Defense Health Agency

Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury
Webinar Series
"Obesity, Eating Behaviors, and Stigma among Service Members"

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Operator: Welcome and thank you for standing by. All participants will be on a listen only mode for the duration of today's call. This conference is being recorded. If you have any objection, you may disconnect at this time. Now to turn the call over to Dr. Vladimir Nacev. Thank you, sir, you may begin.

Dr. Nacev: Thank you very much. Good afternoon and thank you for joining us today for the DCOE Psychological Health June webinar. My name is Dr. Vladimir Nacev, I'm a clinical psychologist and acting chief of the implementation initiative at The Deployment Health Clinical center. I will be your moderator for today's webinar. Today's presentation and resource list are available for download from the file spot. Before we begin, I also review some webinar details. Live closed captioning is available through Federal Relay Conference Captioning. Where you see the file beneath the presentation slides. If you experience technical difficulties, please visit dcoe.mil/webinars, and click on the troubleshooting link under the monthly webinars heading. There may be an audio delay, as we advance the slides in this presentation. Please be patient as the connection catches up with the speaker's comments.

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I will now move to today's webinar and the topic is Obesity, Eating Behaviors, and Stigma among Service Members. Despite the fact that a majority of Americans are all overweight, individuals who are overweight or obese are frequent targets of stigma and prejudice in multiple domains, including employment, education, healthcare and portrayal in the media. The psychological consequences to weight stigma includes, low self-esteem, poor body image, depression, anxiety and suicidal behaviors. Attaining weight standards across the

Department of Defense may be a challenge, but service members who are overweight or obese and they may experience related stigma and bias.

The webinar will highlight the ideal weight standards and explain the construct of weight stigma and its impact on active duty service members. In addition, we will discuss the fit for duty study which seeks to reduce excess weight gain in military population and recommendations for how to address the issue of obesity in healthcare settings. At the conclusion of this webinar, participants will be able to interpret the construct of weight stigma and the potentially adverse effect of weight stigma on psychological functioning of active duty service members with overweight and obesity, use strategies to address excess weight amongst service members without shame or stigma, recognize the presence of weight stigma within the military in order to more effectively address presenting medical, psychological, and social issues.

Now I would like to introduce to you our presenter, Dr. Natasha Schvey. Dr. Natasha Schvey earned her PhD in Clinical Psychology from Yale University and completed her clinical internship in Behavioral Medicine at the Yale School of Medicine. She is currently a postdoctoral fellow in the Department of Medical and Clinical Psychology at the Uniformed Services University of the Health Sciences in Bethesda, Maryland. Her research focuses broadly on obesity and eating pathology, and more specifically, weight stigmatization. Dr. Schvey has published a range of experimental studies, review papers, and chapters which have received national and international media attention. She has presented her work on weight stigmatization to academic, professional, and community organizations throughout the country. Welcome Dr. Schvey.

Dr. Schvey: Thank you so much Dr. Nacev for that very kind introduction and thank you all so much for tuning in this afternoon. Before I get started with my presentation, I do just want to indicate that I have no relevant financial relationship to disclose today and that the views that I'll be expressing in my presentation are mine alone and they do not necessarily reflect those of the Department of Defense or the U.S. government.

The title of my talk today is Obesity, Eating Behaviors and Stigma Amongst Service Members. Just to give you a broad sense of what I'll be speaking about today, I'll start with some background both on obesity and weight stigma and then I'll move along and discuss some of my past and current research and finally I'll provide some clinical and practical implications that are grounded in some of the research that myself and my colleagues have conducted over the years.

To start off with a little bit of background on obesity, it should come as no surprise to most of you that the prevalence rates of overweight and obesity have been skyrocketing in recent decades. I show here the prevalence rates among U.S. adults by state and territory from 2011, 2012, 2013 and 2014. As you can see the prevalence rates have been increasing with very little indication that they're slowing down any time. The majority of Americans are actually now overweight or obese, and that's two-thirds of Americans. Importantly, obesity is predictive of and associated with significant physical, economic and emotional consequences. Obesity is a significant contributor to cardiovascular disease and

many types of cancer, which importantly, are two of the leading causes of death in industrialized nations. The other involves obesity as a contributor to both morbidity and mortality. As a result of both the prevalence and the host of harmful consequences of obesity, we now consider obesity to be a public health priority really of the utmost importance.

I've established that obesity is prevalent and harmful within America, more broadly, but I want to talk specifically about what we know about obesity within the military. If you're a civilian like me, you might expect that the military might not struggle with the same rate of obesity counterparts, but in fact that's not true. Research indicates that obesity and active duty service members have actually tripled in the past 15 years, such that 61% of military personnel are now either overweight or obese. You can see that the rate of obesity in the military is actually pretty much mirroring that of civilian population. 13% are obese included in that figure.

What does this mean for military preparement and readiness? Well, unfortunately 1,200 first term enlistees are discharged every single year due to weight status alone. Five percent of our current military have at least one obesity related diagnosis or co-morbidity. This includes things like hypertension, hyperlipidemia, type II diabetes and so on. As I've been alluding to, obesity is really problematic as it pertains to the military and that it affects our military readiness. Now overweight is actually the leading medical reason for rejection from the U.S. military. In fact, 27% of 17 to 24 year olds are actually too heavy to join the military. This is a really important demographic to think about when you think about our military readiness and preparedness. These are individuals that are eager to serve our country and more than a quarter of them are being declined due just to weight status.

Between 1995 and 2008 the number of potential recruits who failed their physical due to overweight increased by 70%. Now, 15% of men and 20% of women report difficulties meeting weight and/or body fat standards. You can see that this is really a pronounced issue within the military today.

I want to talk about some of the consequences of obesity in the military. We talked about the consequences of obesity as it pertains to health but what about to our military readiness? Obesity really impacts one's military career, and I'll speak more to that in a moment. Those who repeatedly fail their weight or their tape test, or fail their physical training often face separation or premature discharge from the military. Importantly, many opportunities for additional training, promotion, and even the ability to deploy and reenlist are partially, or in large part determined by our current standards.

As I mentioned, service members must meet very specific weight and fitness standards in order to advance within the military. There's expectation that our personnel are ready for the physical demands of military service, which absolutely makes sense if you think about individuals who are in combat roles. We, of course, want them to be at peak physical performance and health. However, the standards apply not only to individuals in combat roles, but to individuals within all ranks of the military. The body weight and fitness level are

frequently used as proxies for health, something known as military appearance, and also combat readiness. That military appearance part is something that I really want to focus attention on, because unlike health or potential combat readiness military appearance is very subjectively assessed.

Our current DOD retention standards indicate that an individual's BMI must be below or at 27.5 and that's in addition to certain service specific standards. Of those with a BMI that exceeds 27.5 are then subject to additional assessments and physical training.

I want to pull your attention to the different service specific standards, and I'll go through each of them. I want to start here with the army and I know that this is a very, very busy slide, so I kind of want to break down what we're looking at here. I want to focus your attention here which is the average height for a man in the United States. It's five foot nine. As you can see, the maximum amount of weight that that individual can carry grows a little bit with each age bracket. Between 17 and 20, the maximum weight is 175 and then when an individual is 40 years old or older that goes up to 186. I think it's interesting to acknowledge the fact that that's only a difference of 11 pounds, ostensibly over the course of somebody's lifetime in the military.

Now, focusing your attention here for women, I wanted to focus on the average height for a woman which is five foot four. For this average woman, she can start out weighing no more than 145 pounds and then when she reaches the age of 40 or above, the maximum weight is 151. For women it's even more stringent and there's only a pretty narrow bandwidth of about six pounds that an individual can gain over the course of her military career. For women who are watching, I'm sure that you are aware that there are certain life events such as, childbirth and taking care of children, and menopause that really affect our weight sort of beyond our control. I think it's really salient to focus on the fact that there's that six pound bandwidth that women are able to gain within the course of their military career.

Moving along with the army, here I wanted to highlight the body fat percentage standards and these also are graduated with age. You can see that for a man, he can start out at 20% body fat and can exceed no more than26% body fat. For women the maximum is between 30%, between 17 and 20 years old and 36% when a woman is 40 years of age or older. Again, for women, there's only that allowance to gain 6% body fat over the course of one's military career.

In addition to those weight and body fat standards that I just pointed out, individuals in the army must also face weigh ins that occur at least every six months and more so if an individual is at risk of failing some of those weight and tape tests. If body fat standards are exceeded, an individual is then enrolled in what is called the Army Body Composition Program. Satisfactory progress in the Army Body Composition Program is defined as a monthly weight loss of three to eight pounds or one percent body fat. Failure is defined as three non-consecutive months of less than that satisfactory progress.

I want everyone to think about a time in their lives where either they were trying to lose weight or somebody that's close to them was trying to lose weight and then think about what that would mean if you had to lose three to eight pounds per month and if you didn't that your career might actually be in jeopardy. In addition to those standards, the commander also has the authority to enforce a body fat assessment if a soldier doesn't present, quote-unquote, "A soldierly appearance." That's even if they meet the other standards as determined by the fitness testing, the body weight, and the body fat if an individual somehow doesn't present that soldierly appearance, they might be subject to different standards in addition. I think that's really important to investigate, because again that is so subjective. One commander might have a very different idea of what constitutes soldierly appearance.

Moving on to the Air Force. Individuals in the Air Force face fitness assessments which include body composition, so abdominal circumference or waist circumference, cardio-respiratory endurance which is a one and a half mile run and a test of muscle fitness, which is how many push ups you can do in a minute and how many sit ups you can do in one minute. Then a composite to this score is generated from the assessment. Individuals are graded at excellent, satisfactory, or unsatisfactory based on that composite score. If an individual test results reveal that it was unsatisfactory, they must actually retest within three months and join something called the Be Well program within ten days of failure. The Be Well program is essentially a diet and exercise remediation program.

In addition to the fitness assessment, I wanted to point out the standard for both men and women, and I know that there's a lot of detail on the slide here, so I'll let you take a look at that for a moment. As you can see for an average 30 year old male, he must be able to run a mile and a half in just over 13 minutes, he's expected to do 42 sit ups and 33 push ups in one minute. For your average 30 year old female, she must run a mile and a half in just over 16 minutes and be able to do 38 sit ups in one minute and 18 push ups in one minute. This is irrespective of an individual's rank or their role with the Air Force.

I wanted to move on to the Marine Corps, and I'm skipping the Navy for a reason, I'm going to return to the Navy in just one minute. The Marine Corps is often known as being the most stringent of any of the services. I wanted to kind of highlight why that might be. As you can see here for the Marine Corps, again we're returning to our average height male who's five foot nine, the maximum weight that he can have is 186 pounds, and you'll notice a distinction between this one and some of the other charts that I was showing and that there is no difference by age. The Marine Corps doesn't allow for an individual to gain weight as they get older. Similarly, for our five foot four female here, the maximum weight that she can have is 145 pounds. Again, irrespective of her age.

Again, for people that are watching, thinking about your average five foot four woman, 145 pounds is well within a healthy range, but for a lot of people, that might not be readily attainable weight. We know that there are a lot of factors that influence our weight aside from just how hard we work or how badly we want it. An individual might have a really difficult time meeting those standards even if they're in excellent physical health.

In addition the Marine Corps also conducts semi-annual weigh ins and if these standards are exceeded, a member has six months that they can meet those requirements in. I wanted to pull some quotes from the Marine Corps Body Composition Program. They write that failure to meet those standards may result in formal assignment to the Body Composition Program which decreases competitiveness for selection for promotion, and administrative action that includes limitations on promotion, retention, assignment or administrative separation. Furthermore, Marines who do not present a suitable military appearance will take all necessary action to improve their appearance within prescribed timelines. Failure to do so may result in formal assignment to the Military Appearance Program which decreases competitiveness for selection for promotion, and administrative action that includes limitations on promotion, retention and assignment.

Essentially, if an individual is consistently failing these standards, he or she might be subject to these remedial programs and if that person fails to make the expected progress within a certain time frame, that individual's career might be adversely affected. I think that second quote from the Body Composition Program is especially relevant. Again, it mentions that military appearance which is very subjective and an individual might be in peak physical condition and somehow their body shape does not lend itself well to that military appearance.

The reason that I skipped the Navy is because the Navy has actually implemented some new policies that, this is really hot off of the presses, just beginning this past spring of 2016. The new body fat rules actually include a graduated standard that allow for the acquisition of body fat over time and age. As you can see for men the body fat standard goes from 22% up to 26% and for women from 33% to 36%. You can see that these are still stringent standards but they do make accommodations for changes that might occur over the course of a lifespan.

One question that I had in doing research within the military is how are service members with obesity treated. What got me wondering about this was given the high prevalence of overweight and obesity within the military coupled with a culture that emphasizes fitness and a military appearance, I was wondering whether or not this might meant that there is potential for high rates of weight stigma within the military.

I want to take a step back and now provide a broad definition of what I mean when I say weight stigma. This is really my area of research specialization. I wanted to explain this construct to those of you who might not be familiar. Weight stigma broadly defined refers to negative attitudes that depict overweight individuals as lazy, sloppy, gluttonous, clumsy, lacking in willpower and self-discipline, and even that depict individuals with overweight and obesity as being somehow less competent than their lean peers. Importantly, these negative attitudes and stereotypes are very rarely challenged. As a result, frequently lead to interpersonal rejection, prejudice, and even various forms of discrimination.

Weight stigma can be both subtle and overt. A subtle example might be an offhand weight based joke made by a family member or a coworker, or even

somebody who is running the fitness testing, or the teasing. It can also be more overt such as weight based nicknames that are demeaning or having your weight being directly commented on by an individual. Weight stigma is driven by a confluence of factors. It largely stems from the belief that stigma might actually motivate weight loss. Weight stigma is a really unique form of stigma, in that individuals sometimes believe that if we stigmatize, if we shame then people will be motivated to lose weight. That's really unique. We don't hear that about any other forms of stigma. It also stems from the belief that people are fully and singularly responsible for their own weight status and that if they fail to lose weight, it reflects some personal deficit that they have.

Weight stigma's also widely and broadly perpetuated because our culture promotes the overt expression of weight stigma. Weight stigma is widely considered to be the last socially acceptable form of stigma, and that it's expressed very overtly with very few repercussions or in very little push back. Our culture also tends to value thinness. This should come as no surprise. If you turn on the TV or look through a magazine, that our ideal in this culture is of a very thin and lean body type. Our culture also tends to blame the victim rather than taking a step back and looking at the circumstances. Instead of looking at our obesogenic environment in which we are all currently operating, our culture tends to focus its gaze on the individual with obesity and ask why is an individual not losing weight.

Our culture also allows for and sanctions very pejorative depictions of persons with obesity. It probably doesn't take long for you to think up an example from television, commercial, a movie, even a comment that somebody has made. We allow for very pejorative depictions of persons with obesity and even thinking about characters with overweight and obesity in various forms of media, oftentimes they are portrayed very stereotypically. Binge eating or acting in a very clumsy way or acting in a way that's sort of the punch line.

How common is weight stigma? Is this something that we need to be concerned about. Not surprisingly, my answer is yes, we do need to be concerned. In some recent studies, we found that the rates of weight stigma and weight based discrimination do increase with extent of obesity. As you can see with a BMI of just over 31, about 14% of individuals do report perceived discrimination based on weight status. As you can see those numbers just continue to go up. Such that an individual with a BMI that exceeds 45, 63% of those individuals face repeated discrimination based just on their body size.

In fact, rate of weight stigmatization have increased by 66% since 1995. It's interesting to note that the rates of weight stigma have actually increased as have the rates of obesity. You might think as the rates of obesity have gone up, we all know people that are overweight now. We recognize that this is a problem, you might expect that stigma would go down, but it's actually had the opposite effect in that as obesity rates rise, so too does the extent of weight stigma. In fact weight stigma is now the third most commonly reported form of discrimination among women. Rates of weight stigma are actually on par with rates of racial discrimination. One notable difference, as I mentioned earlier, in that weight stigma is widely considered to be very socially acceptable. Whereas other forms

of stigma, the expression might be blunted due to social desirability or not wanting to appear biased. Individuals feel very free to express stigmatizing attitudes towards persons with obesity.

Weight stigma occurs and is prevalent in multiple domains including the media. As I mentioned, characters with overweight and obesity are much more likely to be the butt of a joke, they're more likely to be seen binge eating, tripping over furniture, or being laughed at. Weight stigma is also very pronounced within interpersonal relationships and this is across the life span. Actually there are some really interesting studies looking at children as young as preschool and when they are given the opportunity to pick different individuals to be their playmates, from pictures, the child with obesity consistently gets chosen last. These attitudes are indoctrinated very early on. Weight stigma also occurs within interpersonal and romantic relationships, such that individuals with obesity and in particular women with obesity, are much more likely to remain single and unmarried as compared to their leaner counterparts.

Weight stigma is also very pronounced within numerous employment opportunities and this really runs the gambit across employment settings so from things like inequitable hiring practices, wage discrepancies and even wrongful termination due to one's weight. We oftentimes see weight stigma within educational settings, such that individuals with obesity are less likely to be admitted to competitive college and graduate programs. In addition, a study found that parents of children with obesity, were actually less likely to pay for their college education when compared to parents of lean children.

Finally, we also tend to see a lot of weight stigma within the healthcare setting. This is really important to point out, because a lot of people with obesity actually avoid presenting for medical appointments because of fear of stigma. Individuals with obesity report stigma from their doctors, nurse practitioners, dietitians and even individuals who are specifically trained in the treatment of obesity. I wanted to clarify that this is not only perceptions of stigma, but actually in research where we've asked doctors and nurses and providers, those individuals do report having lesser thoughts of individuals with obesity, such that doctors and providers actually spend less time in their appointments with a patient with obesity. They're more likely to view them as non-compliant. They're more likely to view them as lacking willpower, and potentially even being responsible for their presenting symptoms. This is a very real consequence for the provision of healthcare, such that individuals with obesity are more likely to delay important preventative care appointments, due to the fear of stigma.

One important question that I want to return to, and I briefly mentioned this a few minutes ago, but weight stigma's also unique from other forms of stigma, in that some people believe that it might motivate weight loss and healthy behaviors. By this logic, weight stigma, which has been shown to increase body image dissatisfaction, might then motivate an individual to lose weight. Again, by this logic, if we tease somebody, if we make fun of them, they're going to feel badly about themselves and they're going to want to do something about that to change. This is a question that has been studied extensively by researchers, myself and my colleagues, and I wanted to actually provide the answer to this

question here that weight stigma does not, in fact, promote healthy behaviors, but it seems that it actually might promote unhealthy behaviors. For example, when stigma is associated and predictive of eating in secret, binge eating behaviors, and in a weight loss program, these are individuals who are presenting for the treatment of overweight, individuals who have faced weight stigma are actually less likely to lose weight, and more likely to drop out of the program altogether, as compared to their peers who have not suffered from weight stigmatization.

In addition, weight stigma is associated with lower motivation to exercise and even the avoidance of physical activity altogether. I hope that these data start to show you that not only does weight stigma not motivate healthy behaviors but that it might actually be promoting those behaviors that contribute to and exacerbate obesity. Weight stigma is also associated with a number of psychological consequences, including low self-esteem, poor body image, depression, anxiety and even suicidal thoughts and suicidal behaviors.

Now that I've given you an overview of weight stigma, I want to return to the topic of weight stigma and the U.S. military. To date there are no data on the experiences of weight stigma within the military setting. I'm thinking, why might this be so important to assess within the military setting. For one, military service members are already at very high risk for eating disorders, unhealthy weight control behaviors and the use of compensatory behaviors. When I say compensatory behaviors, I mean any behavior that is intended to undo the effects of eating, so things like purging, laxative misuse, diuretic misuse, et cetera. We need more data on the treatment of obesity in the military.

Given the negative consequences of weight stigma in civilian populations, coupled with the vulnerability potentially of military populations, this makes this a really important topic. It will also be vital for determining best practices for promoting health and fitness. No one is saying that health and fitness and wellness, are not important in the military. Just the opposite. We want to ensure that our efforts at promoting health and fitness, are not inadvertently shaming or stigmatizing.

I want to move along to some of my past and present research. The objective of one of the studies that I'm currently working on was to assess the experiences of weight stigma among active duty service members with overweight and obesity. The sample that I used for this study was drawn from something called the Fit for Duty study. This is a randomized, controlled obesity prevention program that is currently taking place at Joint Base McChord up in Fort Madigan. This is a study that was recruiting active duty military personnel who are overweight or obese or who have a family history of overweight or obesity. The overarching goal of the program was to compare a Fit for Duty obesity prevention program to a health education control.

My sample was 119 active duty service members with overweight and obesity. About 70% of the sample was male. The mean BMI was just under 30. About a third of the sample was non-Caucasian and the average age was just about 31. We administered a series of self-report assessments to all of these participants

and the data that I'll be showing you today are from the baseline appointment. I'm not going to be showing you the results of the treatment in today's presentation, but I will just be showing some of that baseline data.

These self-report assessments included assessments of an individual's mood, their psychological functioning and also a measure of weight stigma with in the military. In order to create this assessment, I consulted with my colleagues in the military. We wanted to come up with a very culturally sensitive assessment of weight stigma in the military to elicit forthright and candid responses. The weight stigma in the military measure, it really runs the gambit of stigmatizing experiences. For instance, were you ever called a weight related nickname? Have you ever been denied a promotion or an award? Are there any other consequences of your excess weight within the military that you've experienced.

Then we collected height, weight and body fat of all of the participants. Just to orient you to the results here, we dichotomize the responses on that weight stigma questionnaire which is basically a fancy way of saying we divided the respondents into those who had experienced weight stigma in the military and those who had not experienced weight stigma in the military. This is because we wanted to get a broad stroke lay of the land of how many people is this affecting. Again, because this is the first study to assess weight stigma in the military we were looking to just get sort of a base rate.

As you can see nearly 50% of our sample reported at least one instance of weight stigma in the military. Again, this ran the gambit from teasing and offhand weight based jokes or nicknames, to also being denied a promotion or early separation from the military. We also wanted to look at whether or not weight stigma was associated with any other health indices or psychological functioning. We did find that weight stigma in the military was positively and significantly associated with depressive symptoms, with maladaptive coping. What I mean by maladaptive coping is an individual who uses really poor behavioral skills to cope with the stress of stigma. These are individuals that say in response to stigma, I wore baggy clothing so no one can see my shape to make fun of me or in response to stigma, I tried to lose weight really quickly by fasting. These are really unhealthy methods.

In addition, stigma in the military was positively associated with the use of compensatory behaviors. As I had defined earlier, compensatory behaviors refers to the use of things like laxatives, purging, fasting, compulsive over exercise, even the use of enemas. You can see that positive relationship.

Finally, the experience of stigma in the military was also associated with something we call weight stigma internalization. That's essentially the extent to which one believes that negative weight based stereotypes refer to him or herself. For example, "If I only had more willpower, I wouldn't be the weight that I am."

In addition, we wanted to break down what some of these experiences looked like and we found that 30% had faced assumption in the military about their ability or about their laziness. The 30% said that "Individuals don't think I am as

fit as other people are," or "Individuals assume that I'm lazy, because of my weight." 30% also said that they were given a hard time by coworkers or supervisors because of their weight. 18% said that they had been laughed at or mocked. 15% had faced disciplinary action in the military due to their weight. 11% reported that they had actually been passed up for promotion for no other reason except for their height, weight, body composition measurements.

We also wanted to get a sense of how these service members feel about themselves. We found that 65% actually wish that they could drastically change their weight. Just over half feel depressed when thinking about their weight. 50% feel anxious about their weight because of what people might think of me. Just under a third, said that weight is a major way that I judge my value as a person. A quarter said that they hate themselves for their weight.

In addition, we wanted to administer a qualitative measure to get a better sense of what these experiences might look like them and get the more personal description. 51 respondents opted to provide qualitative data in the study. Of those 51, 8% reported weight related nicknames in the military, and I wanted to provide some examples here. Those included Fatty, Gorda, which is essentially Fatty in Spanish, Big-Booty Judy, Thunder Thighs. A quarter described weight related consequences at home. An individual wrote in lower self-esteem. Another individual wrote, "Spouse upset by career impact." 39% cited examples wherein their weight resulted in the denial of a promotion, opportunity, or an award. One individual said, "Missed out on an award." Another individual said, "Cannot be promoted." Finally three-quarters of the sample described weight related consequences within the work setting. For example, one individual wrote in, "Physical training three times per day." Another individual wrote in, "Weigh ins before and after work."

For many of us, this is very difficult to even imagine. Having to complete physical training exercises three times per day, or be weighed in both before and after work. Then, coupled with that stress, knowing that your career might be hanging in the balance, depending on the results of those assessments.

To recap some of the main findings, stigma was frequently reported by active duty service members. In fact, nearly half of them reported at least one incidence. Weight stigma in the military was associated with depression, internalization of weight stigma, compensatory behavior, such as purging, maladaptive coping in response to stigma. Some of the take home points from this study are that service members clearly face enormous pressure to be fit and that service members with obesity do appear to be quite stigmatized within the military. In addition, our data showed that service members with overweight and obesity already felt quite distressed about their weight data. It seems that added stigma on top of the shame that they're already experiencing would be quit counterproductive.

Moving along from my past and present research, I want to discuss some of the clinical and practical implications of my research and also some of my colleagues' research. To begin with I want to talk about some of the potential challenges or problems with our current standards in the military. I don't want to

come in here as a civilian and indicate that anything's being done incorrectly or wrong, I just want to start a dialogue of what can we maybe do better to promote health of individuals of all weight status without stigmatizing and shaming.

One thought that I had is that the emphasis on BMI and abdominal waist circumference, might promote unhealthy weight control behaviors. We also know from decades and decades of obesity research that successful weight loss and maintenance are exceedingly difficult and that obesity is a very heterogeneous attribute that there are a lot of factors that contribute to one's weight status, aside from just how hard do you work, or how disciplined are you. In addition, some individuals do find it more difficult than others to lose weight. Two individuals might weigh the same amount and they both might engage in the same exercise, they both might eat similar things, and one individual might just find it easier to lose weight than the other. We know that there are hosts of genetic and metabolic and biologic and psychological factors that go into determining somebody's weight status.

In addition, I find it problematic that even if an individual's BMI is within the specified range, that he or she may be subject to a quote, "weight redistribution plan." This is very subjective and somewhat vague. An individual might be in excellent physical health and shape and still have a certain time period in which they need to quote, "redistribute their weight to achieve a more acceptable military appearance." 0This might be problematic, in so far as it might contribute to stigma and those employment disadvantages, as well as contribute to eating pathology. To illustrate that point I wanted to pull a recent article from the Marine Corps Times. This is an excerpt from the article. "There was a staff sergeant I knew and he was outstanding. The only reason he got out of the Corps was because of the new weight standards” said a gunnery sergeant at Camp Pendleton, California, who underwent liposuction in June. Even though the Corps allows Marines to have the procedure, he asked not to be identified, saying that there's a stigma associated with failing to meet fitness requirements."

I find that particularly striking given that this is an individual in the Marines, who we would anticipate to be in excellent physical health, this individual underwent a very costly and potentially dangerous operation in order to better meet that standard of military appearance. In addition from the same article, ""I know an officer," he said, "who in order to make weight wore sweat suits, didn't eat for a week, took pills and used enemas."" This seems to be not just the exception but almost somewhat normative within the military that immediately prior to a weigh in or taping, individuals resort to very drastic and unhealthy weight control measures.

That begs the question, should we reconsider the use of BMI within the services? As we know, BMI is often used as a proxy for health, so we determine somebody's BMI and then based on that number we categorize this person as being healthy or unhealthy. However, recent research indicates that using BMI as the primary indicator of health actually a full 75 million U.S. adults would be misclassified as either cardio-metabolically healthy or cardio-metabolically unhealthy. If we just took BMI, and we categorized people, we would be off by 70 million adults, which I think is especially problematic. In fact, other studies have

shown that BMI is consistently the poorest gauge of cardiovascular risk factors. If we're after health here, then BMI does not seem to be the optimal index with which to measure it.

In addition, women who accumulate muscle mass may be more likely than men to exceed BMI and body fat standards. If you remember from the beginning, I showed the slide that said 15% of men and 20% of women report difficulty meeting the standards. This might partially account for that discrepancy. I also think that this finding is particularly relevant, given that combat roles have recently been opened to women and in order to qualify for combat role, you really do need to be in peak physical shape. Women that are accumulating muscle mass in preparation for combat roles, might also be more likely to fail their fitness testing, just based on their biology.

I think it's certainly worth considering revising the body composition standards and to also begin to question the utility of the use of BMI and body fat standards among different roles. Again, I understand the utility of some of those indices in combat roles, but what about for individuals who are more in intelligence, or who are providers or teachers. I think that there's something to be said for tailoring standards to the different roles that an individual has within the services.

Also something to consider, might be the adoption of a health at every size framework, so that framework essentially espouses the tenant that individuals might be healthy irrespective of BMI. There might be an individual who's BMI technically places them at the overweight or obese category, who might be completely healthy. Using the health in every size framework, it makes us a little bit more open minded and it makes us less likely to use BMI as the primary indicator of health.

What are some effective ways to address weight stigma within the military? One is very easy to do, is just using appropriate language when referring to overweight, excess weight and obesity within the military and not resorting to slurs or derogatory language. In addition, removing stigma from PT, physical training, and drills. I have been told a lot of times that people go out for their PT and their routinely called nicknames that refer to their shape and weight. It's something that people don't necessarily question because it might be part of the culture or it might be used to build rapport, but it's clearly problematic.

In addition, it might be important to implement intervention to reduce stigma and to implement anti-bullying policies within the military. Again, we're not saying that weight should not be addressed within the military, but I am advocating that individuals with overweight and obesity should not be bullied or ridiculed due to their weight. It would also be important to discuss the complex causes of obesity. We tend to have a very simplistic view of obesity in this country that it is a matter of eat less, exercise more, if you're not losing weight you're doing something wrong or you lack willpower. In fact, all of our data thus far shows us that obesity is very heterogeneous and very complex and there are a multitude of factors that influence one's weight status. It will also be important to avoid language that places blame on person's with obesity. It will also be important to be aware of stigmatizing comments by others. I guarantee you after you leave the

presentation today, you will start to notice the ways in which obesity is discussed and spoken about by coworkers, friends, family and in the media. Just even developing that awareness of the way that obesity is stigmatized.

It's also important to keep in mind, that stigma is not motivating. This is not just about not wanting to hurt people's feelings, which is important as well, but stigma has what we call an iatrogenic effect, meaning it accomplishes the exact opposite of what people intend for it to do. Using stigma as a motivating tool actually results in increased likelihood of binge eating, avoidance of exercise.

How do we address weight? It's important to use neutral terms and in research, individuals have actually provided terms that they prefer. Things like weight and BMI, rather than saying obesity or fat. In addition, I urge you, those of you who are providers or in the practice of health care to consider the following approaches when treating a client who has some excess weight: "Could we talk about your weight today?", "How do you feel about your weight?", "Do you have any health related goals?", "What words would you like to use when we talk about your weight?" This sounds very simple but many people actually avoid routine healthcare visits because they're so anxious about how their doctor's going to talk about their weight and they're so anxious about being weighed and having their doctor make judgements on their weight.

In addition, when treating families where an individual is trying to lose weight or an individual has overweight or obesity, go ahead and educate families, clients, patients about obesity. We want to always avoid blame and we want to not make assumptions that an individual must be overeating and that's why he or she is overweight. It's important to address weight sensitively and again to recognize that many people avoid healthcare entirely just to avoid that topic.

Also good to have resources available. I have had so many patients come to me and they tell me that their doctor said, "Eat less, move more, lose this amount of weight and come back," and they walk out the door and they don't really have any new skills or tools that they didn't have previously. I urge you if you're a provider, if you know a provider, have some resources that are available, whether it's a referral number, a pamphlet, a website, anything that you can arm your patient with. In addition, try to make it a family affair and this is especially relevant when treating dependents or children with overweight or obesity. It is very stigmatizing if one child has obesity and the other child does not. The lean child is given dessert and the child with obesity is not. That's something that is very shaming to the child with obesity. I encourage you that if one person within a family is trying to lose weight, that the whole family goes in on it and adopts those healthy behaviors so that the one individual is not singled out.

Let's sort of focus on healthy behaviors. A lot of times patients are focused on the number on the scale and they have a certain goal weight in mind. I really urge you instead, to focus on healthy behaviors. Whether it's taking a walk after dinner, or having a goal of being able to go to the playground with your kid and not feel out of breath. Focusing instead on those quality of life indices rather than the number on the scale.

Some more provider recommendations. Again, some of these sound very simple but they are very important. Something like providing armless chairs. If an individual with obesity presents to a waiting room and all of the chairs are small and narrow, with arms, that individual is not going to be comfortable or have a place potentially to sit. That's a very simple modification that providers can make in the offices. Along those same lines, ensuring adequately sized equipment. Many individuals with obesity, they'll go to their doctor and the arm pressure cuff is not sized accurately for them and so the reading will be off. The doctor will have to take it off, they'll have to find a new blood pressure cuff, so just come prepared with blood pressure cuffs of multiple sizes in the office.

Also be mindful of office reading materials. A lot of magazines and popular news media have catchy headlines like "Get a bikini body," or "lose the belly fat." You want to just be aware of the effect that those types of headlines might have on your patient. In addition, try whenever possible to weigh your patient in a private setting and ask permission first. Again, individuals report a number of negative experiences that they've had in healthcare settings because of a provider weighing them and then muttering something or heaving a sigh, or making a comment under their breath. Along those lines again, record weight silently and without any additional commentary. Again, keep in mind that many healthcare patients avoid healthcare entirely just to avoid the scale and the stigma that often accompanies that experience.

Again, be aware of stigmatizing comments by others. At this point, now that you're all aware of the harmful consequences of weight stigma, you can feel free to speak up if you hear somebody making a weight related joke, or making a comment about somebody with overweight or obesity. One idea is to just not laugh if there's a joke that they made or to even say something that that's pejorative or that's disrespectful to individuals with obesity.

I also want to talk about some expectations for weight loss, because individuals tend to inflate the possible outcomes of weight loss effort. I want to kind of set the record straight on that. What we consider success is actually a five to ten percent weight loss. I know that many patients feel frustrated with that, because they might have a target number on the scale that they're really hoping for and five to ten percent might fall short of that. However, from a medical standpoint, a five to ten percent weight loss is considered a success. We also do tend to see improvement metabolically when an individual loses even a modest amount of weight.

You also want to keep in mind that a healthy and steady weight loss is no more than one to two pounds per week. If you see any articles that espouse a new diet that guarantees ten pounds within the first week or two, please use caution when proceeding with that diet and keep in mind that there are some diets that you might lose more than that, but it's likely not actual weight that you're losing and there's likely to be a pretty pronounced rebound effect afterwards.

What we know from decades and decades of research is that ten percent weight loss is the typical outcome of the very best behavioral and/or pharmacological treatment. This is kind of the best we have at this point is a ten percent weight

loss. Again, some people might feel discouraged by that means. That means for an individual who weighs 200 pounds, that's only a potentially a 20 pound weight loss, which might fall short of their own hope, but from a medical standpoint, again, we would be thrilled with that.

Importantly, only ten to twenty percent of people can actually maintain that ten percent weight loss after one year. You can see that this is by far the minority of individuals who are able to lose weight and successfully keep it off. The conclusion, unfortunately is that significant weight loss is just not readily sustainable, with our current treatment options. It's important to keep in mind that BMI is not a great indicator of health and that an individual might have lost a very modest amount of weight, but might still be improving their health.

Before I leave you all, I encourage you to identify some of your own personal attitudes. For example, ask yourselves, "Do I laugh when others make weight related comments or jokes," and if the answer to that is yes, that's okay. Hopefully, it's yesterday and maybe not as much tomorrow. "How do I feel when I interact with people of different sizes?" Some people do have a strong reaction to seeing an individual with obesity. If that's you, that's okay. I think it's important to kind of ask yourself how you feel and what makes you feel that way. "Do I make assumptions about an individual's character, intelligence, abilities, or health status based just on their weight status or their appearance?" This is a pretty common one for people that if you see somebody who has some excess weight or who appears to be obese, we might automatically make assumptions about their health, their competence, their intelligence and it's really important to start to notice those assumptions as they occur. Ask yourself, "What stereotypes do I have?" We all have stereotypes and I think it's important to acknowledge them and think to ourselves where those came from and how we can begin to combat them.

I want to leave you with some take home points for today. One is the importance of using respectful language when discussing overweight and obesity. The importance of avoiding shame and blame when working with people with overweight and obesity or even when talking to friends, family members. Focusing on specific health behaviors. If you're the one trying to lose weight or if you have a friend or family member trying to lose weight, focusing not as much on the scale or a measurement, but on specific health behaviors. "Am I able to walk up this flight of stairs without running out of breath?" If the answer is no, maybe that should be my goal over the course of the next couple of months. Also, it's important to increase the awareness of weight stigma, not only how prevalent it is, but also the host of harmful consequences. It would also be important to remove stigma from existing efforts. That's why it'll be important to facilitate a dialogue within the military to ensure that the weight loss approaches being used now are not promoting and exacerbating the stigma. We really want to keep in mind that the goal here is to combat obesity, but not to combat obese persons.

Thank you so much for your time and attention. I will leave you with my references here.

Dr. Nacev: Thank you so much for your presentation Dr. Schvey. It is now time to answer questions from the audience. If you have not already done so, please submit questions via the question pod located on the screen. We will respond to as many questions as time permits. Question for you, how does geographic remoteness affect obesity? In other words, of patients that have limited number of restaurants, fast food restaurants or other take outs versus fresh food and vegetables and that kind of stuff.

Dr. Schvey: Absolutely, that's a great question. There's actually a term that's been coined on that exact issue and we think of those types of areas as being food deserts. Those can actually be urban environments. You wouldn't necessarily think that it would be a food desert because food is plentiful, the problem is it's the wrong type of food. I think we can all think of a neighborhood that we've driven by or perhaps we've lived in where the only options for food come from the kiosks or the bodegas or the drugstore or the gas stations. That's what I mean when I say food desert. Geographic location absolutely has an enormous bearing on our health.

If you live in a neighborhood, in which you feel unsafe, you're not going to be likely to take that walk after that I mentioned before. In addition, having green space, having sidewalks that are safe, pedestrian only areas, all of those factors can really promote exercise and fitness. On the flip side, individuals who do not have access to those types of safe spaces are much less likely to get the amount of exercise that we would hope for them. It's a very important sort of public policy issue that we're working on addressing in trying to identify these food deserts and trying to find ways of bringing healthful food in. There's also been some research to try to measure the number of fast food restaurants that are near schools and really try to reduce the number of billboards and fast food establishments that are within a close proximity to our schools. Excellent question. Something that the research is really trying to focus on.

Dr. Nacev: [inaudible] measures of studies showing removal of just sodas from schools has made a difference?

Dr. Schvey: Absolutely. There's been a lot of work with removing or revising the vending machines within elementary schools, high schools and also there's a lot of work being done with the school lunch program. All of that has an enormous bearing on our health.

Dr. Nacev: Another question, is the prevalence of obesity in the veteran population that correlates with discharge from the service or from the DOD?

Dr. Schvey: Yes. There is actually a wealth of research on obesity and weight status with veterans and it's a very vulnerable population. We actually know that the rate of binge eating disorder, which is a new addition to the diagnostic and statistical manual, but it is a psychiatric diagnosis where an individual has frequent binge eating episodes. We know that the rate of binge eating disorder are actually much higher within veteran populations than within civilian populations. This is certainly a vulnerable population that just because they're no longer active duty we really want to continue to pay attention to their health and wellness.

Dr. Nacev: A question was posted, are there any known facts or efforts to train healthcare professionals about the stigma and impact on outcome i.e. beneficiaries when seeking care?

Dr. Schvey: We're working on it. I welcome any thoughts that people have on that. We are trying to get into graduate programs at medical schools and we're trying to really get in during the training period because we know that the longer somebody has been practicing actually the more exacerbated their weight stigma tends to be. If we can intervene on trainees rather than fellows and try to demonstrate to them the harmful consequences of weight stigma, I think that's our best opportunity that we have for intervention. There are ongoing efforts and some online resources for individuals within medical practices in order to kind of reduce that bias and better educate our trainees on the consequences of weight stigma.

Dr. Nacev: Another question. I'm not sure to what extent we can answer it, but I will post it anyway. Does the DOD have any stance on funding weight loss surgery?

Dr. Schvey: That is an excellent question. I do not know if there is an official DoD stance on that. That's a great question though.

Dr. Nacev: It was not discussed at all in the [inaudible]

Dr. Schvey: I don't, I'm not sure about the DoD in particular, if there is a stance on that. I do know that those types of procedures are quite common. The quote that I pulled from the individual in the Marine Corps, he had had liposuction, which is an elective surgery, and that was done really with the intention of passing his fitness testing and body composition testing. As far as bariatric surgery goes, that's not an area that I think has been as well studied.

Dr. Nacev: Is there any research that you know with regards to the relationship between weight gain and trauma?

Dr. Schvey: There are some studies that are kind of in their nascent stages actually. A colleague of mine actually recently completed a study looking at history of adverse life events and binge eating behaviors. We do know that there is a bit of correlation and association between a history of adverse life events and eating pathology and binge eating. There's also been some work that's been done at Yale, looking at trauma and sexual abuse, this is amongst civilian populations though, but that they are associated with weight gain and binge eating.

Dr. Nacev: [inaudible] A question was, is there age progression, in terms of weight gain, in other words, the risk for gaining weight is higher or lower depending on the age?

Dr. Schvey: Yes. Generally speaking, yes that is the case. Of course, for many people they might start off their life overweight and then adopt healthy behaviors or have an intervention and then they are able to successfully lose weight across the lifespan, but generally speaking, yes, there tends to be an upward trajectory of weight and fat gain over the course of the lifespan. That's due to many different factors, though sedentary behaviors do tend to increase when an individual ages. Mobility is sometimes a factor, so if an individual is struggling with chronic pain,

he or she is of course less likely to get adequate amounts of exercise. In addition, for women there are a series of hormonal changes that do occur around pre and post menopause and those do tend to affect body composition and weight gain. Absolutely, there does tend to be an upward trajectory as we age.

Dr. Nacev: Another question, just answered that question. Questioner made a comment about providing accommodations such as less chairs would be encouraging unhealthy behavior. How would you address that? In other words, the new phenomenon where people are standing at their desks versus sitting at their desks.

Dr. Schvey: Right. Okay. That's a fun question. What we do know, and I want to be careful how I say this, that things like standing desks, which are kind of all the rage now, they have not necessarily been linked with any improvement in body composition or body weight, but they're certainly not a bad idea. If you're looking to lose weight, I don't think that standing for most of the day is going to help you lose that weight, but it also is healthier than sitting. It's much healthier than the alternative. There's an interesting relationship between exercise and weight loss and people tend to kind of inflate the importance of exercise on weight loss and we actually tend to think of it as about 80% what you eat, about 20% that exercise piece as far as dictating weight loss. Certainly if you can get a standing desk or sit on one of those bouncing chairs, by all means go for it. The science isn't quite there yet with showing that it has any real effect on weight loss, but by all means, go for it.

Dr. Nacev: Another question, how important is psychological counseling for successful long term weight loss, are there any studies to that effect?

Dr. Schvey: There are. That's an excellent question and I think it's a bit of a nuance question, because as I've mentioned, obesity is a very heterogeneous condition. Some people have obesity because they are genetically predisposed to obesity. Both of their parents are overweight or obese, and their grandparents and their siblings and you can tell that the genetic deck is sort of stacked against this individual. For that individual, psychotherapy might not be quite as effective as behavioral weight loss. For individuals who are struggling with things like binge eating or eating in response to a negative mood or negative affect, absolutely psychotherapy can be very beneficial. There is something called cognitive behavioral therapy which is really considered the gold standard treatment, actually, for binge eating. Another type of therapy called interpersonal psychotherapy and that's sort of based on the theory that poor relationships or poor communication skills contribute to a negative mood and then that negative mood contributes to overeating to kind of soothe that negative mood. We just want to be careful. We don't want to recommend therapy in the traditional sense, to everybody with obesity because, again, we don't know the factors that are contributing, but certainly if an individual, overweight or not overweight, is struggling with unhealthy eating behaviors, then absolutely psychotherapy should be recommended.

Dr. Nacev: Another question that was asked is, are there any initiatives from the DoD policy level, do you happen to know, to reevaluate on blanket weight standards when in

now high tech military today we no longer expect everyone to take a heel, so to speak, and many just sit in the basement and operate UAVs for example? We wouldn't want to give brain power for weight standards that we need, maybe we need to alternate weight standards for non-physical combat MOS.

Dr. Schvey: I absolutely agree with that point. I think that's sort of where we are now. It's a tricky issue because I think, of course we want to promote health and wellness among these services, but at the same time there are certain roles that that may or may not be less relevant for. I think having a more tailored targeted approach is definitely advisable and that's something myself and my colleagues are trying to work towards. I don't know about the initiatives that have been take elsewhere, but at the Uniform Services University, myself and colleagues have been engaging in multiple discussions about it, but I'm not sure sort of where that stands as far as policy changes go. Absolutely an important future area.

Dr. Nacev: Based on your research and work with patients, how would you encourage your participants to engage in a healthy active lifestyle if they have a lot of, or individual physical impairments?

Dr. Schvey: Right. That's where we talk about how to really tailor a targeted approach to weight loss. We don't expect everybody to be able to join a gym. First of all they're expensive. Second of all, people might not have them readily available. Third of all, people face stigma within gyms. We try to meet the individual where they are and get a sense of what's enjoyable for them, what do their goals look like. Recommending small incremental lifestyle changes. To a lot of people, the idea of going for a run or going for a walk is really adverse to them, but maybe instead of parking in the closest spot when they're going to the store, maybe parking a few rows out and just trying to incrementally increase the amount of time that that person is up and active. Always taking in to account health, medical issues, we never want to exacerbate somebody's sort of medical complaints, but trying to improve and increase exercise incrementally.

Dr. Nacev: Another question, a very active group with lots of questions. Do you feel perceptions toward obesity is a learned behavior as obesity used to be associated with prosperity?

Dr. Schvey: Well that question is fantastic. We are sort of unique in our culture here in that we have similar rates but higher rates of weight stigma than many other countries. What's actually interesting in that is that in certain countries that do not stigmatize excess weight, for instance the Dominican Republic does not tend to stigmatize excess weight, they're individuals with obesity, they're actually healthier than our individuals with obesity here in this country. There is something that is being promoted culturally and again culturally sanctioned in this country and in other industrialized nations. I think it's a little bit of both. I think that with weight stigma, as with any form of stigma, there is an innate preference for in group members. From the day that we're born, we have a preference for faces that more resemble our own.

I think what's interesting about weight stigma is that people with overweight and obesity don't necessarily see themselves as being part of that group. They see it

as being a transient state that they're eager to get out of. We have stigma that's kind of coming from within people with overweight and obesity and that's being perpetuated from outside. I think the studies of preschoolers showing a strong preference shows that their might be a confluence of learned behavior plus also biologic predisposition to prefer a certain body type. You're absolutely right, there have been major changes within industrialized nations our preferences for body types has similarly shifted. You can look at Peter Paul Rubens painting and you can see that the paradigm of beauty was a more voluptuous, curvy, we would probably call them overweight women then and now our thin ideal has become very, very thin and lean. Preferences have been shaped over time.

Dr. Nacev: You mentioned, the Dominican Republic where overweight individuals there, obesity there [inaudible] here, how do you explain the difference?

Dr. Schvey: We think that the stress of stigma might actually be contributing to an exacerbated number of those obesity related health co-morbidities. We're not saying that excess adiposity does not factor in to the equation, we're just saying it's not this full picture. We know that stress of chronic discrimination amongst other stigmatized groups contributes to really poor health outcomes over time. Cardiovascular risk, impaired glycemic control. We suspect that chronic exposure to stigma and discrimination on top of the risks already inherent from excess adiposity is kind of a one two punch that affects the health of individuals who are targeted.

Dr. Nacev: It's almost like if you have a physical condition it exists, psychological factors like stigmatization adds to it and magnifies it.

Dr. Schvey: Exactly.

Dr. Nacev: Another question is, I think it's some questions about how much stigmatization has gone up in terms of since it's gone up so much, what can be done at the society level?

Dr. Schvey: Great. There are a lot of ideas for that. I think one is going to be addressing the media and how the media depicts persons with obesity. Again, I encourage all of you to kind of think about your favorite TV show or movie or recent commercial you've seen, the way that obese individuals are depicted is really, really shameful. I think starting there, and that's not just television and movies that's also in news media. Oftentimes when a reputable news magazine or newspaper publishes a story about obesity, they tend to show individuals with obesity from the neck down. They tend to focus in on an individual's midsection. They tend to show an individual with a very stereotyped food in their hand, like a cheeseburger. These perpetuate the stigma of obesity. I think starting with the way that we depict and show persons with obesity, and I think also indicating that we're not going to tolerate that. Most people would not dare to make a racial slur or epithet in a room full of people, however, if you think about the number of times people probably make fat jokes or make a comment about weight and it receives laughs and smiles. It's really deemed socially acceptable.

I think it goes from a policy level to an individual level. I think just showing that you're not going to condone those behaviors. In addition, individuals with obesity have no legal recourse in the event of weight based discrimination. Weight status is actually not a protected class in the United States. An individual that's been discriminated against due to their weight really has no legal recourse. I think instituting change at the policy level will also be really important to demonstrate that this isn't a protected class, and we recognize that weight stigma is prevalent and pernicious.

Dr. Nacev: You addressed this question already, previously. I'd like to perhaps elaborate some more. What are alternative measures when a person has disabilities to prevent walking and or running?

Dr. Schvey: Right. That we try to emphasize, if this is a person who is trying to lose weight, then we might kind of shelve the exercise conversation a little bit. Focus more on how the individual's feeling, how the individual is feeling aside from the mobility issues and what the individual is consuming. In addition, there are certain approaches to exercise and mobility that might not involve walking or running. If there's some sort of swimming program that that individual can engage in. I've seen patients who just try to join their local YMCA if walking is really difficult or really painful on their joints. Swimming sometimes alleviates some of that. Again, you always want to check in with your provider before you start any medical or exercise program.

Dr. Nacev: That's a good point. [inaudible] The question is regarding research on weight stigma, does the sample survey include individuals who were overweight and now considered within standards or does it all include currently overweight individuals?

Dr. Schvey: Is this a question about the Fit for Duty. Our sample, the one that I analyzed was only individuals who at the time of their initial assessment had a body mass index of above 25, which a cut point for overweight. We are currently conducting the follow up appointments, so maybe I'll be able to share those results in another time. We're not sure yet, how the program has affected weight loss or gain over time. The results that I showed were all individuals who were currently, at that time of the assessment overweight.

Dr. Nacev: Okay. A follow up question, was are there studies that show how many military individuals who are considered obese, recover to the weight standard?

Dr. Schvey: That's a good question. Not that I'm aware. I would have to do a little searching to see if there's a study that's shown whether or not individuals are able to lose weight and successfully maintain it. Not off the top of my head.

Dr. Nacev: Okay. Do you know studies that have looked at cultural or age related factors that play a role in weight bias or weight stigma?

Dr. Schvey: Yes. There's been some great work coming out of Columbia that has actually demonstrated that certain groups are more vulnerable to the consequences of weight stigma. For instance, we know that women are more vulnerable to stigma

than man, and women begin to experience weight stigma at a BI of just about 27, whereas for men it's a bit higher. In addition, we do tend to see that weight stigma might affect Caucasians more so than other racial or ethnic groups. Also individuals that are younger are more vulnerable to the harmful effects of weight stigma than individuals that are older.

Dr. Nacev: Thank you very much. Thanks again to our presenter, Dr. Schvey. Today's presentation will be archived in the monthly webinar section of the DCOE website. To help us improve future webinars we encourage you to complete the feedback tool that will open in a separate browser on your computer. That's just the presentation and resource list of this webinar visit DCOE website at DCOE.mil/webinars. A downloadable audio podcast and edited transcript of the closed captioning text will be posted to that link. The chat function will remain open for an additional ten minutes after the conclusion of the webinar to permit ten days to continue to work with each other. The next DCOE TBR webinar performance tryout weight, nutrition, and exercise is scheduled for July 14th from 1:00 to 2:30 p.m. in the afternoon. The next psychological health webinar, ethnological update in the treatment of mental health conditions is scheduled for July 28 from 1:00 to 2:30 as well. The 2016 DCOE summit State of the Science Advances in Diagnostics and Treatments of Psychological Health in Traumatic Brain Injury in Military Healthcare is scheduled for September 13th through 15th 2016. The summit registration and continuing education information will be available soon. Thank you again for attending and have a great day.

Operator: This concludes today's webinar. You may now disconnect at this time. Thank you for your participation.