veterans to go to monthly telephone conferences that are held through the local VA, and to make them more aware and connect with Veterans. So we're looking for opportunities to connect, in both directions, not only for us to tell the Veterans it's going on, but for Veterans often have questions about their own disorder, or family members' disorders, and they want to know what's going on, what's being done to solve these problems?

Levi: Yeah that's one thing it's really struck me since we started this podcast is how much, not only is it about the Veteran, but it's also about their caretakers and their family. So we serve the Veteran, but we also serve their family as well. You know that's you just brought that up and it's it's something that I think we should definitely keep in mind as we when we do research, and something that was really brought out when we went to Pittsburgh a few weeks ago, at the _____ Hurdle???????????????? ??????, the center in Pittsburgh, was how much they actually study the caretakers for Veterans who have issues with mobility.

Dr. Kardon: And the more that we meet in person with Veterans, then the researcher becomes more aware of, what are the questions that they have, and how they would like to become involved, and what's the best mechanism? Not everybody has a smartphone, and what are ways that we can better connect with Veterans? When I talk to Veterans, you know not as a patient, but just talking to them, the common story that I often hear is that we don't feel like we're being listened to enough. Maybe it's because our healthcare system right now is trying to see so many patients that there's not enough time to listen as much as we'd like, but we have to find better ways to find better ways of listening to the Veterans, so that they also feel like that somebody is listening to them and that they're translating their issues and their questions into solutions and better communication, very very important.

Levi: Well, Randy to finish on a fun note, what's the fact about you that isn't science or doctor related or research related?

Dr. Kardon: I love to play golf. I love to hit the little round ball into the air

Levi: So you're a masochist is what you're saying?

Dr. Kardon: And I, of course, like to travel, both on behalf of Veteran research, but also to meet other researchers, to connect and find ways that we can help each other benefit from each others' research projects.

Levi: And, if you know, how long have you worked at the VA?

Dr. Kardon: I worked at the VA, you know since I was a medical student, since nineteen seventy five, but I was actually employed by the VA in nineteen eighty nine, so coming up on thirty years.

Levi: Wow that's really cool! All right well Dr. Kardon, thank you for coming on today, and that's it for this episode of the Vets First Podcast, thanks for listening.

Announcer: This concludes today's Vets First Podcast. For questions or comments relating to the program, please direct email correspondence to vetsfirstpodcast@gmail.com. Thanks for listening!