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5 **What's Our Role?**
6 **Mental Performance Consultants' Perspectives on**
7 **Supporting Concussed Athletes**
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Abstract

Bloom et al. (2020) advocated that mental performance consultants (MPCs) can play an important supporting role in the psychosocial recovery and well-being of concussed athletes. The rapid advancement of knowledge and limited resources designed for MPCs present challenges in facilitating this support. To address these challenges, a group of MPCs formed a community of practice to help define our role in this domain. In this article, we have attempted to translate our knowledge into an accessible narrative and approach that can help MPCs better understand our role in providing support to concussed athletes throughout the phases of return-to-play.

Keywords: sport-related concussion, return-to-play, sport psychology, community of practice

**What's Our Role? Mental Performance Consultants' Perspectives on
Supporting Concussed Athletes**

With new sport-related concussion (SRC) research being published daily, it is important to provide clarity for those in a position to work with concussed athletes, to minimize the murkiness that exists around this complex injury. As such, the purpose of this article is to help clarify the role of the mental performance consultant (MPC) in concussion support, and to share best practices and considerations for MPCs who are in a position to offer psychosocial support to concussed athletes.

As MPCs regularly provide psychosocial support to athletes and have been advocated as important professionals to support the SRC recovery process (Bloom et al., 2020), information regarding our role, scope of practice, and boundaries of competency within this complex injury domain is essential. To understand the MPC's position within the SRC landscape, a community of practice (CoP: Wenger et al., 2002) of experienced MPCs was cultivated. This CoP (the six authors on this paper and two additional MPCs) met on a bi-weekly basis and comprised MPCs who have worked with concussed athletes in elite sport contexts across a variety of individual and team sports. CoP meeting discussions centered on SRC symptomatology, research, and management efforts; professional scope of practice; intervention opportunities; collaboration with other professionals; case studies as presented by the MPCs; and collective best practices regarding psychosocial interventions, mental skills, and therapeutic techniques. Two external experts on SRC research and practice also contributed, with presentations on current challenges in research and concussion management, collaborative care, and identifying and clarifying professional lenses; and participating in collaborative discussions to further our collective learning. In an effort to share our learning, this article was collectively undertaken to help translate knowledge from research and this CoP to those working within the mental performance field. The first section

presents our proposed best practices in action following a hypothetical SRC injury. Specifically, we discuss a fictional athlete (Laura) and follow her concussion journey (from pre-injury to recovery) from the perspective of an MPC, while simultaneously presenting some strategies that MPCs can employ at various points throughout the injury timeline in response to her specific situations and/or symptoms. In the second section, we then present key considerations and challenges for optimizing MPCs' work with concussed athletes.

Case Study

Laura was a 21-year-old rugby union player in her 4th year on the varsity team. She was a full back, a position where she could use her strength, speed, and agility. She was viewed as a leader and took this role very seriously; she spent time reviewing video with her coaches, checked in with teammates and staff on how others were doing, and was an avid supporter of mental skills training and my role as MPC with the team. In my second year with the team, I felt I had created good working relationships with the coaches, athletes, and staff. I provided biweekly team sessions on mental skills, communication, group and team dynamics, and psychological recovery. This season we were focused on emotional intelligence, self-regulation, and mindfulness. I generally attended practice three times a week, weekly coach and staff meetings, and all the games where I could see how the athletes and staff responded under pressure, checking their mental skill application and progress.

During a game Laura caught the ball at pace and was tackled below the knees by an opposing player. As she tried to fight off the tackle another opponent came to help the initial tackler, twisting Laura's body. Instead of making contact with the ground with a proper body position, she landed on her shoulder and her head snapped back and hit the ground hard. She lay on the ground motionless as the ruck formed on top of her. The referee stopped the play and called for medical attention. Initially, I saw no movement, but after she was assessed on the field, the athletic therapist helped her off slowly and they went to the locker room. Later

90 in the half I went into the locker room to check on Laura. The therapist indicated that Laura
91 was concussed but was doing “OK”, and that she would see the doctor after the game. The
92 therapist asked if I could stay with Laura because she had to stay on the field for the second
93 half, as no other medical professional was available. Laura and I chatted for a few minutes
94 and she told me that she was feeling OK. Laura said that her head and shoulder hurt; she
95 admitted to being knocked out for a few moments but thought that the therapist was
96 overreacting. But Laura just wasn’t herself; she was repeating questions, seemed disoriented,
97 and overly emotional. I encouraged her to relax, but she could not understand why she wasn’t
98 going back in. I listened to her concerns, empathized, and helped her focus on what she could
99 control. I then suggested calming her emotions by using the skills we had practiced in our
100 team sessions.

101 Later, a doctor, having confirmed Laura’s concussion diagnosis, instructed her to rest
102 for 24 to 48 hours, minimize screen time (excluding all screens if possible), avoid bright
103 lights and loud noises, and to keep track of her symptoms and go immediately to the hospital
104 if any of the symptoms got worse (e.g., headache, vomiting). That evening, Laura’s headache
105 got progressively worse, and she admitted to maybe having underplayed her symptoms and
106 went to the hospital for follow up.

107 The first few days following her injury, Laura was diligent about resting and staying
108 off her phone but struggled with being physically inactive. She indicated that she was doing
109 what the doctor and therapist had said but wasn’t feeling any better. In fact, she felt stressed
110 at the thought of her team competing without her, and was questioning how long her recovery
111 would take. She said she was seeing the physiotherapist that day for treatment on her neck
112 and shoulder, as they were both very stiff and sore. I told her that I was available to her if she
113 needed anything and to feel free to text me even if she just wanted to complain about how she
114 was feeling.

115 The next week, Laura had some ups and downs; she wasn't going to classes and
116 started feeling alone and bored as she hadn't seen her teammates or friends for a few days.
117 We revisited self-regulation and mindfulness techniques, and I helped her find ways to relax
118 and breathe that helped lessen her symptoms at times. She hadn't yet spoken to her parents,
119 so I encouraged her to reach out to them as they had been supportive in the past. She told me
120 that she didn't feel like she was progressing; in comparison to a previous ankle injury, she
121 just didn't understand why she didn't feel better after 2 weeks. She was becoming
122 increasingly frustrated and impatient. Laura continued to see the physio for her shoulder and
123 neck, and after 3 weeks she started to feel better, and noticed her headaches were less severe.

124 Feeling a bit better, Laura decided to get out of her apartment and come to a game
125 against our biggest rivals. She seemed alright with not being able to play and wanted to
126 support her team. I stood with her on the side lines during warm-up and she seemed in good
127 spirits; the team and staff were happy to see her and commented on her looking better.
128 During the first half, as I did my usual scan of the environment, I noticed Laura sitting down
129 with her head in her hands. I approached her and she said she was feeling sick and that her
130 headache was "fierce". I reported this to the athletic therapist, who said, "Too much, too
131 soon", noting the loud crowd noise and excitement of the game had likely impacted her
132 symptoms.

133 The next few days, following the acute strain of doing too much, Laura found her
134 symptoms slowly improving. We spoke every two days and worked on some goal setting,
135 positive self-talk, and continued our relaxation exercises. She said, "I am determined to do
136 everything I can to get rid of my symptoms". She felt positive that she had been progressing
137 with her mental skills and mentioned she was cleared by the doctor and therapist to start some
138 light activity that week: just 20 minutes on the bike to see how she felt. Soon, Laura
139 progressed to 40-minute bike rides with moderate intensity, some light weightlifting, and ball

140 handling with some of her teammates, without any worsening or return of her symptoms.

141 After multiple guided progressions, she was cleared for non-contact practice. The first
142 week went well for Laura, despite being tired and a little more emotional in my view. After
143 guided contact progressions with the therapist, she was cleared for contact. Although we all
144 expected her to be eager and ready to go, Laura struggled. She had a short fuse, was quick to
145 be upset when she didn't perform perfectly, and ended many practices in tears. Before her
146 injury, Laura was always confident while running through contact. Now, she was hesitating,
147 recklessly passing the ball, or dropping the ball, which she would never have done in the past.
148 After a particularly bad practice, Laura asked to meet to talk about her confidence. "It was
149 such a normal play. It could happen again" she repeated. We explored those thoughts and I
150 encouraged her to challenge them by exploring the evidence. Laura acknowledged she had
151 been hit that way hundreds of times before and nothing had happened. We then built on her
152 internal narrative and her ability to manage or change her self-talk. We worked on naming
153 and understanding the emotions that came with fear, letting those thoughts go, and calming
154 herself. After numerous sessions, Laura eventually realized that she continued to fear getting
155 another concussion; she kept trying to imagine how her injury happened. I asked her "How
156 did it happen?" Uncharacteristically, Laura couldn't answer. She admitted to not knowing
157 exactly how she lost consciousness, or how she really got hit. She knew she took the ball into
158 contact and wound up with her worst injury. Showing courage, Laura decided that she should
159 watch the film and analyze how she got concussed. She admitted not having watched the
160 injury film due to her fears and all the negative emotions around that hit. I asked, "Well, what
161 if you were to watch it with the support of a coach, or a teammate?". She asked to watch it
162 with me. We prepared with some breathing exercises; Laura watched it, kept calm, and began
163 to analyze. Laura was very critical of how she fell and absorbed the contact from both
164 tacklers. Rather than protecting the ball and her head, she tried making a desperation pass as

she was going down, something she had not done before. With a renewed sense of purpose, Laura devised a plan for if ever she was caught by two tacklers: she would either keep her legs moving or protect the ball and go to ground safely.

The following practice, Laura looked like her old self again. Looking back on our interactions, I was incredibly thankful for the relationship we had before her injury, and her willingness to lean on me as a source of support in her trying time. Her injury was not an easy one to overcome, but I found a strengthened confidence in how mental skills can support medically-guided rehabilitation in return to play protocols for concussion.

Key Considerations for Supporting Concussed Athletes

In this next section, we present considerations for supporting an athlete with SRC through the phases of the psychological response to injury model: injury onset, rehabilitation, and return to sport (Wiese-Bjornstal et al., 2015), but first discuss how potential support can begin prior to the SRC occurring (pre-injury).

Pre-Injury

The quality of the existing relationships between the MPC, the athlete, and various stakeholders (e.g., teammates, coach, integrated support team; IST) prior to the SRC will impact the MPC's ability to successfully support the athlete following their SRC. Therefore, a key challenge for an MPC is how they build and maintain athlete and team relations. Good quality relationships allow for: an effective therapeutic alliance to be established with the client, supporting any potential interventions provided at concussion onset; an understanding of any potential factors (e.g., current stressors) which may predispose the athlete to have a higher potential for injury (Ivarsson et al., 2017); and, potential inclusion in the SRC management process due to a greater presence within the IST (as seen in Laura's story). Where the MPC may not be embedded within a team or squad of athletes and the support request comes from a referral, building a network of suitably qualified practitioners to draw

upon is essential.

The degree of presence, visibility, and successful immersion in the athletes' environment (i.e., practice and games) is especially important for building a relationship that will facilitate the ability to support concussed athletes. MPCs may not only 'have sight' of a suspected SRC but, because of strong relations with the athlete and a good understanding of that individual, be able to identify abnormal variability in athlete behavior (i.e., potential symptoms) that may provide valuable information for the clinical team. That said, although MPCs are in a position to inform a diagnosis, they should not diagnose, nor give advice on SRC treatment or management. Ongoing presence by the MPC can also 'normalize' the MPC's role in the immediate SRC identification and management process, and play a role in facilitating a psychologically safe climate where athletes are comfortable disclosing their injury experiences. Given that intra-personal factors (e.g., lack of knowledge, internal pressure) have been associated with disclosure (Kerr et al., 2014), the MPC can also play a role in educating athletes regarding concussion knowledge and management, which may be of particular importance for adolescent athletes (Ferdinand-Pennock et al., 2020).

A final consideration for an MPC's practice pre-injury is their own knowledge and understanding of SRCs and concussion management (i.e., symptoms, behaviors; track, court, or pitchside protocols; medical concussion management rules). Resources like the latest Consensus Statement on concussion in sport (McCrory et al., 2017), practical guidance on first aid triage (e.g., Hockey Canada, Concussion Legacy Foundation apps), and the specific injury protocols from the MPC's team or sport will assist in developing this knowledge and understanding. When informed, MPCs can help educate athletes on what to expect, while removing unnecessary additional anxieties around uncertainty. A challenge for an MPC here is identifying and advocating for their role in the SRC management process within a particular team or group. The development of MPC-specific education (e.g., SRC "first aid"

for MPCs) would help inform MPCs about their role in SRC management processes, and may be especially important for MPCs not embedded within a team or IST.

Injury Onset

When a concussion occurs the MPC may be the first point of contact with the athlete. The athlete may disclose the injury to the MPC, another athlete might raise concerns about a fellow athlete, or the MPC might observe signs and symptoms. Thus, we suggest the potential role of the MPC could be in providing immediate, onsite emergency care or psychological ‘first aid’. MPCs may be able to assist the medical team in identifying symptoms that might have been missed (e.g., behavioral change that would not be known without knowing the athlete pre-injury). Importantly, the MPC must know their role and stay within their scope of practice (e.g., not give advice on medical matters).

Following contact with the athlete, irrespective of the context, the next stage of psychological first aid, if the process hasn't already occurred, is to encourage the athlete to see a doctor for diagnosis. If there is no access to medical support, the athlete should be encouraged to go to the hospital. There may be issues around confidentiality at this point, as the athlete may have chosen to disclose in confidence and not want the medical team to know. MPCs should prepare in advance for such scenarios and identify clear and ethical strategies to ensure the welfare of the athlete. This may include developing an ethics section, which can be included in a confidentiality statement provided to the client (organization/team when embedded) to address such boundaries of competency.

Immediately post-concussion, the MPC may also be in a position to support the athlete. This might include accompanying the athlete to the hospital or staying with them in the medical waiting room. Emotional support through listening and maintaining communication, or helping the athlete shift environments (away team/overnight stays, competitions/events, etc.) may also be important. Again, as MPCs in these contexts, we are

not responsible for the athlete's physical health, and there are clear established boundaries for medical roles. Instead, it is important for the MPC to be fully briefed on the team or sport's medical plan/protocol for such occasions, and provide support as needed.

Rehabilitation

Following the acute injury onset phase, the MPC may support the concussed athlete through their rehabilitation. One strategy is psychoeducation; this may involve the practitioner educating themselves to lead conversations regarding SRC experiences and helping the athlete understand and normalize their symptoms. Psychoeducation could also involve providing information or concussion resources (e.g., web resources) to give the athlete a degree of control/autonomy in their recovery; as well as to educate, inform, raise awareness, and provide assistance. The concussed athlete is also likely to experience a range of symptoms and the MPC can help the athlete develop strategies to manage these symptoms (see Table 1 for common strategies used by practitioners with their concussed athletes' symptoms, experiences, and needs; cf. Seguin, & Durand-Bush, 2019).

As with other injuries, beyond the MPC providing direct support, they can facilitate the athlete's engagement in social support networks. For example, connecting the athlete with another injured athlete; or encouraging coaches, teammates, to reach out. An additional function of the MPC in the rehabilitation phase, is to gauge how the rest of the team or support staff is interpreting the situation and the SRC experience. Having a social and cultural understanding of the athlete's environment will further facilitate and refine any psychological-based interventions the MPC has designed in conjunction with, or in addition to those of the medical staff, helping ensure a positive and supportive climate.

The complex nature of concussion often results in a longer rehabilitation than expected, and in some cases, eventually necessitates exit from the sport. An MPC may be able to offer longer term support in these cases; for example, MPCs who have an established

referral network may be able to provide a clinical referral to an athlete who is experiencing mental health issues that may result from prolonged concussion experiences. The facilitation of resilience and coping skill development (e.g., including life balance, identity development) may also be beneficial to an athlete transitioning from sport. Here, different resources and referral options may be necessary while MPCs stay within their scope of practice.

Return to Sport

In the return to sport phase of an athlete's recovery from SRC, MPCs should build on the mental skills developed prior to injury and in earlier injury phases, and support the athlete in developing a set of strategies to deal with return-to-sport demands. As with all stages of recovery, the athlete's return to sport should be medically informed and psychologically supported. A number of stressors are commonly experienced as athletes return to sport; for example, fear of re-injury, returning to pre-concussion performance levels, and general internal and external expectations (Podlog et al., 2011). To manage these stressors, a number of coping skills can be fostered to help the athlete maintain motivation and enhance confidence (see Table 1). The MPC has a role in facilitating an athlete's psychological readiness to return to play. Return to sport is often a non-linear process and the athlete may be prone to re-injury. Psychologically, re-injury presents a new set of stressors, in addition to the athlete having to repeat various stages of the graduated return to play protocols, with often more intense psychological and physical processes (e.g., heightened anxiety).

Once the athlete has successfully returned to sport, the MPC has a role in continuing to help the athlete maintain or manage their performance expectations. If the MPC is within the athlete's environment, they may observe the athlete as they resume training and competing, and observe reactions to challenges upon sport re-entry.

Concluding Thoughts

In offering specific suggestions for the role of the MPC in supporting concussed

athletes we hope we have identified that we as MPCs can not only support the athlete themselves, but also the athlete's environment. Indeed, there is a need to consider the social and cultural factors that impact each aspect of the athlete's SRC experience, as well as the MPC's level of competency. Also helpful is the consideration of the level or ability of the athlete (elite, amateur, collegiate, youth sport) as this will affect what resources/network the athlete is able to access. This may be especially pertinent for those transitioning from sport or out of an elite context, where the ability to access a support/resource network is likely greatly affected by the social resources available. In addition, where athletes are not part of a team or squad environment and the MPC has provided support through private or individual referral, we urge MPCs to look at how they can facilitate client access to such resources. Here, scope lies for development of suitable resources for both athletes and MPC to aid such processes. Finally, irrespective of the context of support, we reiterate the importance of the MPC operating within the boundaries of their competency. As an MPC our role is not to diagnose or guide treatment for concussed athletes, but to support them through their experiences.

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The authors confirm that the data supporting the findings of this study are available within the article.

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 344

345 **Table 1.**
 346 ***Common psychological skills and techniques used by practitioners.***

Symptoms/Experiences/Needs	Psychological Skills	Common Techniques
<ul style="list-style-type: none"> ● Identify symptoms & symptom triggers ● Behaviors which limit exposure to symptom triggers ● Behaviors that lead symptoms to worsen 	Self-Regulation	<ul style="list-style-type: none"> ● Self-monitoring (e.g., daily symptom/behavioral logs; activity and symptom threshold documentation)
<ul style="list-style-type: none"> ● Controllability/locus of control ● Inability to see progress ● Well-being mindset and leveraging performance mindset to adhere to rehabilitation protocols 	Goal-Setting/ Goal- Management	<ul style="list-style-type: none"> ● Support goal development and adherence with medical team/return-to-sport protocols ● Emphasize “revisit, revise” of SMARTER goals for flexibility in recovery process
<ul style="list-style-type: none"> ● Pain/muscle soreness ● Headaches ● Decreased arousal ● Counter stress response ● Energy conservation ● Manage sleep disturbances ● Challenge fatigue ● Heightened emotions 	Relaxation	<ul style="list-style-type: none"> ● Active or passive progressive muscle relaxation ● Breathing exercises ● Meditation
<ul style="list-style-type: none"> ● Internal dialogue ● Locus of control ● Attention/focus 	Self-Talk	<ul style="list-style-type: none"> ● Reframing negative self-talk ● Focus on process vs. outcomes ● Affirmations to normalize experience
<ul style="list-style-type: none"> ● Skill maintenance ● Resilience ● Recovery ● Enhance rehabilitation effectiveness ● Manage emotions/pain 	Imagery	<ul style="list-style-type: none"> ● Abstract or targeted healing imagery ● Mental practice of rehabilitation exercises and outcomes ● Sport specific mental rehearsal
<ul style="list-style-type: none"> ● Acceptance ● Present-focused ● Non-judgmental of recovery process 	Mindfulness	<ul style="list-style-type: none"> ● Centering ● Informal or formal meditation exercises/audio ● Labelling emotions and thoughts

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347 *Note.* The skills presented have been adapted from Seguin & Durand-Bush (2019) and
348 include others as identified in the included narrative, and represent common skills and
349 techniques used by practitioners to support their concussed athletes' symptoms, experiences,
350 and needs. The skills presented are not intended as an exhaustive list.
351