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From the CDC a qualitative study of middle and high school professionals' experiences and views on concussion: Identifying opportunities to support the return to school process★

Kelly Sarmiento^{a,*}, Zoe Donnell^b, Elizabeth Bell^b, and Rosanne Hoffman^b

^aCenters for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention, 1600 Clifton Road, Atlanta, GA 30329-4027, United States

^bICF, 530 Gaither Road, Rockville, MD 20850, United States

Abstract

Introduction: Current research recommends that students returning to school after a concussion should receive a return to school plan that is tailored to their individual symptoms. School professionals play important roles in designing and implementing the supports outlined in return to school plans.

Methods: This qualitative study explored middle and high school professionals' experiences with concussion, particularly their knowledge and perceptions of the injury and their experience with supporting students with concussion. Six focus groups were conducted with two to four school professionals per group, including two groups of teachers, two groups of school psychologists and counselors, and two groups of school nurses. Findings were coded into four categories: (a) challenges with identifying a concussion; (b) strategies for communicating with students about concussion; (c) barriers to implementing return to learn plans; and (d) establishing a collaborative school support team.

Results: School professionals who participated in the focus groups were knowledgeable about concussion and the importance of helping their student recover. Participants also understood the importance of recognizing the signs and symptoms of concussion and communicating with students and parents about this injury. However, the study participants reported various challenges related to concussion identification and management, including the perceived validity of concussion symptom reporting by students. A team-based approach was mentioned across all groups as the preferred method for school-based concussion management for students.

Conclusion: School professionals in this study were eager to address concussion in their schools, but desire guidance on how to overcome social norms around concussion identification and reporting. In addition, there is a need for consistent use of written instructions from healthcare providers to help guide return to learn (RTL) accommodations.

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*Corresponding author. KSarmiento@cdc.gov (K. Sarmiento).

Practical applications: The findings from this study can help inform the integration of concussion, and other health, management plans in schools.

Keywords

Concussion; Traumatic brain injury; Children; School; Nurse

1. Introduction

According to the Centers for Disease Control and Prevention (CDC), a concussion is “a type of traumatic brain injury (TBI) caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth. This sudden movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging the brain cells.” (Centers for Disease Control and Prevention, 2017) Concussion is of particular concern for young people. There were over 800,000 TBI-related emergency department visits among children and adolescents age 17 and under in 2014 (Peterson, 2018). However, this estimate is not inclusive of the children and adolescents seen in primary care offices or specialty clinics or those who do not seek medical care (Arbogast, Curry, Pfeiffer, et al., 2016; Setnik & Bazarian, 2007). According to one study in a regional healthcare system, as many as 80% of TBI-related visits among children and adolescents were not captured as the surveillance system only collected emergency department-based data for this injury (Arbogast et al., 2016).

Among children and adolescents, most concussion symptoms resolve within a couple of weeks, but the length of recovery varies based on the characteristics of the injury and person (Heyer, Weber, Rose, Perkins, & Schmittauer, 2015). Longitudinal studies suggest that 30%–60% of children and adolescents will have persistent symptoms at one month post-injury, 10% at three months post-injury, and less than 5% at one year post-injury (Crowe, Collie, Hearps, et al., 2015; Asken et al., 2016; Barlow et al., 2010; Barlow, Crawford, Brooks, Turley, & Mikrogianakis, 2015; Sroufe et al., 2010). Young people who do not immediately report their concussion symptoms and continue with regular activities—such as sports—can risk prolonging their recovery (Asken et al., 2016). Current clinical research recommends a gradual return to activity after a concussion (Harmon et al., 2013; Zemek, Barrowman, Freedman, et al., 2016). Under the guidance of a medical provider, children and adolescents should follow a stepwise return-to-activity approach customized to their symptoms and health history (Kania, Shaikh, White, & Ackerman, 2016; Thomas, Coxe, Li, et al., 2017). This approach should also outline strategies that help mitigate the reemergence of symptoms and avoidance of actions that may put them at risk for a prolonged recovery or more serious injury (Sady, Vaughan, & Gioia, 2011). While young people are recovering from concussion and returning to regular activities, such as school, some will need changes to their daily routines. For instance, in the classroom setting, temporary support and accommodations at school may be needed to help manage a student’s concussion symptoms as they return to school, sometimes referred to as the return to learn (RTL) process (Sady et al., 2011). Managing a student’s RTL appropriately helps the student recover, and can reduce the potential for extended absence from school, declines in school performance, and feelings of

isolation that a student may experience after their injury (Arbogast et al., 2013; Rose, McNally, & Heyer, 2015).

In coordination with the child's medical provider, teachers, school psychologists and counselors, and school nurses play important roles in designing and implementing school-based supports and plans for students returning to school after a concussion. School psychologists and counselors can provide oversight regarding support services and recommendations about accommodations for students. In addition, they can guide development of school policies for supporting concussed students (Hossler, McAvoy, Rossen, Schoessler, & Thompson, 2014). School nurses are the primary school-based healthcare providers for students and can serve as a resource for educating other school professionals about RTL (The National Association of School Nurses, Inc, 2013; Thomas et al., 2017). They can also monitor students to ensure an optimal recovery process (Hossler et al., 2014). Teachers interact with students daily, which gives them the opportunity to observe their students' needs, and make accommodations to reduce sensory or cognitive demands on students (Gioia, Glang, Hooper, & Eagan, 2016; Halstead et al., 2013). Their more frequent interaction with students also makes teachers more likely to notice changes in concussion symptoms and provide accommodations customized to the student's needs.

Despite their centrality to students' recovery from concussion, few studies have explored school professionals' experiences with concussion, and particularly, their knowledge of the injury and the challenges they face as they try to support students with concussion. This qualitative study offers a contribution to the literature on this topic. We conducted a series of six focus groups with teachers, school psychologists and counselors, and school nurses to better understand their perceptions of concussion and experiences with RTL. Findings from this project will inform CDC's ongoing efforts to support key groups in preventing, recognizing, and responding to concussion.

2. Methodology

Using a qualitative data collection approach, we assessed school professionals' perceptions of concussion, information needs about concussion, and experiences with concussion management at middle and high schools (e.g., professionals in schools serving students grades 6 through 12). Our research design included six focus groups with two to four school professionals per group: including, two groups of teachers, two groups of school psychologists and counselors, and two groups of school nurses. This study is part of a larger research project that explores young athletes, parents, coaches, and school professionals' experiences with concussion and with CDC's HEADS UP campaign (an awareness campaign focused on concussion in children and adolescents). Findings from this project will inform CDC's ongoing efforts to support key groups with preventing, recognizing, and responding to concussion.

In recruiting participants, we sought geographic diversity by targeting school professionals from each census region. The majority of school professionals were recruited through the CDC HEADS UP campaign partner network. The CDC HEADS UP partner network outreach focused on the: American School Counselor Association, National Association of

School Psychologists, and National Association of School Nurses. To supplement recruitment efforts, we worked with a professional focus group recruitment vendor who ensured we recruited a sample of participants that met our desired criteria.

Collection of data occurred in a unique setting, as participants joined an online platform and also called into a virtual conference space to participate in the discussion. This approach allowed the participants to view educational fact sheets and messages on concussion developed through the CDC HEADS UP campaign and provided flexibility to participants in regard to scheduling. A trained moderator facilitated the discussion among school professionals using a standardized moderator guide that covered topics including: perceptions of concussion, information gaps related to concussion, and their role related to concussion identification and management.

Each participant signed a consent form before the groups took place, and, at the beginning of the call, the moderator asked participants to verbally consent to participation in the discussion. To ensure privacy, the moderator used only participants' first names during the discussion. Additional research staff joined the call to take notes. The virtual focus groups were audio recorded for notetaking purposes. Each focus group was 90 min in length. Participants' contact information was stored in a secure project folder until the study was complete.

Two authors independently reviewed notes from each of the focus groups and then discussed common themes that emerged across all the groups. The authors then developed a list of these themes and assigned each one a unique code to assist with the analysis. Each author then coded the notes from the focus groups independently. The authors used a spreadsheet to record the coded themes. Next, the two authors discussed and resolved any discrepancies in their spreadsheets. A third author then reviewed the results and found overlap. The third author also proposed four overarching categories to consolidate the original codes and aligned them with the topics of the moderator's guide. Results are reported according to the four overarching categories. The goal of the research was to produce actionable findings. To this end, the authors designed the categories using a format aimed at informing school-based concussion efforts, including the development of protocols and educational tools for school professionals. No software was used in the analysis. The four overarching themes are:

1. Challenges with identifying concussion
2. Strategies for communicating with students
3. Barriers to implementing RTL plans
4. Establishing a collaborative school support team

The study was approved by the ICF's internal Institutional Review Board (ICF IRB FWA00000845) and the White House Office of Management and Budget (0920-0572). School professionals were offered an online \$30 Amazon gift card as compensation for their participation. The gift card was emailed to them by research staff after the focus group session.

3. Results

Fifty-eight school professionals were screened for the study, and ultimately 19 school professionals participated across the six groups. The goal of the recruitment was to screen for and recruit participants with a range of experience in the school setting, representing the four census regions of the country, and a diversity of racial/ethnic backgrounds. A summary of the participants' demographic information can be found in Table 1. Table 2 includes examples of quotes from participants for each main theme.

4. Challenges with identifying a concussion

Across the focus groups, participants remarked on challenges related to identification of students with a concussion. These challenges centered on: (a) the need for improved knowledge and understanding of concussion signs and symptoms; and (b) the challenge of relying on students to self-report symptoms.

4.1. Need for improved knowledge and understanding of concussion signs and symptoms

School professionals, across each group, consistently agreed on the importance of understanding concussion signs and symptoms. In addition, there was emphasis on the need to ensure school professionals are aware that a student's signs and symptoms can re-emerge as the student returns to school. Participants also discussed that concussion signs and symptoms should inform the creation of short-term supports or accommodations customized to the student's needs in the classroom. School nurses and school counselors and psychologists reported that they rely on instructions from the healthcare provider to create accommodations for a child with a concussion. They noted that, while not always provided, guidance from healthcare providers often varies in the level of detail.

In all six focus groups, teachers, school nurses, and school psychologists and counselors shared a universal concern about the challenge of identifying a concussion as it is "an invisible injury" and a student may experience multiple symptoms common with other conditions. As one teacher shared, "You can't see a concussion." A school counselor similarly explained that "concussion is not a visible wound." This dynamic contributed to uncertainty across school professionals about how to watch for, recognize, and manage concussion signs and symptoms in the school setting.

4.2. Relying on students to report symptoms creates barriers to concussion management

Overall, school professionals described the positive role each play in creating and managing accommodations for students returning to school with a concussion. However, some school professionals also described a culture at their schools where the legitimacy of a student's concussion is questioned, and as a result, is not taken seriously. Participants discussed how some still struggle to see concussion as a real injury because it's difficult to see the injury itself. School professionals also reported that they often have to rely on a student's report of their injury and how they are feeling, as parents sometimes will not inform the school of their child's concussion. School nurses in particular shared that at times they needed to convince others at their school that students were not faking their injuries and symptoms. A

school nurse commented that sometimes students bring up false complaints, “crying wolf,” and teachers are less likely to believe it when they have a real injury, especially one that is hard to see.

Teachers acknowledged that believability of symptoms is a real challenge in their classrooms. One teacher shared, “It’s a difficult one because you just have to take their word for it.” Another teacher shared, “With middle schoolers you can’t tell if they don’t want to do it or have a legitimate problem.” Given this challenge of concussion believability, teachers shared that they rely on their school nurses to inform them when a student has an injury.

5. Strategies for communicating with students about concussion

School professionals reported that they generally feel comfortable bringing up concussion with their students, but they suggested strategies to enhance this communication. Teachers and nurses are most likely to discuss concussion with students. To help support communication with students, school professionals described a variety of useful strategies they use to communicate with students, such as:

5.1. Facilitating concussion discussion with students

School nurses believed that it was part of their job to convey concussion information to students prior to, and in the event of an injury. For example, school nurses discussed the importance of talking to students about following a gradual return to activity plan and how not doing so could impact their students’ recovery. However, they also described the need to make information practical for students. This may include explaining to students that spending time on their phone or computer might make them feel worse, instead of just saying they need to lessen their screen time. Teachers noted that concussion may often be off topic from the academic focus of their class, making it hard to incorporate concussion education into their class. One teacher explained it this way: “It’s hard for me to jump from Shakespeare to concussions.” Teachers also noted that students need to understand that concussion is not only a sports injury and that it can happen in other ways.

5.2. Emphasizing potential long-term consequences of a concussion may help students take it more seriously

School nurses shared a belief that delivering and reinforcing consistent messages about concussion safety and recovery to students is essential. They wanted students to understand the long-term benefits of taking time to recover and to encourage them to follow-through on the steps needed for recovery. One school nurse put it this way: “Kids don’t see past Saturday’s dance.” Teachers similarly discussed the importance of speaking with students about potential long-term consequences of concussion. Teachers felt that students should learn about the potential long-term consequences of concussion, and the benefits of rest. One teacher offered that “kids need to have a sense of value for their bodies. If something is hurting you, something’s not right, don’t keep it to yourself—let it be known.” They suggested frequent check-ins with students during the school day while students are recovering from concussion. School psychologists and counselors also believed that students

needed to hear from them about the risks of a subsequent injury while they are still in recovery, the importance of patience as they gradually recover, and reminders about taking breaks as needed since not doing so may worsen their symptoms.

5.3. Reinforcing with students how accommodations can help them feel better faster

Some school professionals described how students struggle to appreciate the potential long-term health effects of concussion, which can often cause them to refrain from using prescribed accommodations. Several school psychologists and counselors shared that at times, students are in denial of their injury and do not want to accept accommodations. They suggested that students worry that the accommodations imply that the student has a weakness. To counter this attitude, they suggested reframing the accommodations in a positive way, presenting them as a skill-building approach to help students succeed and get better faster. They also noted that students respond well to role models who could share personal concussion experiences. School psychologists and counselors suggested giving students helpful analogies about what their brain is going through. One school psychologist shared, “It’s your brain, and your brain is used to doing everything. It’s difficult to give your brain a break.”

6. Barriers to implementing return to learn plans

School professionals described experiencing three potential barriers to implementing accommodations for students with concussion in the class-room. The first challenge is identifying appropriate accommodations that address specific concussion signs and symptoms. The second challenge, which was most evident among teachers, is managing the implementation of those individualized accommodations in the classroom. The third is the potential for limited communication among parents and schools professionals—who are all involved in RTL planning.

6.1. Identifying appropriate accommodations

Overall, school professionals use information from healthcare providers to inform the accommodations they put in place for students returning to school after a concussion. This information also helps teachers customize their lesson planning and plan specific supports for the student as needed in the classroom. However, school professionals reported variation in the amount of information given, as well as inconsistencies in the information. In addition, school professionals at times need to rely solely on the parent or student’s report of the injury. This may lead to school professionals not receiving a full account of the injury and the student’s symptoms, as well as limited information regarding other co-morbid conditions that may affect a student’s recovery. Further, it requires school professionals to plan supports for the student’s RTL without any collaboration or input from the healthcare provider on management of symptoms and recovery.

6.2. Implementing accommodations

In addition to challenges with identifying appropriate accommodations for students with concussion, school professionals acknowledged that implementing these accommodations can be even harder. School nurses discussed that students have a difficult time taking rest

breaks during the school day, either because they do not want to fall behind or they do not see a need to take a break. They described the challenges teachers face to shorten and individualize lesson plans to minimize the workload for students recovering from concussion. Teachers agreed that supporting students with RTL entails reducing pressure on the students since “thinking is taxing.” One teacher explained: “As much as you hate the time kids miss in class, it’s really important for them not to have that added stress.” School psychologists and counselors offered that teachers would benefit from receiving educational materials that are concise, actionable, and easy to read with suggestions about how to implement accommodations in the classroom. For example, school psychologists and counselors described that teachers face particular challenges with reducing screen time for students because so much school work currently uses technology.

Teachers across focus groups reported experience accommodating students returning to school after a concussion. Several teachers shared that there is no standard process for implementing classroom accommodations and that this type of information, particularly written guidelines and action steps for teachers, would be useful. In addition, teachers expressed the need for specific guidance on how to support their students with concussion and maintain communication with parents, school nurses, and school psychologists on the student’s progress. As one school nurse explained, “Teachers are inundated with emails and information.” Without this guidance, managing RTL in the classroom is very challenging, especially with teachers’ busy schedules.

6.3. Communication with parents

School professionals, most commonly school nurses, described the importance of communicating with parents about concussion. To facilitate these discussions, school professionals reported the need to use a variety of information formats to reach parents with messages about their child, such as using both printed handouts and emails. Some teachers shared that they often do not hear from parents that a child has had a concussion. Instead, they said they are most likely to hear about a student’s injury from the school nurse or the student themselves.

Some school professionals described challenges communicating with parents about concussion. In particular, these school professionals believed that communication with parents is difficult because parents may be reluctant to accept that their child needs to take time away from usual activities (particularly sports) in order to recover.

7. Establishing a collaborative school support team

Consistently, across all groups, school professionals articulated the importance of having a school-based team that supports students and ensures students receive proper care throughout concussion recovery. In each group, participants described their respective contributions to the school support team. School nurses described themselves as “concussion advocates and educators” for other school staff. They also reported feeling a responsibility to cultivate understanding and a responsibility to convey the legitimacy of a student’s concussion. School nurses described that it would be useful for healthcare providers to provide information to school professionals about concussion, particularly guidance about

RTL and specific accommodations based on students' needs. They suggested that healthcare providers can support their work by using a standard form that school nurses can use to advise teachers regarding classroom accommodations for students, based on students' symptoms. School nurses also shared that it would be useful to have additional information about the return to play process so that they can communicate with the students' support team about this aspect of their recovery as needed.

School psychologists and counselors described their primary role in the school-based team as educators, communicating with students and teachers about concussion and what to expect when a student is recovering from a concussion. They emphasized the importance of partnering with teachers to support them with implementing classroom accommodations. Most importantly, school psychologists and counselors felt that the school-based team needed to coordinate and deliver consistent messages to students and their parents. Some school psychologists and counselors added that their role on the school support team was also to ensure that students' emotional needs were met. They described the school support team as a system that has ongoing communication to help students until they fully recover. One participant described the responsibility as, "keeping students on top of their work and helping them be a student."

Teachers described that their responsibilities on the team are to modify students' school work to support their recovery. Teachers also portrayed their role as reactive, not preventive, when it comes to concussion. Teachers depend on their school nurses for guidance about how to appropriately manage concussions in the classroom.

8. Discussion

Our study found that the school professionals who participated in the focus groups are engaged and knowledgeable about concussion and understand the importance of helping their student recover. Yet, identifying concussions in students was documented as a challenge in this study. In all six focus groups, school professionals discussed how the invisibility of concussion makes it challenging for some to believe the injury is legitimate among their students. Halstead et al. (2013) also discussed this barrier and described the difficulty for some school professionals to recognize the need for adjustments for students with concussion (Halstead et al., 2013; Rose, McNally, & Heyer, 2015; Gioia, Glang, Hooper, & Eagan, 2016). These findings suggest there is potential to improve school professionals' knowledge of the concussion signs and symptoms to address these potential barriers.

The results of this study also show that school nurses can be critical in supporting individual students with concussion. Consistent with these findings, others studies have also reported that school nurses are looked to, to lend credibility to the existence of the student's injury and for educating other school professionals about concussion (McNeal & Selekmen, 2017). However, not all schools have access to a full-time school nurse. According to the National Association of School Nurses, less than half of schools in the United States (39.3%) employ a full-time school nurse and a quarter (25.2%) of schools do not employ a school nurse in any capacity. Schools with low-income and disadvantaged students are more likely to be

affected, with some areas having only one school nurse for every 4000 students (National Association of School Nurses, 2017). Given the integral role school nurses can play in concussion education, identification, and management, limited access to school nurses may effect implementation of concussion efforts in schools.

A consistent theme expressed by participants was their reliance on guidance from a student's healthcare provider(s). A previous study concluded that when the discharge instructions or information provided to a school from the child's healthcare provider about the concussion is vague or inconsistent, school professionals are put at a disadvantage for communicating needed accommodations and creating a customized RTL plan (Wing, Amanullah, Jacobs, Clark, & Merritt, 2016). Other studies have also recommended close collaboration between a student's healthcare provider and school professionals (Weber, Welch, Parsons, & Valovich McLeod, 2015). A study by Zuckerbraun, Atabaki, Collins, Thomas, & Gioia, (2014), demonstrated this importance through an evaluation of the use of standardized discharge instructions, including a letter for healthcare providers to provide to their patient's school, in an emergency department setting. Use of these standardized discharge instructions, titled Acute Concussion Evaluation tools, resulted in improved reported follow-up with primary care or concussion specialists and adherence to concussion management recommendations (Centers for Disease Control and Prevention, 2006; Zuckerbraun et al., 2014). The letter for schools also significantly increased the students' likelihood of receiving school-based accommodations during their recovery (Zuckerbraun et al., 2014).

However, despite the reported benefits of discharge instructions, as many as a third of young patients do not receive clear discharge instructions after going to an emergency department with concussion symptoms (De Maio, Joseph, Tibbo-Valeriotte, et al., 2014; Upchurch, Morgan, Umfress, Yang, & Riederer, 2014). When discharge instructions are provided, healthcare providers often give instructions on return to play but not on RTL (De Maio et al., 2014; Upchurch et al., 2014). Similarly, a survey of healthcare providers and review of electronic medical records of children treated for concussion found that only 62% of electronic medical records included recommendations that mentioned cognitive rest (Arbogast et al., 2013). This indicates a need to better disseminate written information from healthcare providers about RTL to school professionals, as well as better awareness and integration of RTL planning into healthcare provider's concussion care practices.

Importantly, across groups, school professionals were willing and motivated to improve students' experiences as they RTL. Previous research suggests that there are opportunities to bring together and leverage the school support team to improve RTL for young people (Arbogast et al., 2013). Similar studies also conclude that teachers, school psychologists and counselors, the school nurse, and parents should be involved in fostering a collaborative environment to support students' recovery (Hossler et al., 2014; Sady et al., 2011). The school support team's coordination and communication is essential to caring for a student who is recovering from a concussion as they RTL (Sady et al., 2011). In our study, we also found that school nurses, school psychologists and counselors, and teachers want to contribute to their schools' support teams and felt they each have a unique role within the team.

This study is subject to several limitations. First, this study population was not large or diverse enough to allow the findings to be generalizable to the larger population of school professionals. Ideally, a larger group of school professionals across a broad range of distinct demographics would have been engaged for this study, but further research could pursue this and analyze differences in concussion perception and care between demographic groups. Focus group participants were also predominantly female. The study aimed to recruit a balance of male and female participants, but due to challenges with recruitment, we were unable to achieve this balance in our sample. This study also did not explore variations among school professionals who work in middle versus high schools. For example, the groups did not include coaches, who are also commonly teachers or other school professionals as well, in the middle and high school setting. There may be differences of opinion or experiences among school professionals at middle and high schools, and future studies could explore this topic. Finally, participants who agreed to take part in the study may be more motivated or knowledgeable talking about concussion relative to other school professionals. Consequently, this study may not represent schools with less motivated or knowledgeable school professionals or schools in which these types of professional are not present at all.

9. Conclusion

Despite the study participants' strong beliefs about the importance of concussion and improving RTL for students, it is apparent that there are challenges that interfere with these school professionals' ability to support students in this way. Many school professionals in this study reported a lack of guidance to help them implement and monitor a student's accommodations in a coordinated way, and expressed a desire for resources, specifically from a student's healthcare provider. Further research is needed to identify strategies to address these challenges and better support school professionals, in a variety of geographic settings, to ensure optimal recovery for students with concussion.

10. Practical applications

Concussion symptoms can affect how a student thinks, acts, learns, and feels. This can present challenges and notable implications for progress in school (Arbogast et al. 2013). School professionals play an essential role in addressing these challenges and supporting students returning to school after a concussion. This study provides a deeper understanding of school professionals' experiences and recommendations for addressing concussion in school settings. These insights offer important context for overcoming the barriers that school professionals face in their daily work with students returning to school after a concussion.

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Table 1

Participant demographics.

Focus group	Number screened	Number of participants	Gender	Census region	Race/ethnicity
School psychologists and counselors 1	14	4	2 female, 2 male	1 Northeast, 1 Midwest, 2 South	3 White, non-Hispanic, 1 Black or African-American, non-Hispanic
School psychologists and counselors 2	12	4	4 female	2 Midwest, 2 South	2 White, non-Hispanic, 2 Black or African-American, non-Hispanic
School nurses 1	7	3	3 female	2 Midwest, 1 South	3 White, non-Hispanic
School nurses 2	8	2	2 female	1 Northeast, 1 West	2 White, non-Hispanic
Teachers 1	4	3	3 female	1 Northeast, 1 South, 1 West	1 Black or African-American, non-Hispanic, 1 Hispanic, 1 White, non-Hispanic
Teachers 2	8	3	3 female	2 Midwest, 1 West	2 Black or African-American, non-Hispanic, 1 Hispanic

Table 2

Themes and participants' quotes.

Challenges with identifying a concussion	Strategies for communicating with students about concussion	Barriers to implementing return to learn plans	Establishing a collaborative school support team
<p>"Concussion is not a visible wound." "It's a difficult one because you just have to take their word for it."</p>	<p>It's hard for me to jump from Shakespeare to concussions." "Kids don't see past Saturday's dance." "It's your brain, and your brain is used to doing everything. It's difficult to give your brain a break."</p>	<p>"Teachers are left on their own to figure things out." "As much as you hate the time kids miss in class, it's really important for them not to have that added stress."</p>	<p>"...Keeping students on top of their work and helping them be a student."</p>