

Treating Athletes with Eating Disorders and Unhealthy Sport Environments

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la-shell_johnson@med.unc.edu: Good afternoon, everyone. We would like to welcome you today to our presentation titled, "Treating Athletes with Eating Disorders and Unhealthy Sports Environments." And we're going to first mention a few things to note; participants will be muted upon entry, and videos turned off. For technical assistance, please use the chat box located at the bottom of your screens.

la-shell_johnson@med.unc.edu: Third, you will receive an email approximately one month from today, requesting feedback and impact on today's presentation. We also ask that you visit us at www.nceedus.org/training to view other training opportunities that we have within our training library.

la-shell_johnson@med.unc.edu: I'll go ahead and introduce today's speaker. Today's speaker is Mrs. Rachael Flatt, a 2010 Olympian US National Champion and World Junior Champion in Women's Figure Skating.

la-shell_johnson@med.unc.edu: She is also a 3x World Team Member with a top finish of 5th and a 4x Senior Grand Prix Silver Medalist. After retiring from skating in 2014, she graduated from Stanford University with a Bachelor's in Biology and a minor in Psychology.

la-shell_johnson@med.unc.edu: She then served as the Programs Director at the Center for M2Health and managed several research studies that leveraged digital mental health tools to improve treatment outcomes, particularly for eating disorders.

la-shell_johnson@med.unc.edu: In 2018, she began her doctoral studies in UNC Chapel Hill's Clinical Psychology Program under the mentorship of that to Cynthia Bulik, where she researches eating disorders with a focus on digital mental health tools and athlete mental health. She continues to play an active role in the sports community as an athlete representative for the U.S. Olympic and Paralympic Committee's Mental Health Task Force and Racial and Social Justice Council and on U.S. Figure Skating's Board of Directors, among other positions.

la-shell_johnson@med.unc.edu: I will now turn things over to Mrs. Rachael Flatt. And as a reminder, today's presentation will be recorded and available on the NCEED training library one week from today.

Rachael Flatt: Awesome, hi everyone! Thanks for that introduction.

Rachael Flatt: It's always funny to hear those accolades read back to you, but thank you all so much for joining today.

Rachael Flatt: As La-Shell said, we're gonna be talking about treating athletes with eating disorders and unhealthy sport environments.

Rachael Flatt: One quick, quick, disclosure is that I have a National Science Foundation grant through the graduate research fellowship program.

Rachael Flatt: And in terms of the objectives for today, I'm hoping you all will feel comfortable kind of describing some core treatment considerations for athletes with eating disorders, primarily based on their level of care including how to kind of navigate some of the complexities with exercise, given that that's a huge component of an athlete's lifestyle.

Rachael Flatt: I also hope that you'll be able to critically evaluate larger systemic and cultural risk and maintenance factors that many athletes face with eating disorders, and then also thinking about how you can participate in changing the culture around eating disorders and sports, since this is a problem that we continue to face and it's something that we are certainly making strides on improving, but still have a ways to go.

Rachael Flatt: So, in terms of the agenda today, I won't talk a ton about the specific treatment of eating disorders for specific types of eating disorder since NCEED has some great webinars on that already.

Rachael Flatt: So, what I'm going to do today is spend a little bit of time talking about the different levels of care for athletes with eating disorders and really specific considerations, based on those levels of care and crafting a return to play plan for athletes who are re-entering the sport context.

Rachael Flatt: Then, we'll spend a bit of time talking about unhealthy sport environments, since that can certainly play a role in treatment, but they aren't necessarily discussed as often. So, I'll talk a little bit about what this looks like in terms of immediate local environments, as well as a broader perspective in terms of systemic and cultural aspects of kind of the overarching sport environment. And, then we'll save a few minutes at the end for some questions and answers.

Rachael Flatt: But, before we jump into that, I wanted to take a brief moment to talk a little bit about why this is something that should be discussed more often, and why should we should be concerned about eating disorders and athletes.

Rachael Flatt: Certainly, from a personal experience as La-Shell mentioned, I was an elite figure skater for many years and certainly saw the toll that eating disorders can take on elite-level athletes and how that can not only impact their career, but also their overall livelihood and their transition out of retirement, or the transition out of sport into retirement and into other things beyond sport.

Rachael Flatt: But certainly dealt with poor body image myself and certainly understand how sport can play a role with both the onset of an eating disorder and the maintenance of an eating disorder, so this is something that I'm very passionate about.

Rachael Flatt: But, certainly there are other issues here at play outside of anecdotal evidence that are really important and pertain to why we should be talking about eating disorders in sport more often.

Rachael Flatt: So, first of all, the prevalence is generally, at least as high in athletes, if not higher, than the general population. In many cases it says the general population prevalence is somewhere between one in five or 6%, but it can actually be upwards of 30% in some samples of elite athletes.

Rachael Flatt: This can certainly be related to unique sport specific risk factors, which definitely includes the sport and which athletes participate.

Rachael Flatt: So, for instance, aesthetic sports like figure skating or diving or gymnastics, weight class sports like wrestling, endurance sports like long distance running, certainly have higher prevalence estimates than other sports.

There's also sport related risk factors, including early sports specialization, exposure to traumatic injuries, and having to wear kind of revealing sports gear or uniforms and objectification of athlete bodies that occur so often in the media, that can definitely contribute to some of the elevated risk of both eating disorder onset and maintenance in this population.

Rachael Flatt: Of course, eating disorders, have a number of negative consequences for athlete's health and wellness. But, not only are these detrimental to their performance or their likelihood of developing injuries. But obviously it's detrimental to their long term health and wellness post-sport.

Rachael Flatt: Unfortunately, there are some you know folks in the sports community that operate as part of support teams that can be primarily concerned with the health of the athletes, just so they can perform and do their jobs as athletes.

Rachael Flatt: But that can kind of reflect some of the unhealthy sport environment that folks might encounter and instead we really need to focus on the athlete's health and wellness from a holistic perspective.

Rachael Flatt: Not just so that they can get back on the field and play, but because they're human and absolutely deserve treatment to help ensure that they are happy and healthy as a person first and as an athlete second.

Rachael Flatt: So, in terms of the level of care to consider, obviously there are quite a few steps here that athletes may enter treatment or they may step up or step down certain levels of care which could include hospitalization, residential treatment programs, intensive outpatient, or partial hospitalization programs, and outpatient programs. So, quickly talk a little bit about what each of those levels of care might look like in case you aren't familiar with those. So, in terms of hospitalization this is certainly the highest level of care.

Rachael Flatt: Folks who are going to be at this level of care, have the most severe eating disorder pathology in most cases. These are folks with severe anorexia nervosa, but they might also present with severe cases of bulimia nervosa or ARFID. These folks are usually medically unstable, or have really high risk levels which could include endorsement of you know, suicidal ideation with a plan, intent, and means.

Rachael Flatt: And may be at a point where they feel that they need intense meal supervision in order to ensure that they can progress down to a lower level of treatment.

Rachael Flatt: Oftentimes, this consists of a really high level multi-disciplinary team, where they provide the athletes with around the clock care.

Rachael Flatt: So, the teams can often consist of physicians, psychiatrists, psychologists, registered dietitians, nurses, occupational therapists, recreational therapist, it's a, it's a huge team in many cases.

Rachael Flatt: But these are these are folks who are usually quite sick and really warrant that level of supervision 24/7. The goals typically for this level of care are oftentimes crisis management, helping the athletes regain weight and certainly engage in nutritional rehabilitation.

Rachael Flatt: And also, in addition to that, we want to make sure that there's a reduction of harmful behavior whether those are eating disorder behaviors or potentially self-harm behaviors.

Rachael Flatt: We just want to get them to a point where they're medically stable before discharging them to a lower level of care.

Rachael Flatt: So, the next step down here is residential care, again these folks typically have pretty severe eating disorder pathology still sometimes they may still have low weight. And they still are at a point where they really need quite a bit of multi-disciplinary care still. If they are stepping down from hospitalization at this point, they will have returned to a point where they are medically stable and have had a decent amount of risk mitigation.

Rachael Flatt: These folks also still have a decent amount of psychological impairment.

Rachael Flatt: So, for instance, they have high levels of functional impairment, they may not be able to return 100% to daily tasks on their own and still need quite a bit of help with meals, for instance, but also have really intense weight and shape concerns and are not at a point quite yet where they can step down to a lower level of care.

Rachael Flatt: Sometimes folks at this level of care will also have they'll, they'll require some additional support because they don't necessarily have adequate at home support.

Rachael Flatt: So sometimes the parents, the family system or home life could be really unstable and the home system is just unable to provide the support that is needed, especially for younger individuals, while they work through recovery. This could certainly also be the case for an athlete with a severe eating disorder who's a college level athlete, who's far from home, doesn't feel like they can kind of adequately take care of themselves without substantial support.

Rachael Flatt: The goals for this level of care again are still centered around weight regain and stabilization, reduction of eating disorder behaviors, and kind of this preparation for lower levels of care.

So obviously, we want to focus on improving their level of functioning and impairment working towards setting themselves up for success as they stepped down to a lower level of care.

Rachael Flatt: And kind of this mid-range level of treatment can consist of either intensive outpatient treatment or partial hospitalization programs these folks didn't have moderate eating disorder pathology that's too severe for outpatient management alone.

Rachael Flatt: So sometimes they are either stepping up from outpatient care or stepping down from either hospitalization or residential care.

Rachael Flatt: So, for instance, say, an athlete who has been in outpatient care has been continuously and steadily losing weight, despite being engaged in this type of treatment. They're medically stable, but they still need quite a bit of help with meal and snack management, so this might be a good level of care for those athletes.

Rachael Flatt: Sometimes these levels of care, also have slightly smaller multi-disciplinary teams and it's certainly not around the clock care either. So, it may be a bit of a transition for folks to go from higher levels of care with around the clock care to that smaller step down.

Rachael Flatt: So that they're still getting quite a bit of daily contact as needed with quite a few members of the multi-disciplinary treatment team, but it's moving them to a place where they're starting to get a little bit more independence in their schedule goals. Here again reduction of eating disorder behaviors so start thinking about skill generalization and practice and helping them, ensure that the transition down to a lower level of care down to outpatient treatment goes smoothly, so that there is some weight maintenance or continuation of weight regain as needed.

Rachael Flatt: And then, finally, the last level of care that we'll talk about here is outpatient treatment.

Rachael Flatt: So, folks at this level of care will often have mild to moderate eating disorder pathology. And sometimes for athletes, they will cry or they will oftentimes show up with a RED-S which is the relative energy efficiency in sport. And you might also see this in the research as referenced as low energy availability.

Rachael Flatt: So, this is really where athletes aren't getting enough calories to support their normal functioning such that their kind of overtraining or exercising too much without adequate calorie

consumption, despite kind of normal eating habits or they might be engaging in disordered eating behaviors to intentionally reduce their caloric balance. And certainly, this can coexist with other eating disorder pathology like weight and shape concerns.

Rachael Flatt: But you'll still see other psychological and physiological consequences, because of the low energy availability which can range from things like GI issues, and musculoskeletal problems, and cardiac abnormalities to comorbid anxiety, depression, or poor concentration etc. There's a whole host of other issues that might show up with RED-S.

Rachael Flatt: For outpatient care, there are also less frequent meetings with members of the multi-disciplinary team and, again, this might be a little bit smaller than what we'd see at the higher levels of care. So, oftentimes this is, including dietitians, physicians, psychologists, and psychiatrists, especially if there's any medication being used or the athletes are currently taking. And, in addition to that, the goals here are really full abstinence from the eating disorder behaviors, weight maintenance and stability long term.

Rachael Flatt: Kind of reduction of weight and shape concerns increasing the overall independence of the athletes, especially if they're under the age of 18 and helping them build out those skills so that they can engage in regular eating and meal habits, without the help of their parents and then also addressing any additional co-morbid psychiatric illnesses.

Rachael Flatt: In terms of the effective forms of psychotherapy that are used throughout these levels of care, there's a few evidence-based treatments that have pretty decent response rates. But, obviously we still need a little bit more research here in terms of the treatment options that are most effective in reducing relapse. Since eating disorders still continue to have pretty high relapse rates.

Rachael Flatt: So for, for athletes certainly been effective forms of psychotherapy are the same as non-athletes, but these treatments can certainly be tailored to address some of those sports specific risk factors or maintenance factors.

Rachael Flatt: So for adolescents here we've got Family Based Treatment, which is the top line treatment. This is really where the family takes the lead and it's, it's, designed primarily for outpatient care.

Rachael Flatt: There's three phases, where the family kind of initially takes charge of the meal planning and reduction of eating disorder behaviors, and then in the second, and third phases, the treatment

team kind of works with the family and the adolescent to return control of meals to the adolescent. And, then helps them kind of build out other life skills in establishing their independence.

Rachael Flatt: For adults, the best form of treatment is still Cognitive Behavioral Therapy or enhancing Cognitive Behavioral Therapy or CBT-E.

Rachael Flatt: Which again, focuses on abstinence from eating disorder behaviors, weight regain and stability, followed by addressing weight and shape concerns and relapse prevention.

Rachael Flatt: Certainly, there are some additional effective forms of psychotherapy out there, including dialectical behavior therapy, acceptance and commitment therapy, and inner personal psychotherapy.

Rachael Flatt: But they aren't quite as well researched and often are used as a second line of care, or sometimes specific skills from these frameworks are kind of pulled into either FBT or CBT-E kind of as a supplemental basis.

Rachael Flatt: Um, in terms of what is covered at each treatment check-in for athletes with eating disorders.

Rachael Flatt: There's, there's, a whole host of things that can be addressed here, but a few things that I wanted to make sure that you all are aware of in terms of what at least should be addressed at each check-in. Certainly, you want to make sure that athletes are assessed in terms of their physical and psychological functioning and impairment.

Rachael Flatt: Certainly, you want to get an understanding of where their eating disorder behaviors are in relation to the last meeting. So, that includes looking at binge eating and all the compensatory behaviors including vomiting and diuretic and laxative misuse.

Rachael Flatt: Restrictive, restrictive eating or fasting and certainly any maladaptive exercise behaviors. For athletes specifically want to make sure that maladaptive exercise behaviors are really well assessed, especially in relation to the athletes training load so that there's a clear understanding of what the caloric intake and outputs are and also making sure that this is a healthy place for them to either continue engaging in exercise, or potentially taking that down a notch to ensure that their weight stabilizes. And so that they're getting adequate caloric intake and nutritional intake.

Rachael Flatt: Certainly, you want to make sure you do a check on their weight and shape concerns to see if and how those have changed over time. Obviously want to do a physical exam, which would include any weight changes.

Rachael Flatt: Certainly, with athletes who are competing at high levels or have high training loads definitely want to look at menstruation status here too.

Rachael Flatt: And then, certainly if there's any medications that are currently being used and other health needs those are great places to have a discussion here as well.

Rachael Flatt: In terms of some of the other health needs, this is also where Red-S might show up so being able to use something like the REDS-CAT screener which the International Olympic Committee put together that might be a useful tool to use here to better understand what some of the additional health concerns might be in relation to some of the eating disorder psychopathology.

Rachael Flatt: So one of the things that is important here for athletes, in particular, is that there may be a slightly expanded multi-disciplinary treatment team.

Rachael Flatt: Excuse me.

Rachael Flatt: This is a great model that Conviser, Tierney, and Nickols put together a few years ago, that is fantastic in helping kind of figure out who all should be incorporated into the athlete's treatment so certainly.

Rachael Flatt: At the Center of the model here is the athlete to ensure that every member of the team is helping support their recovery.

Rachael Flatt: Certainly, parents and a family therapist are essential in navigating treatment when the athletes under 18, but can also be equally helpful for athletes who have really severe eating disorders and may initially be resistant to treatment.

Rachael Flatt: Of course we want to make sure that there's a psychologist and a registered dietitian involved to help ensure that the athlete is making strides on their coping and communication skills.

Rachael Flatt: Eating disorders are highly co-morbid with a history of trauma. So, certainly making sure that that's a key piece of assessment on the psychology front and on the dietitian front like doing quite a bit of meal planning, nutrition, education, and weight monitoring are essential here.

Rachael Flatt: Definitely want to include a psychiatrist here as well, especially if there's any medication management that's occurring, but these last three.

Rachael Flatt: Buckets in at the bottom here are additional, folks that might be folks that not are usually can earn that aren't usually included for folks who are not athletes that are seeking treatment.

Rachael Flatt: So on the bottom left here we've got physicians, athletic trainers, and physical therapists. These are a great group of folks involved in terms of this multi-disciplinary care in part because athletes want to be healthy and safe and returning to training or their competition. And, obviously eating disorders can be associated with increased injury rates. So, making sure that athletic trainers and physical therapists are involved here and understand where this athlete is in terms of their treatment and their recovery process is essential.

Rachael Flatt: Sometimes coaches might also be involved, especially at lower levels of care to help the athletes understand what is going to be safe and effective in terms of their training and competition levels.

Rachael Flatt: And that's something that may be more difficult for the remainder of the team to identify, or for the athletes themselves to identify, especially if they've got really severe eating disorder pathology and impairment.

Rachael Flatt: And then, finally, this last bucket, folks from the athletic administration. So, for athletes that are competing either through high school sports, or college sports, or pro teams, these are going to be great individuals to at least be involved.

Rachael Flatt: To have a better understanding of what the impacts might be in terms of the athlete's eligibility, their compliance, and their financial support, which I'll talk a little bit more about in a moment.

Rachael Flatt: But this is a great cohesive and holistic team, to ensure that the athletes are getting the best care possible and also understands how eating disorder treatment, especially if they have to take a step back from their sport might impact their athletic career.

Rachael Flatt: So, in terms of some of the considerations for athletes in treatment, based on their levels of care, one of the primary misnomers for folks, especially in these high levels of care is that they shouldn't be engaging in any physical activity.

Rachael Flatt: And, in fact, there's actually some recent research out there that indicates low levels of physical activity can be helpful.

Rachael Flatt: But, certainly before going down that road, it's essential to evaluate if and how any maladaptive exercise behaviors like compulsive exercise may be contributing to the overall eating disorder picture. Certainly, if an individual, if an athlete is medically unstable treatment teams wouldn't necessarily open up any forms of physical activity.

Rachael Flatt: But, it can certainly be helpful in lowering the risk of severe medical complications like DVTs and can help an athlete retain their flexibility if they're allowed to stretch, or even just feel connected with their sport, which can certainly provide psychological benefits if getting back to the competition is a strong motivator for treatment. In addition to some of the considerations at high levels of care related to physical activity certainly these folks who are in inpatient units or residential programs most likely will have a significant time away from sport.

Rachael Flatt: It is unlikely that athletes at these levels of care will be cleared to train at full, full force, let alone compete. In fact, the average length of time individuals are hospitalized or in residential treatment programs for eating disorders is a little over two months, which could certainly be a decent chunk of time for a competitive season for an athlete.

Rachael Flatt: And certainly this could have a number of consequences in terms of eligibility or financial support from a college athletics department or professional sport organization. So, that's why it's really important to have the folks on the admin teams be a part of some of these conversations. So, that athletes and the remainder of the treatment team have a really good understanding of how seeking treatment might impact some of the athletes' sport career, in addition to that time away from sport can certainly have psychological benefits and consequences.

Rachael Flatt: Being able to identify some of the pros and cons related to taking a break from the sport can be really important.

Rachael Flatt: Some of the pros can be you know, an opportunity to identify some of the problematic aspects of the sport's environment. Maybe getting a time away from a coach who is constantly criticizing weight, or giving the athlete an opportunity to just really get healthy and stronger and maybe recover from eating disorder related injuries.

Rachael Flatt: Certainly, on the flip side, though, is you know athletes might experience, some you know possible psychological consequences, because maybe the return to competition is a huge motivator for treatment.

Rachael Flatt: And so, if the contact from with sport is reduced quite a bit, maybe the athlete isn't experiencing the social benefits of being around their team.

Rachael Flatt: And feeling that type of support encouragement, so a lot of things to kind of suss out at these levels and to understand what some of the immediate impacts might be on the athletes psychological state and having that time away from the sport.

Rachael Flatt: One other thing that I think is going to be important to start integrating into all levels of care, but especially at high levels of care is understanding the athlete identity. So, this is the extent to which an athlete or an individual kind of identifies as an athlete and how strongly they internalize that.

Rachael Flatt: It's really helpful to understand and evaluate this construct, especially if the eating disorder is tied to the individuals desire to perform well in their sport.

Rachael Flatt: Oftentimes we're starting to see a significant relationship between the intensity of athlete identity as well as the severity of eating disorder pathology. So, understanding that link, understanding how the sport may be kind of manifesting in terms of how the eating disorder is playing out is going to be really important for setting up future treatment goals.

Rachael Flatt: Um, and one more thing that I'll mention here too at high levels of care, is that if the athletic support team is not really involved in some of these higher levels of care. So, for instance, a high school athlete is coming in for a high level of care, but really their main support team is their coach.

Rachael Flatt: But they aren't really able to be highly involved with the treatment and with a multi-disciplinary treatment team in part because of all of the other constraints on their time.

Rachael Flatt: One of the things that can be helpful here is having a discussion with the athlete about what information they want to share and with whom. And in terms of their overall sport environment and who they have contact with routinely in their later levels of treatment.

Rachael Flatt: Coming up with a game plan about that early on, can be helpful in determining what, what and who will be involved.

Rachael Flatt: this is also great opportunity to spend some time kind of educating the team around the athlete. So, for instance, if a coach is problematic in terms of their negative coaching comments that they're making about an athlete's weight or shape.

Rachael Flatt: This is a great opportunity for those individuals to take some time, get some additional education and training, so that they are no longer contributing to the maintenance of the eating disorder when that athlete returns to the sport.

Rachael Flatt: And then at these high levels of care, this is a point at which you can start planning the continuity of care prior to stepping down. Especially, as those folks might regain some contact with the athlete, but it may not be a point at which you are fully integrating that team right off the bat. So, this is a good opportunity to take care of some planning, before the athlete steps down to a lower level of care.

Rachael Flatt: For well, I guess, as, as athletes kind of either step down to lower levels of care, to these mid-ranges of care from either being hospitalized, or in a residential program, or if they are stepping up from outpatient care, there are a few additional considerations to keep in mind.

Rachael Flatt: Specific to physical activity here, the level of activity, maybe a little bit higher here, than the highest levels of care. So, it should be kind of conceptualized as a transitional state of physical activity should be time-limited and very closely monitored in person, especially if the athlete does have a history of maladaptive exercise behaviors.

Rachael Flatt: And this can also be seen as an opportunity to really help the athlete regain contact with a sport and include some social support with their coaches, with their teammates, with other training mates, etc.

Rachael Flatt: Um what is really important here, though, is to evaluate the athlete's perception of reduced amounts of physical activity. So, say they are increasing their train or their physical activity load from the lower levels of care, or if they're having to take things down a notch from either outpatient care, or from a full training load; it's really helpful to understand how they are responding to that physically.

Rachael Flatt: That can be you know looked at from a physiological metrics perspective, but also understanding how they are receiving that kind of stepped down psychologically. We really want to understand if these athletes, in particular.

Rachael Flatt: We don't want them to inadvertently begin engaging in maladaptive exercise behaviors if that's not part of their overall eating disorder pathology so really helping them have a clear understanding of how exercise can function healthfully in their lives, as well as their participation in sport can be really important. So, this is a great opportunity to have that discussion.

Rachael Flatt: And then, if maladaptive exercise behaviors are definitely present this is a great opportunity and level of care to start developing and initiating an exercise return-to-play plan, which I'll talk a little bit more about in a second. More often than not, this is fully initiated and implemented at lower levels of care just kind of depending on the length of time that athletes or mid-range levels of care.

Rachael Flatt: But certainly, this is a great opportunity to start talking about that, with an athlete and with the overall multi-disciplinary care team to understand what things might look like down the road and start coming up with treatment targets here. In addition to that, athletes in mid-range levels of care certainly may have reduced contact with their sport environment.

Rachael Flatt: So, certainly want to have a similar discussion here in terms of psychological, and career benefits, and consequences, similar to what I mentioned before.

Rachael Flatt: But, this is also a great opportunity to start talking about motivations for continuing treatment. Sometimes at those higher levels of care, especially if folks aren't in those hospitalization or residential programs for a long amount of time. This is a really good place to start having conversations here about what is going to help this athlete continue through treatment, since it's not the easiest thing.

Rachael Flatt: One aspect that may come up here for athletes with eating disorders and this actually does come up more often than you think is a desire to actually stop competing. In part, because sometimes even an eating disorder can be so severe and can, can really complicate an athlete's

understanding of their desire to continue participating in sport, so when they have that reduce contact with that sport environment.

Rachael Flatt: And kind of open that door to discussing whether or not they want to continue competing and help them understand if the sport environment is a safe place for them to continue.

Rachael Flatt: Or if it may be, as a place for them where they need to change a number of things in order to continue and make sure that the eating disorder does not come back. If the athletic support team again here is not involved or not really heavily involved in these mid-range levels of care.

Rachael Flatt: These are the opportunities to really take some time to begin that implementation of continuity of care with that athletic support team.

Rachael Flatt: So, making sure that a plan is in place, we're starting that that communication and helping the athlete understand what may be expected of them down the line.

Rachael Flatt: Again, here we might begin or continue the education of that support team, especially if they're problematic numbers here to ensure that they do not contribute to eating disorder relapse and then having a plan for either stepping up or stepping down for the athlete in the event that they're eating disorder symptoms worsen or improve.

Rachael Flatt: In terms of the low levels of care, one of the things that I wanted to focus on briefly here was a review paper that Cook and some colleagues put together back in 2016 in terms of the gradual reinstatement of physical activity. Since low levels of care really going to be the place where most athletes begin fully reintegrating sport into their, their, lifestyle. So a few things that were identified a few themes that were identified in this review of research papers really helped shape the recommendations in terms of how to incorporate exercise and you can see all of those on the right, but certainly there's consensus around having a multi-disciplinary team. Certainly, continuing to monitor medical status and safety concerns, and screening for kind of maladaptive eating disorder behaviors, but one of the things that can be really helpful in helping the athlete agree to this stepped, kind of gradual reinstatement of physical activity is creating a written contract of how and when exercise is actually going to be used in treatment.

Rachael Flatt: So that it's very clear, the entire team is agreeing to it, and that there can be any adjustments made as needed. One of the things that is super important here is, including a psycho educational component so helping the athletes understand.

Rachael Flatt: What is a healthy relationship with exercise? For instance, what contributed to some of their maladaptive exercise behaviors in the past? How they can prevent that in the future and ensuring that they have really high levels of awareness so potentially using some mindfulness exercises to help them understand some of the cognition and emotions that might come up with exercise down the line, as they start reintegrating that into their treatment and into their life.

Rachael Flatt: Again, you really want to focus on positive reinforcement, kind of creating that graded program, so that you're starting with mild intensity and building slowly.

Rachael Flatt: And, then also thinking about tailoring the types of exercise to the needs of the individual so, for instance, thinking about is this someone who really engaged in a lot of compulsive exercise related to cardio types of exercise in the past.

Rachael Flatt: Maybe that's not quite where we want to start and instead it might be focused a little bit more on some gentle weightlifting or stretching or yoga before reintroducing some cardio-type of exercises that were more problematic beforehand. And then, of course, having some nutritional components to kind of account for some of the physiological needs during the exercise and then having a good debrief session afterwards to help the athletes understand like what went well, maybe what didn't, what can be improved in the future, and maybe what needs to change in terms of the contract that was initially created, or the graded program that was initially created to ensure that they are engaging in healthy exercise and really instating this physical activity in a way that is going to be sustainable, long term.

Rachael Flatt: At this point in low levels of care, certainly there is going to be re-entry into the sport context for athletes who decide that they do want to continue competing.

Rachael Flatt: One thing to keep in mind here, is that sometimes athletes will have seasonal disordered eating behaviors. So, for instance it's really common in weight class sports for athletes to engage in some compensatory eating behaviors. So, maybe vomiting or misuse of diuretics and laxatives to lose weight to meet their weight class which may trigger the onset of an eating disorder again down the line. So, being able to have a clear understanding of if and when those types of disordered eating behaviors may come up throughout the kind of continuum of a season, is essential here that may not be so prevalent or present in non-athletes.

Rachael Flatt: One thing that is usually addressed here as well at these low levels of care, especially in outpatient, is when there is certainly time to address some of the sport related risk and maintenance factors is making sure that athletes have a clear understanding of what about their environment or in

terms of their support team who may have been contributing to some of the eating disorder risk and maintenance.

Rachael Flatt: Again, having a conversation around athlete identity and sport-related relapse prevention are key goals and can be really helpful, and in the athletes overall prognosis and they're successful trajectory and reentry back into sport.

Rachael Flatt: And then, last but not least, here, this is the point at which you want full multi-disciplinary team integration.

Rachael Flatt: So, making sure that there is, you know this continuity of care implemented, especially if an athlete is stepping down from higher levels of care. We want to make sure that the athletic support team still has continued education around what the athlete may need and just generally eating disorder education, so that they know what to look for down the line, in the event that the athlete relapses. And then also ensuring that there's any alterations of the team training approaches to successfully reduce eating disorder risk down the line.

Rachael Flatt: So, that was a quick glance of some of the considerations here, based on the levels of care for athletes.

Rachael Flatt: Last, but not least. So, before we jump into the unhealthy sport environments, is a quick overview of what a return-to-play plan might look like. So, I had mentioned this a little bit beforehand, but this is something, this is a document that can be created and discussed and signed off by all members of the multi-disciplinary treatment team and the athlete. So, this is really supposed to be a collaborative effort, this is not supposed to be the treatment team saying here's what you need to do.

Rachael Flatt: Ideally, the athlete is heavily involved in the creation of this document. Some of the components that you might consider including are attended regular meetings with the multi-disciplinary team.

Rachael Flatt: Thinking about frequency of communication. So, for instance, if some of the members of the team are not as heavily involved like coaches.

Rachael Flatt: You know if they are busy with other students or with other teams, making sure that there is a clear understanding of how often they will be communicating with the overall team to ensure that there is a clear understanding of what next steps are.

Rachael Flatt: In addition to that, we want to ensure that regular eating habits are built in here so, for instance, if you're adhering to kind of CBT-E format, making sure that the athlete is agreeing to three meals a day, or two to three snacks every day is helpful to build in here, as well as abstinence from disordered eating behaviors.

Rachael Flatt: Certainly, can include metrics related to weight regain or maintenance, as well as the frequency of weight checks. So, that it kind of removes some of the stigma related to those discussions, but also makes it very clear in writing, what the expectations are.

Rachael Flatt: And then, in addition to that, for athletes specifically want to focus on the prescribed training and physical activity loads, so you know. On a slide a couple slides ago, being able to incorporate some of the reintegration to physical activity types of metrics can be helpful in building that into the overall return to play plans. So that the whole team understands what the expectations are, and the athlete knows what they might get to look forward to.

Rachael Flatt: And, it helps the entire treatment team build out long term steps for success and for sustainable treatment gains. If there are any measurable changes in the sport contacts that need to change, this is also a great place to put that in whether or not that's the athlete's responsibility.

Rachael Flatt: And maybe be something that's unique to their case again, this could be related to coaching or parenting concerns or any related negative comparisons or weight checks that are done. For instance, at the ice rink or something, or on the field, like making sure that those are no longer part of the picture and are only done in the medical context, can be helpful things to identify and include here.

Rachael Flatt: Um last couple things here that you definitely want to include are, any criteria that would warrant changes in stepped care. So, for instance, if the athlete is currently on an outpatient level.

Rachael Flatt: Thinking through what criteria would warrant them to increase their level of care and move up or if they are currently at a moderate level of care what it might look like if they are able to step down.

Rachael Flatt: And if any of these requirements are not met, one thing that can be helpful in increasing the likelihood of the athlete following through, is having really clear consequences if the requirements aren't met. But on the flip side, also having really clear rewards and benefits if the requirements are met. So, being able to focus on, for instance the athlete's ability to make us, you know, really substantial training gains, once they're once they've recovered from their eating disorder; or being able to have a longevity in the sport, because they're no longer getting eating disorder related injuries. Those can be helpful things to have on that document, to ensure that there's continued motivation.

Rachael Flatt: So, in the last few minutes, I want to end with a little bit of time talking about unhealthy sport environments and obviously I've spent most of the presentation and kind of talking about person level interventions for the athletes, but we all know that the unhealthiest sport environments can really contribute negatively to eating disorder risk constant and maintenance.

Rachael Flatt: So, I want to spend a little bit of time talking about the overall sports environment as a place where we can also intervene and conceptualize it as part of the overall treatment for athletes with eating disorders.

Rachael Flatt: Before we intervene, now we need to know what some of the indicators are of unhealthy training environments. So, I've alluded to some of these already, as I've gone through this presentation. But certainly, key indicators here are negative comments from coaches or support staff on weight or shape in this, can certainly include fat talk.

Rachael Flatt: So, this is something that often comes up with athletes who have publicly discussed their eating disorder, or their history of an eating disorder.

Rachael Flatt: And noting that sometimes coaches, or members of support staff might make cursory comments about the athlete's weight and think, "Oh gosh, you know you are really looking bloated today, or you've really gain some weight and, it would be much easier for you to continue competing if you were to lose weight." Those types of comments can certainly be really detrimental to an athlete's overall psychological state of mind. And, and so, looking for that as an indicator of an unhealthy training environment is something that comes up frequently.

Rachael Flatt: Sometimes there's also social comparison in team dynamics and pressure. So occasionally, there may be instances of athlete's kind of comparing their jersey size or talking about the size of their legs, for instance, or their BMI percentages, or fat percentages as a comparison, especially when they're getting these metrics assessed often. And so, those types of team dynamics and the normalization of those types of conversations or pressures can certainly come up when an athlete is talking about what contributed to their eating disorder.

Rachael Flatt: Sometimes in certain sports and in sport environments, there may be some encouragement or normalization of harmful weight management behaviors. So, for instance, like what I mentioned earlier, with say wrestling or weight class sports. Oftentimes you'll hear stories about athletes exercising, you know, for hours on end with garbage bags over them to try and sweat off additional weight. You know, certainly those might be normalized behaviors in in some sports, but may actually contribute to an eating disorder for some athletes. And so, trying to understand if that's present in an athlete's immediate environment can be helpful to mitigating that risk down the line.

Rachael Flatt: Again, weight checks, body checking as well. So, for instance, if athletes are kind of looking at themselves in the mirror and kind of pinching and pulling at their waist, or their arms, or trying to see what their body might look like if it was a different shape.

Rachael Flatt: Both of these aspects may confer some additional eating disorder risk, as well as the messaging that comes up, often in some of these aesthetically-based sports, or judge sports that lower weight is equivalent to increasing the likelihood of your success. So these are some general indicators of unhealthy training environments that may come up in an athlete's local environment.

Rachael Flatt: But in addition to that, there may be some systemic and cultural risks that come up during an athlete's life cycle, certainly from a developmental stage.

Rachael Flatt: There may be, you know kind of this lack of education of the team around the athletes. Generally speaking, there's very little public education around eating disorders, unfortunately. But that may be taken to another level, in relation to how little education is available in terms of sports specific risk factors for eating disorders, for instance, among the team.

Rachael Flatt: So that, in addition to some of the team and staff dynamics that I've discussed already may be really present at some of these developmental stages for athletes.

Rachael Flatt: Unfortunately, for some of the younger athletes who are coming up through the sport, oftentimes there is not an overarching, multi-disciplinary team available to them at their fingertips, like it wouldn't be available at a Division 1 athletics department.

Rachael Flatt: Oftentimes they have to identify kind of piecemeal support, and there's a really tremendous lack of continuity and different messaging that comes up.

Rachael Flatt: So sometimes it can be hard for those athletes and their families to understand what they should be looking for, if some of the messages they're receiving are problematic and how it may contribute to an eating disorder.

Rachael Flatt: And again, there may be some sport-specific risk factors and normalization of eating disorders and eating disorder behaviors that may come up that are kind of part of the indoctrination into a sport, unfortunately. And so, it takes a lot of unlearning later in a career or later in life, for an athlete to understand what was problematic about being in in a specific sport or specific sport environment and how that may have contributed to their eating disorder. In terms of what comes up at some of the elite stages, there's a lot of athletes who certainly talked about the pressures of being a public figure and the overall objectification of athlete bodies and how that can put a lot of pressure on them to maintain a certain physique. Even if their bodies are changing as they grow through puberty, or as their physique changes as they kind of alter their training regimens. So, that can be a key point for these elite athletes that comes up when their visibility increases.

Rachael Flatt: In addition to that, sometimes within sport organizations there is an issue with perceived legitimacy and emphasis on mental health and eating disorders generally.

Rachael Flatt: And, in most cases there isn't a specific mode of support for the organization or at the organizational level for athletes to go seek treatment.

Rachael Flatt: So, only in a few SLIM cases do athletes actually have the resources, the support, and the insurance coverage, to pay for high level eating disorder treatment as needed.

Rachael Flatt: But on top of that, if the mental health concerns or eating disorder concerns aren't legitimized in the first place, it can be really difficult to get athletes to seek treatment in the first place.

Rachael Flatt: In addition to that, elite athletes tend to be a pretty work protected research pool, so it makes it really difficult to understand some of the nuances for this population and for those demographics.

Rachael Flatt: Hopefully down the line there could be a little bit more open, communication and research done on this group of athletes, so that we can understand. You know, as an athlete progresses through the sport, what made changes in terms of their eating disorder, or risk, or onset, or maintenance. But, that will hopefully be something that's addressed down the line.

Rachael Flatt: Excuse me. And finally, for the last group of athletes here, that I have. Here are folks that are entering retirement.

Rachael Flatt: Unfortunately, there is a tremendous lack of preparation talk to most athletes who are currently competing, or even close to retirement and that's the last thing they want to talk about. They do not want to talk about what is next for them after sport in most cases.

Rachael Flatt: And you know, compounding that is the fact that there is a tremendous lack of designated services. In most cases, athletes have insurance coverage that goes up until they finished competing or finished training, and then as soon as they retire those resources and support cease to exist.

Rachael Flatt: So being able to help athletes prepare for that, that change, those designated services to continuing after their retirement can be really helpful in reducing eating disorder risk, but also helping them manage that transition out of sport, since it's very much possible that in that stressful time in that transitional period that some psychological concerns may come up again.

Rachael Flatt: Um, some athletes have also talked a little bit about expectations of maintaining physique so, in some cases Athletes have talked about how they've never had any eating disorder concerns prior to retirement.

Rachael Flatt: But, after they retired they experienced some changes in their weight in shape and really found that to be problematic and distressing, especially they're a public figure, and there may be some external pressures to maintain that physique.

Rachael Flatt: So, the overall culture and messaging around how athletes should not have to maintain a physique that they had for many years as an athlete is essential to change. And then, finally, this, this group of athletes is really under researched and poorly understood. So, this is a group that requires a lot more understanding to really understand, to help the treatment teams get a better focus on what needs to be addressed, for this group.

Rachael Flatt: So, in terms of what's next, and the last few minutes you know, certainly, there are a number of immediate environmental changes that can be put in place, including positive coaching strategies really celebrating body diversity, identifying and eliminating any fat talk, or body comparisons, or harmful messaging, and that certainly includes getting rid of the message that low weight equals success.

Rachael Flatt: And really helping athletes understand that help-seeking behaviors are essential in order to get them the help they need.

Rachael Flatt: On a systemic and cultural level, you know we can certainly start changing some of the incentive structures in terms of focusing on medals to changing that I'm focusing on overall health and wellness.

Rachael Flatt: We can certainly increase our overall education for every member of the multi-disciplinary treatment team and support staff around eating disorders and calling out the objectification of athlete bodies.

Rachael Flatt: But, also making sure that we create organizational level support, including through that retirement phase and increasing accountability for those types of support systems to be put in place.

Rachael Flatt: So, in terms of the highlights, I hope you feel like you have a little bit of understanding, a little bit better understanding of what it might look like for an athlete to seek treatment for an eating disorder. What it may look like in terms of the sport-related maintenance factors, athlete identity, and discussing an individual's desire to continue competing to kind of inform the overall case conceptualization.

Rachael Flatt: You know, as a main takeaway, I hope that you all feel comfortable, knowing that it is essential for treatment teams to really understand the new turn function of maladaptive exercise behaviors and athletes with eating disorders and you will, to come up with an effective return-to-play plan that's appropriate for their level of care and they're eating disorder severity.

Rachael Flatt: And then, finally for eating disorders and athletes who are retiring despite the speaking of really high risk-period for various psychiatric illnesses, this is a group that could really use some additional research and support. So, I hope that, that's something that you're able to take back with you after today.

Rachael Flatt: Um, quick round of references and with that I will kick it back to La-Shell to round this out.

la-shell_johnson@med.unc.edu: Thank you so much, that's fine. We're going to go ahead and quickly address any questions. Um, I know we have a couple of minutes left.

la-shell_johnson@med.unc.edu: Any unanswered questions will be sent to you via email one week from today with responses from Ms. Flatt, and you will also once again receive slides from today's presentation within an hour once the presentation ends.

la-shell_johnson@med.unc.edu: So the first question asks, how do you handle when an athlete doesn't want their coach to know what's going on and also maintain confidentiality?

Rachael Flatt: Yeah, so that's a great question and I, I have run into this case many times, where athletes don't feel comfortable openly disclosing what is currently going on in terms of their treatment. So, sometimes that may be a discussion that is ongoing.

Rachael Flatt: So initially, as an athlete might be resistant to treatment or might be resistant to having an open communication with friends, family, with coaches, etc. that's certainly something that you absolutely want to respect from the get go.

Rachael Flatt: And it's important to kind of leave that on the table as something to discuss down the line, so that the coach has an opportunity to learn more and get better education, or even just be a better support system for the athlete down the line. As they may feel more comfortable discussing that.

Rachael Flatt: You can also frame that discussion as an opportunity to help the athlete feel more invested in their treatment and their training options down the line. So, that may be an opportunity to kind of loop the coach in and help the athlete understand that this is not something to penalize them, it's not something to be looked at as a consequence, but rather as an opportunity for them to really engage more with their team and help the coach understand more what they need. And so, those are a couple of things that we found to be helpful.

la-shell_johnson@med.unc.edu: Okay, and I'll go ahead and quickly address one more question. "How do you discuss the importance of physical fitness, being fit for sport without implying that being thin is a way to do that?"

Rachael Flatt: Yeah. So, one of the things that we try to focus on here is one, celebrating the diverse bodies that are successful in sport. So, for instance, the incredible acts done by you know, Simone Biles, Aly Raisman, who really changed the understanding that we have what body types can be successful in gymnastics.

Rachael Flatt: So being able to look to those athletes who have changed what it means to have a successful kind of, or to challenge the successful physique in sport can be helpful. But, also focusing on the technique not how an athlete looks. When you're talking about what an athlete's body can functionally do in their technique rather than their look; or their thinness, is really a great way to go in those types of conversations and challenging the norms of the sport, or of the typical conversation and sports.

la-shell_johnson@med.unc.edu: Thank you so much for the responses, I just want to go ahead and thank everyone for joining today's presentation. We will have this presentation on our training library within one week from today. And, as I mentioned earlier, questions that were not answered during our question and answer segment will be sent to you with responses one week from today. Ms. Flatt do you have any closing remarks for the attendees?

Rachael Flatt: No, I just wanted to say thank you to you all for joining, and I hope you all are able to take something back with you. And thank you so much for just engaging with this material, and hopefully being involved with changing how we think about mental health and eating disorders in sports. I hope you enjoy your weekend.

la-shell_johnson@med.unc.edu: Thank you all once again and have a great weekend.