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The Role of the Strength and Conditioning Coach in Return-from-Injury Care: A Survey Study

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ABSTRACT

The purpose of this study was to describe the perceptions of strength and conditioning coaches (SCCs) regarding professional roles and decision-making related to return-from-injury care in the National Collegiate Athletic Association (NCAA) to identify areas of opportunity related to effective completion of the rehabilitation continuum. Sixty-seven SCCs completed a web-based survey. Means, standard deviations, and frequency of responses were used to report results. SCCs perceive their roles to be most significant in advanced training, training systems not specific to the injury, and late-stage strength/function. Only 72% of Head SCCs and 66% of Assistant SCCs perceive their role to include shared development of training sessions for return to performance, which is an aspect of their scope of practice; fewer are included in return to sport programming. Less than one third make any recommendations for clearance to progress to the next stage in rehabilitation. SCCs expressed a desire for a larger role in decision-making regarding readiness for full return to competition, yet only 68% of Head SCCs and 59% of Assistant SCCs report they conduct any testing for the final transition to return to performance. Areas of opportunity for the SCC include conducting assessments related to return to sport and full return to performance to contribute to progression/clearance recommendations and contributing to the end stage program design for effective completion of the rehabilitation continuum. These integral components of the rehabilitation continuum could allow the SCCs to have a more defined role and greater voice in return-from-injury care.

Keywords: return to play, return to sport, rehabilitation continuum, CSCS, collegiate, athletic trainer, injury

INTRODUCTION

The number of student athletes competing in the National Collegiate Athletic Association (NCAA) is over 520,000 (NCAA, 2022). Return-from-injury outcomes in the NCAA remain less than ideal, with rates of return across sport and injury type at less than 85% (Daruwalla et al., 2014; Howard et al., 2016; Robins et al., 2017; Swindell et al., 2022). Re-injury rates are also high (Doherty et al., 2021; Kamath et al., 2014). Continued instability/weakness at the injury site, and lack of confidence/psychological readiness have been reported as top reasons for not successfully returning (Ardern et al., 2014; Bashaireh et al., 2024; Hsu et al., 2016; Kim et al., 2023). These findings suggest that the rehabilitation continuum (Figure 1) may not have been effectively completed for athletes who did not successfully return to sport (RTS) or who experienced re-injury; or that perhaps these athletes did not receive effective interdisciplinary support from their care team. In modern high performance sporting context, an athlete's successful return is ultimately a shared responsibility requiring a unified care team. Zampogna et al. (2021) determined that return outcomes after ACLR at one NCAA Division I institution were more favorable than in similarly designed studies, likely due to strict follow up by the surgeon and daily technical and psychological support given mainly by the athletic trainers (ATCs) during the recovery period. The study revealed

an important finding about the impact of the care team member's roles and responsibilities on the athlete's overall outcome after injury (Zampogna et al., 2021). This unique finding, paired with continued suboptimal return rates, and general lack of education regarding effective completion of the rehabilitation continuum (Ardern et al., 2016; Armitage et al., 2022; Buckthorpe et al., 2019; Choice & Downey, 2023; Choice et al., 2024; Creighton et al., 2010; Draovitch et al., 2022; Shrier et al., 2014; Yung et al., 2022), supports further investigation into specific roles, responsibilities, and involvement in decision-making of all care team members, specifically the strength and conditioning coach (SCC) who is well-positioned to be a key member of a collaborative care team in the later stages of the rehabilitation continuum (Figure 1).

NCAA return-from-injury care teams often include a combination of SCCs, ATCs, sport coaches, surgeons, physicians, mental health providers, registered dietitians, sports nutritionists, physical therapists, sports scientists, and the athletes themselves (Ardern et al., 2016; Creighton et al., 2010; Kraak et al., 2021; Matheson et al., 2011; Rollo et al., 2021; Shrier et al., 2014; Wilk & Arrigo, 2017). Unfortunately, current roles within the rehabilitation continuum in the NCAA based on handbooks and policies are not well-defined beyond the role of the ATC and physician (Parsons, 2014). In the NCAA setting, the ATC carries out the plan of care for RTS protocols and is who ultimately clears the athlete to RTS as the designated care coordinator (under physician supervision) (Parsons, 2014). SCCs have important roles in return-from-injury care, complementary to the role of the ATCs, due to their expertise in exercise physiology, progressive exercise programming, load monitoring, and ability to assess physical readiness for sport demands (Choice & Downey, 2023, Choice et al., 2024; Kilian & Kendall, 2023; Redman et al., 2021; Reiman & Lorenz, 2011). Despite return to performance (RTP) being the final phase of the rehabilitation continuum (Figure 1), current literature reveals many rehabilitation models end at the RTS phase - ineffectively completing the rehabilitation continuum (Ardern et al., 2016, Armitage et al., 2022; Buckthorpe et al., 2019; Choice & Downey, 2023; Choice et al., 2024; Creighton et al., 2010; Draovitch et al., 2022; Kilian & Kendall, 2023; Shrier et al., 2014; Yung et al., 2022). This negatively impacts overall return-from-injury outcomes and supports the need to research all transition points across the rehabilitation continuum and the roles and responsibilities of SCCs involved to create an effective operational model for return-from-injury care. An inherent challenge to the current return-from-injury model used in the NCAA is that the role of the SCC as a contributing member of the care team is not clearly defined, and the full rehabilitation continuum is not always considered (Ardern, 2016; Parsons, 2014)

As literature supports the shift to a collaborative decision-making model to improve athlete outcomes after injury, it is imperative to understand current perceptions of roles and responsibilities of SCCs at NCAA institutions. The purpose of this study was to collect and analyze survey data to describe perceptions of professional roles and decision-making related to return-from-injury care to identify areas of opportunity related to effective completion of the rehabilitation continuum.

METHODS

Experimental Approach to the Problem

SCCs at NCAA member institutions completed an anonymous one-time online survey. A cross-sectional study design was employed. Questions were asked related to the individual's perception of their current professional role in the care team structure, including decision-making across the phases of the rehabilitation continuum, as well as

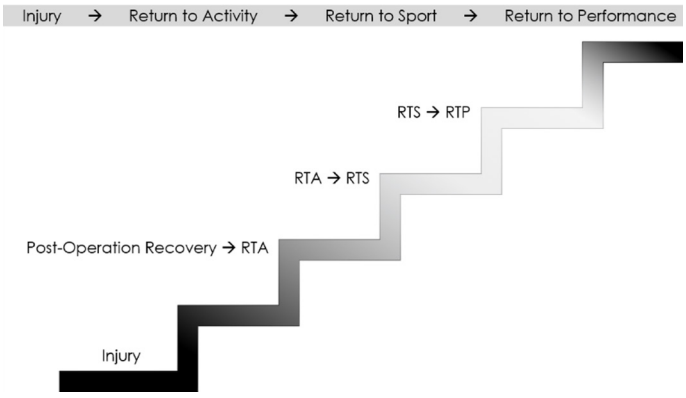

Figure 1. Illustration of the full rehabilitation continuum specific to the background and methods of this particular study. This framework has the potential to be adopted and operationalized based on workplace resources and injury/case specifics. Within the survey, Return to Activity (RTA) (also referred to as Return to Participation) is defined as: the athlete may be continuing with rehabilitation and is beginning to train but at a lower level. Return to Sport (RTS) is defined as: the athlete may be playing their sport but is not participating at pre-injury level. Return to Performance (RTP) is defined as: the athlete has fully returned and is able to perform at or above pre-injury level (Ardern et al., 2016).

their perceptions of what they believe their role should be. The survey can be found in Appendix A. The study was approved by the ethical review board. All survey respondents were required to provide consent prior to accessing the survey. Answers to every survey question were not required.

Participants

The survey was sent to 927 SCCs who were listed in the online athletics staff directories for NCAA member institutions. Institutions were selected at random based on available public information. NCAA institutions from each of the 50 states across the USA were targeted for representation nationwide. Institutions across Divisions (I,II,III) were also targeted for representation across divisions and conferences.

Procedures

A 10 minute web-based survey (Qualtrics, Provo, UT) was distributed via email and was available from January 17, 2024 through February 17, 2024. Survey questions were developed by the research team based on literature from 2007-2022 about professional roles and responsibilities in return-from-injury care. The survey was initially tested with a small convenience sample of six relevant professionals at one institution, and then adapted accordingly. The survey first requested demographic data. The full survey included questions investigating three domains: 1) professional roles and responsibilities including role in decision-making; 2) care team composition; and 3) workplace interprofessional education. Data from the first domain were reported on in this specific study. Data were downloaded into a Microsoft Excel Spreadsheet (Office Suite 2019; Microsoft, Redmond, WA). Descriptive data were expressed as mean and standard deviation, and frequency of response. Results from the first domain are reported on this paper.

RESULTS

Sixty-seven SCCs completed this survey (34 Head SCC and 33 Assistant SCC). Of the Head SCCs: 18 worked with Division I, 10 with Division II, and 6 with Division III. Experience/ time in position ranged from one to 30 years. Of the Assistant SCCs: 22 worked with Division I, 6 with Division II, and 5 with Division III. Experience/ time in position ranged from one to 25 years. Twenty-one different DI conferences were represented, 8 different DII conferences, and 5 different DIII conferences. The sports teams most commonly worked with were basketball, football, and soccer.

Various aspects of care included in the full rehabilitation continuum were targeted in the survey. SCCs perceive their role to be smallest in the following four aspects of care in order: early rehabilitation, pain management, early stage strength, and biomechanical analysis (Figure 2). The aspect of care ranked next highest was aerobic conditioning (Figure 2). SCCs perceive their role to be largest in advanced training, training systems or processes not specific to the injury, load monitoring, and late-stage strength/function for RTS (Figure 2). There is also high variability in this sample of SCC respondents as seen with the standard deviation from the mean (Figure 2).

Although the perception of role in “late stage strength” was reported in the top four ranked aspects of care (Figure 2), only 72% of Head SCCs and 66% of Assistant SCCs perceive their role to include shared development of training sessions in the final stages of rehabilitation for RTP (Table 2), and even fewer SCCs perceive their role to include shared development of training sessions for RTS (53% of Head SCCs, 63% Assistant SCCs) (Table 1). Additionally, load monitoring was ranked in the top four aspects of care (Figure 2), yet only 34% of SCCs utilized wearable data to monitor external load for RTS and 44% of Head SCCs and 28% of Assistant SCCs reported utilizing wearable data to monitor external load for RTP (Tables 1-2).

Over two thirds reported that they collaborate, communicate and share recommendations across members of the care team through RTS and RTP with 100% of Head SCCs reporting that they collaborate with the care team for RTP (Tables 1-2). Roughly two thirds report taking a recommendation from another professional on the care team and prescribing exercise accordingly for RTS, and over three fourths do this for RTP (Tables 1-2). Over 78% of SCC respondents perceive their role to include “increase confidence and autonomy of the athlete” and “support role” (Tables 1-2).”

Less than one third reported making any type of recommendation related to clearance for RTS (9% Assistant; 23% Head) or RTP (19% Assistant; 28% Head) (Tables 1-2). Similarly, this data indicates that the majority of the SCC respondents do not weigh the risk to benefit ratio and assess contraindications for participation in sport or assess legal implications

of return (Tables 1-2).

Assistant SCCs reported very similar or lower levels of involvement in all aspects of care for RTS compared to Head SCCs (Table 1), with the exception of "conduct testing" and "help with development of training sessions in final stages". Assistant SCCs reported lower levels of involvement in all aspects of care for RTP compared to Head SCCs (Table 2).

SCC respondents expressed a desire for a larger role in return decision-making at all three transitions (RTA, RTS, RTP) (Table 3), yet only about half report that their role includes conducting testing to objectively assess readiness for RTS (47-53%) and RTP (59-68%) (Tables 1-2). When specifically analyzing the final RTP transition for the athlete (Table 3), there is a wide range of reported perceptions of current role in decision-making from "very insignificant" to "significant". The majority of respondents indicated that their role should be considered a 3 or greater on a 5-point Likert scale (0=very insignificant, 5=significant) in terms of the significance level their role in decision-making should be. The 5-point Likert scale indicates a trend from current perceptions of lower level significance in decision-making for RTP to a desire for a greater role in decision-making for RTP (Table 3).

DISCUSSION

The current findings revealed areas of opportunity for the SCC in return-from-injury care, based on current perceptions, including supporting data for the move from a segmented decision-making model of care to a collaborative interdisciplinary model. Specific opportunities are highlighted for the deconstruction of silos and the unification of the care team. Suggestions are made to advocate for the SCC and all care team members to be involved in a unified rehabilitation continuum.

SCCs have an important role in return-from-injury care, complementary to the role of the ATC (the designated care coordinator in the NCAA), especially in the later stages at and after RTS clearance. When comparing components of professional roles for RTS versus RTP, SCCs ranked their role higher in the final transition to RTP in almost all components (Tables 1-2). SCCs expressed interest in being involved in decision-making at transition points during the rehabilitation continuum (Table 3), however, there is an opportunity for SCCs to improve involvement in testing/assessment for readiness to support their role in these decisions (Table 2) (i.e. evaluate practice external load data trends and compare to competition external load expectations). SCCs perceive themselves to play a large role in advanced training and late-stage strength and conditioning (Figure 2), and many do report shared development of training sessions during final rehabilitation stages. However, there

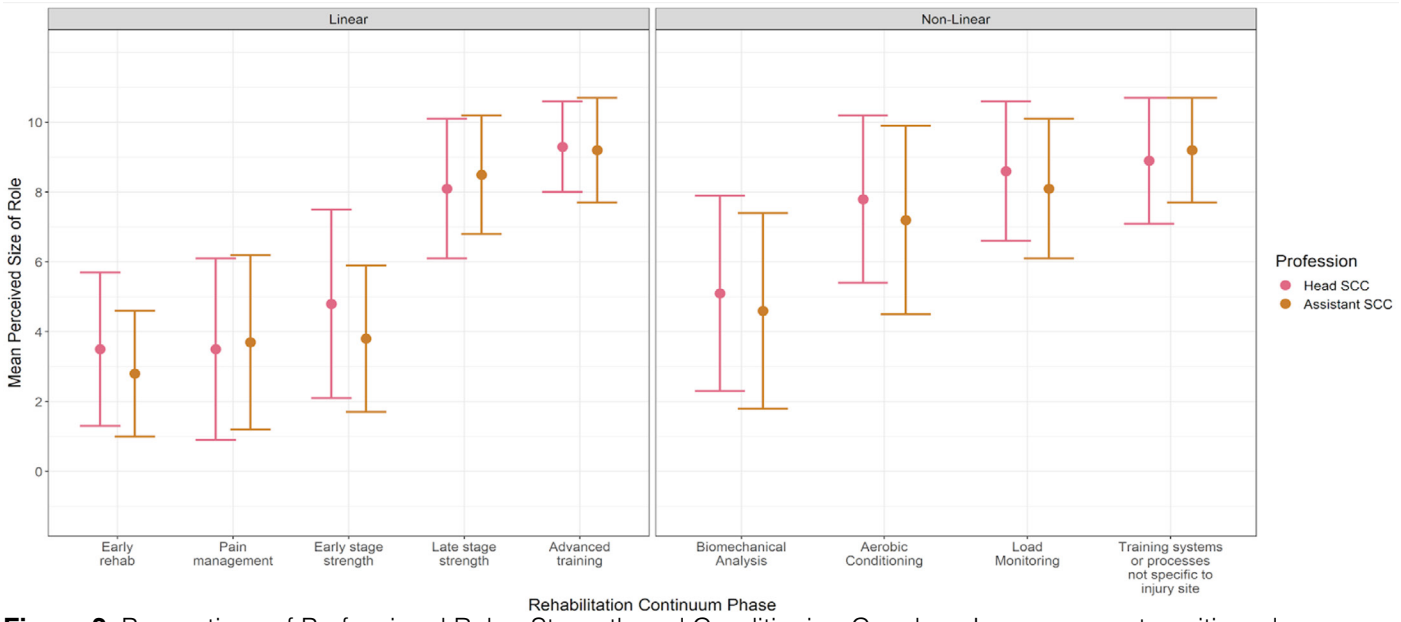

Figure 2. Perceptions of Professional Role - Strength and Conditioning Coaches. In your current position, do you perceive that you have a small, medium, or large role in the following. Likert scale of 1-10; 1= small; 5= medium; 10= large.
Head Strength and Conditioning Coach (SCC) n=34; Assistant SCC n=33.

Table 1. What specific components are part of your current role in Return to Sport? (select all that apply)
Defined as: athlete may be playing their sport but is not participating at pre-injury level

	% of respondents who selected yes
Make a recommendation of "cleared" or "not cleared"	Head: 23% Asst: 9%
Take the recommendation from the physician and/or PT and/or other professional and prescribe exercise/treatment/etc. accordingly	Head: 69% Asst: 72%
Support role	Head: 84% Asst: 78%
Conduct testing (i.e. hop testing and strength testing) to objectively assess readiness	Head: 47% Asst: 53%
Increase confidence of the athlete / help the athlete develop autonomy	Head: 81% Asst: 84%
Weigh the risk to benefit ratio and assess relative and absolute contraindications for participation in sport	Head: 31% Asst: 22%
Collaborate, communicate and share recommendations across members of the care team	Head: 78% Asst: 66%
Assess legal implications	Head: 9% Asst: 0%
Help coaches and/or clinicians by developing training sessions that address the athlete's concerns in the final stages of rehabilitation	Head: 53% Asst: 63%
Utilize wearable data such as GPS microtechnology for external load	Head: 34% Asst: 34%

Head Strength and Conditioning Coach (SCC) N=25; Assistant (Asst) SCC N=32

Table 2. What specific components are part of your current role in Return to Performance? (select all that apply)
Defined as: athlete has fully returned and is able to perform at or above pre-injury level

	% of respondents who selected yes
Make a recommendation of "cleared" or "not cleared"	Head: 28% Asst: 19%
Take the recommendation from the physician and/or PT and/or other professional and prescribe exercise/treatment/etc. accordingly	Head: 88% Asst: 75%
Support role	Head: 100% Asst: 72%
Conduct testing (i.e. hop testing and strength testing) to objectively assess readiness	Head: 68% Asst: 59%
Increase confidence of the athlete / help the athlete develop autonomy	Head: 100% Asst: 88%
Weigh the risk to benefit ratio and assess relative and absolute contraindications for participation in sport	Head: 36% Asst: 31%
Collaborate, communicate and share recommendations across members of the care team	Head: 100% Asst: 72%
Assess legal implications	Head: 8% Asst: 3%
Help coaches and/or clinicians by developing training sessions that address the athlete's concerns in the final stages of rehabilitation	Head: 72% Asst: 66%
Utilize wearable data such as GPS microtechnology for external load	Head: 44% Asst: 28%

Head Strength and Conditioning Coach (SCC) N=25; Assistant (Asst) SCC N=32

Table 3.
How significant is your current role in decision-making for the following? (Current)
How large or small of a role do you believe you should have in the decision-making for the following? (Should)
Report includes percentage (%) of respondents

	Likert	5 Significant/ Primary Role	4	3	2	1	0 Very Insignificant/ No Role
Transition from Injury to Return to Activity/ Participation							
Head SCC	Current	11	14	18	29	25	3
	Should	11	21	29	32	7	0
Asst SCC	Current	0	4	28	32	32	4
	Should	4	12	44	24	12	4
Transition to Return to Sport							
Head SCC	Current	21	29	11	25	11	3
	Should	32	39	18	7	0	4
Asst SCC	Current	16	20	32	20	8	4
	Should	20	40	28	8	0	4
Transition to Return to Performance							
Head SCC	Current	43	14	11	21	11	0
	Should	43	39	7	7	4	0
Asst SCC	Current	32	20	32	8	4	4
	Should	40	36	24	0	0	0

Head SCC N=28; Assistant (Asst) SCC N=25

remains a disconnect between these programming contributions and involvement in readiness testing and clearance decisions. There is also room for more SCCs to be included in end stage program design, a key aspect of their scope of practice - to bridge RTS with RTP. While the SCCs rank their roles highest in the RTP phase, they are infrequently positioned as a key decision-maker at the RTS and RTP transitions. Increased involvement in objective assessments, biomechanical analysis, and external load monitoring may support the SCCs' desired role as a contributing voice in return decisions. The findings from this study are supported by the work of Zhong et al. (2024), who concluded that although physical testing is considered a fundamental and routine responsibility of SCCs, there is limited evidence indicating that SCCs consistently perform such testing or utilize the resulting data to inform decision-making processes throughout the rehabilitation continuum. Addressing this disconnect may further enhance the unification of the rehabilitation continuum and support for optimal outcomes for the athlete. For example, intentional comprehensive testing data to make decisions supporting RTS and a more defined role of the SCC to continue carrying out effective programming from RTS to RTP may be useful.

This survey data supports the opportunity to collaborate with mental health providers when available, dependent on athlete case specifics (Table 1), based on how SCCs perceive their role (Table 1). SCCs are in a position to assist with daily support of the athlete, within their scope of practice, and current perceptions indicate many SCCs are already in a great support role for this critical aspect of care. Furthermore, SCCs have the opportunity to work collaboratively with the sport coaches to prescribe appropriate conditioning programming for effective restoration of aerobic capacity. Aerobic conditioning is often not prioritized during early and mid-rehabilitation and is usually not part of the battery of testing for RTS criteria, which makes it challenging to assess if prescription has been adequate to restore aerobic fitness to decrease injury risk and improve overall outcomes (Choice & Downey, 2023). Again, SCCs are well-positioned to collaborate with ATCs and sport coaches for late-stage comprehensive program design. This includes utilization of load monitoring techniques to make objective decisions about progressive overload and external load metrics for cardiovascular and muscle fitness/readiness (Aoki et al., 2017; Redman et al., 2021). For example, the SCC may monitor GPS data to add adequate conditioning to an athlete's plan to build them back to match-play requirements. SCCs may also monitor GPS data to ensure that an athlete is not doing too much too soon based on progressive overload principles. Literature supports SCC involvement in external load monitoring efforts

to appropriately prescribe exercise in the later return phases and assess physical preparedness as it relates to sport clearance for full return (Aoki et al., 2017; Choice & Downey, 2023; Choice et al., 2024; Redman et al., 2021). Load monitoring is commonly included within the later stages of the continuum and once RTP has been reached, but there is opportunity to use load monitoring tactics earlier in the rehabilitation continuum for the RTS transition (Aoki et al., 2017; Choice & Downey, 2023; Choice et al., 2024; Redman et al., 2021).

Roles are most often described in silos that support a segmented decision-making model, despite efforts that support a collaborative interdisciplinary model (Matheson et al., 2011; Parsons, 2014; Rollo et al., 2021; Wilk & Arrigo, 2017; Yung et al., 2022). Professionals can identify their own scope of practice within the context of working with injured athletes, but the understanding of professional roles and responsibilities of others is limited and highly variable (Beasley et al., 2021, Beasley et al., 2022; Buckthorpe et al., 2019; King et al., 2023; Manspeaker & Hankemeier, 2019; Rollo et al., 2021; Shrier et al., 2014; Zarro et al., 2022). Overall, there is a lack of documented consistency about how decision-making occurs and who is typically involved in shared decision-making throughout the full continuum of care in the NCAA. More information about involvement in decision-making is imperative for professionals on interdisciplinary care teams because return-from-injury decision-making is complex, dynamic and variable; in part due to varying professional roles and responsibilities (Baugh et al., 2020; Breitbach et al., 2017; Courson et al., 2014; Dijkstra et al., 2017; Shrier et al., 2014).

Some SCC respondents reported that collaboration with the care team was not a component of their current role, and most SCC respondents reported a desire for greater inclusion alongside other care team members. Understanding scope of practice, roles and responsibilities in return-from-injury care, and how to include all partners can be achieved in part with improved education (Shrier et al., 2014). There is a clear need based on available literature for increased education around the roles and responsibilities of providers (Ardern et al., 2016; Beasley et al., 2021; Beasley et al., 2022; Courson et al., 2014; Dijkstra et al., 2017; Kilian & Kendall, 2023; Manspeaker et al., 2019; Talpey & Siesmaa, 2017). The increased education should target professionals understanding each other's roles, communication around differences and similarities in roles, the athlete understanding the roles of the professionals, and clear understanding of the care team leader who will provide clear direction for the team (Buckthorpe et al., 2019; Manspeaker et al., 2019; Parsons, 2023; Rollo et al., 2021). Improved interdisciplinary education within handbooks and workplace structure is imperative for NCAA care teams because challenges identified by ATCs surrounding interdisciplinary collaborative practice specifically include limited knowledge of roles and scope of practice, factors affecting team collaboration, and time (Manspeaker et al., 2019). With increased interdisciplinary education and communication should come an operational framework to guide the return-from-injury process. Workplaces may adopt Figure 1 and operationalize the framework based on available resources and personnel at the institution. Simply using an outline that includes transition points may improve overall care because it may lead to increased communication and collaboration. Leaders within each rehabilitation phase can be determined and overlapping roles should be discussed.

Limitations to this study include the known high variability of resources between NCAA divisions and conferences, and the high variability between injury cases (i.e. reconstruction surgery vs. mild sprain) and sport-specific needs (i.e., aerobic vs. anaerobic sports). Not all interdisciplinary care teams are expected to function in the same way, and not all injury cases should be treated the same way. Findings from this sample are skewed towards Division I based on the responses. This exploratory, self-reported survey data is a critical first step in filling the current gap in knowledge regarding the professional role of the SCC on interdisciplinary NCAA return-from-injury care teams with the goal of improving athlete outcomes and experiences. Lastly, workplace education intervention studies (pre/post) are necessary to determine changes, if any, on athlete return-from-injury outcomes based on increased education and improving communication about roles and responsibilities and enhancing collaboration (i.e. SCC and ATC working together for end stage program design and readiness testing).

PRACTICAL APPLICATIONS

Even with known variability in resources and injuries, it may prove beneficial for the NCAA to adopt a consistent rehabilitation continuum model to guide collaborative care. For many injuries, much of the rehabilitation continuum is progressive (linear)

with early rehabilitation and pain management occurring immediately after the injury is sustained, followed by early-stage strength then late-stage strength, and finally advanced training which mimics the natural progression/build of the athlete back to elite performance level (Ardern et al., 2016; Armitage et al., 2022; Choice et al., 2024; Kisner et al., 2017). Within this progressive framework, there are components of care that are considered a consistent piece of rehabilitation (non-linear, e.g. load monitoring and biomechanical analysis) that require disciplinary expertise beyond the scope of ATC alone. Utilization of a comprehensive, phased rehabilitation continuum with designated decision-based transition points allows coaches and clinicians to use a structured, progressive, criteria-based unified approach for return that is applicable to any sport (Ardern et al., 2016).

This study provides novel insight into the perceptions of SCCs regarding professional roles and decision-making in return-from-injury care within the NCAA. The present findings highlight the need for SCCs to advocate for more structured involvement in both the early and later stages of the rehabilitation continuum, especially around readiness testing and clearance discussions. Practical strategies include: 1) engaging in regular care team meetings to clarify roles and responsibilities; 2) initiating readiness assessments and presenting results during regularly scheduled meetings, ensuring that testing is conducted across the rehabilitation continuum and results are an agenda item; 3) work in collaboration with all high performance disciplines, specifically addressing athlete confidence and autonomy; 4) partnering with coaches to deliver individualized conditioning programs; and 5) advocate for updated interdisciplinary models that define roles. Considering the lack of formal role clarity and the limited use of SCC led testing, these efforts may enhance communication, ultimately ensuring athletes receive data-driven collaborative care, improving the likelihood of effectively completing the rehabilitation continuum and return to high performance safely and confidently.

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CONFLICTS OF INTEREST

The authors have no conflict of interest to disclose

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ETHICAL APPROVAL

The study was approved by the ethical review board. All survey respondents were required to provide consent prior to accessing the survey. Answers to every survey question were not required. IRB Study Number: 2112583-1.

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Appendix A

Survey

IRB Study Number: 2112583-1

Introduction

You are invited to participate in a research study. This study is being conducted by faculty in the School of Physical Therapy at Regis University. The purpose of this study is to identify perceptions of different athletics personnel about return from injury in NCAA sport. We want to understand who makes up these teams of professionals. We also want to understand what each person thinks their role is during different parts of the return from injury timeline. This includes what information is considered and who on the care team is best able to evaluate different parts of the rehabilitation process. Your participation is voluntary. This form includes detailed information on this research study to help you decide whether to participate or not. Please read it carefully and ask any questions you have before you agree to participate.

Procedures

Your participation involves completing one survey. This should take no more than 10 minutes. The survey has two parts. The first part will ask about your background. The second part will ask about return from injury experiences. If you agree to participate, you will type your name as acknowledgement of this consent. No other personal data is needed.
The survey will be open from January 17th, 2024 to February 17th, 2024

Potential Risks or Discomforts

Your participation in this study does not involve any physical or emotional risk.

Possible benefits

Taking part in this research study may not benefit you personally. We may learn new things that may help others in the future. This may help athletes and return to performance decision making.

Confidentiality

The researchers will make every effort to ensure that the information you provide as part of this research remains confidential. Your identity will not be revealed.
We will only collect information via Qualtrics survey. This information will be securely stored in a password protected cloud-based storage system. It is only accessible to the primary investigators.
This form will be kept for a minimum of three years after the study is complete. Then it will be destroyed.
It is unlikely, but possible, that others (Regis University or State or Federal officials) may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so.

Financial Information

Participation in this study will involve no cost to you. You will not be paid for participating in this study.

What are my rights as a research participant?
Participation in this study is voluntary. You do not have to answer any question you do not want to answer. You may choose not to participate or to withdraw from this research at any time. If you decide not to participate or to withdraw from this study, please inform the researchers. The researchers may ask you if the information already collected from you can be included in the research project.
Who can I contact if I have questions or concerns about this research study?
If you have questions, you are free to email the researchers: Dr. Erin Choice at echoice@regis.edu and Dr. Rebecca Downey at downe809@regis.edu.
If you have any questions about your rights as a participant in this research, you can contact the following office at the Regis University:
Regis Institutional Review Board Regis University Denver, CO 80221 Phone: (303) 458-4188 Email: irb@regis.edu

Informed Consent

By typing your first and last name, you agree to participate in this study and are providing an electronic signature and verification that you are 18 years of age or older. By consenting, you indicate that you understand the risks and benefits of participation, and know what you will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your participation in the study if you choose to do so. Please email the researchers directly if you would like a copy of the informed consent for your records.

Demographics

1. What is your primary current professional role? (physical therapist, head athletic trainer, assistant athletic trainer, GA athletic trainer, head sport coach, assistant sport coach, physician, surgeon, health strength and conditioning coach, assistant strength and conditioning coach, GA strength and conditioning coach, sport scientist/ data analyst, nutritionist, registered dietician, mental performance coach, sport psychologist, other (text box)).
2. Who is your primary employer as it pertains to your work with NCAA athletes? (hospital/ system, university/ college, private clinic, corporately owned clinic, I am paid as part time status/ a part time employee or contractor directly from a university for my work with NCAA athletes, but this is not my primary employer, other (text box)).
3. What division do the majority of your collegiate athletes participate in? (NCAA Division I, NCAA Division II, NCAA Division III, Other (text box)).
4. What conference(s) do the majority of your athletes play in?
5. How many years total have you worked with collegiate athletes in your professional role?
6. List top 3 sports you most commonly work with.
7. List any and all degrees and specialty certifications you have (for example DPT, MD, CSCS, Board certified specialty).

In the following questions, consider the following definitions:
Return to Participation: athlete may be continuing with rehabilitation, is beginning to train but at a lower level
Return to Sport: athlete may be playing their sport but is not participating at pre-injury level
Return to Performance: athlete has fully returned and is able to perform at or above pre-injury level

First Domain of Questions

1. In your current position, do you perceive that you have a small, medium, or large role in: (early rehab stages, pain management, biomechanical analysis, early stage strength and function related to injury, late stage strength and function related to sport movements/training for return to sport, advances training, load monitoring, aerobic conditioning, training systems or processes that are not specific to the injury site).
2. Currently, how significant is your role in the decision making for the following phases (very insignificant to significant; 5-point Likert scale): transition from injury to return to participation, transition from return to participation to return to sport, transition from return to sport to return to performance.
3. How large or small of a role do you believe you SHOULD have in the decision making for the following phases? (no role to primary role; 5-point Likert): transition from injury to return to participation, transition from return to participation to return to sport, transition from return to sport to return to performance.
4. What specific components are part of your current role in Return to Sport? Select all that apply.
5. What specific components are part of your current role in Return to Performance? Select all that apply.

Additional survey questions that were not reported on in this manuscript can be requested by emailing the lead author.