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Abstract

In March 2014, the Ontario Ministry of Education was the first ministry in Canada to institute a formal concussion policy. The ministry stipulates that student long-term health and safety are essential preconditions for learning, and that concussions can negatively impact cognitive, physical, emotional, and social development. Policy/Program Memorandum (PPM) No. 158 requires all school boards and school authorities to establish a policy on concussions. Each school board in Ontario developed a concussion policy within their local context to address concussion awareness, prevention, identification, management, and training. School boards, administrators, teachers, staff, students, parents/guardians, volunteers, and community-based organizations were encouraged to participate in policy development as stated in PPM No. 158.

The purpose of this study was to understand how school boards in Ontario interpreted PPM No. 158 in the development and implementation of board concussion policies and administrative procedures. An interpretive policy analysis founded on Gadamer’s philosophical hermeneutics was conducted on publicly available concussion policy documents and related administrative procedures from 64 Ontario school boards and school authorities. Semi-structured interviews were conducted with four school board administrators to further contextualize this analysis.

School boards in Ontario relied on partnerships across the domains of education, health, and safety in order to fulfill the requirements of PPM No. 158. Within each domain, collaboration between students, parents/guardians, teachers, administrators, coaches, and health care providers was essential for the development and implementation of school board concussion policies. Multiple stakeholder groups frequently share responsibility for student education, health, and safety. Effective collaborative partnerships require strong communication and a shared understanding of concussion prevention, identification, and management strategies. As a result of PPM No. 158, teachers and school administrators have increasingly taken on a leadership role in this regard.
Keywords

Concussion, Interpretive Policy Analysis, School Board Policy, Gadamer, Partnership, Education, Health, Safety, Ontario
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This research is also the result of the tireless efforts of my Research Assistant, Leila. Thank you for your hours of hard work. I can’t wait to see how your own research journey unfolds. I would also like to thank the other members of our research lab. Your work is inspiring and will truly improve the health and well-being of the populations with which you work.

I would also like to acknowledge the school board administrators who participated in this study. Thank you for sharing your decades of knowledge and experience in the teaching profession with me. While our time together was brief, our conversations have shaped the way I think about my role as a teacher within the broader school community.

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Chapter 1

“Science takes time, but games are played tomorrow.”

—Ken Dryden

1

1 Introduction

There are approximately two million students enrolled in the publicly funded education system in Ontario (Ministry of Education, 2018). During a typical school day, students in Ontario participate in a wide range of physical activities including Health and Physical Education class, recess, intramural and interschool sport, and periods of Daily Physical Activity. Despite the use of required safety equipment, appropriate training techniques, and adequate supervision; there is always a risk of injury with any physical activity, including risk of concussion. Keeping students safe is the shared responsibility of parents/guardians, teachers, school administrators, and coaches who are involved with students on a regular basis. In recent years there has been an increase in focus on concussion in people of all ages and all levels of competition. Currently, researchers are hastening their efforts to better understand the science of concussion from cell to society…but games are played tomorrow. Congruent with the words of Ken Dryden in the epigraph at the beginning of this thesis, it takes time to conduct research on the biological, psychological, and sociological aspects of concussion and to determine the efficacy (if any) of potential biomedical and sociological interventions. Further, once a preponderance of evidence is amassed to suggest which interventions may be effective in addressing these issues, it often takes additional time to enact these interventions on a large scale. Essentially, science takes time, as do policy and legislative processes.

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Compared with the United States, Canada has been slow to enact policies and legislation to address the issue of concussion in public education and youth sport. After a series of false starts and pieces of legislation falling through the cracks of legislative assembly floors, Ontario was the first province in Canada to enact youth concussion policy and legislation. These changes in public education and youth sport are relatively recent as they occurred during the four years of my doctoral program. The research presented in this thesis is an analysis of the early days of school board concussion policy development and implementation in Ontario. As games are played tomorrow, there is still much research to be done.

1.1 Statement of the Problem

Concussion is a form of traumatic brain injury (TBI) caused by biomechanical forces to the head or body that results in an impairment of neurological function (McCrory et al., 2017). Approximately 4 million children worldwide present to emergency departments with concussion annually (Davis et al., 2017). Between 2003 and 2013, 176,685 children visited Ontario emergency departments and physician offices for suspected concussions (Zemek et al., 2017). This represents a 4.4-fold increase between 2003 and 2013, with 35,000 concussion-related visits reported in 2013 alone. Although concussions are a complex multifaceted injury, the most common signs and symptoms involve headache, nausea, dizziness, anxiety, and difficulty concentrating (McCrory et al., 2017), all of which are symptoms that are potentially implicated in academic performance.

To address this growing issue, the Ontario Ministry of Education instituted a formal concussion policy in March 2014, Policy/Program Memorandum (PPM) No. 158: School Board Policies on Concussion, and called for the involvement of all members of the school community to address concussion in students. This interdisciplinary approach requires the collaboration of students, parents/guardians, teachers, principals, coaches, and health care providers in supporting students in their return to school. Concussion policy in Ontario schools is situated within the greater context of education policy in the province. The Ontario Ministry of Education recognizes that student long-term health and safety are essential preconditions for learning and that concussions can negatively impact cognitive, physical, emotional, and social development (Ministry of Education, 2014a).
This memorandum applies to all publicly funded elementary and secondary schools in the province (i.e., it does not apply to private schools or licensed child-care providers). PPM No. 158 requires all school boards in the province to establish a policy on concussions that addresses issues of awareness, prevention, identification, management, and staff training using the annually updated Ontario Physical Education Safety Guidelines Concussion Protocol developed by the Ontario Physical Health and Education Association (Ophea) as a minimum standard (referred to as 'Ophea Concussion Protocol' throughout this document, Ophea, 2017). This method of education policy development and implementation is consistent with Ontario’s long history of balancing centralization of authority under the direction of a provincial Ministry, with the needs of local school boards to serve the communities within their boundaries (Allison, 1991; Wotherspoon, 2014). In accordance with paragraph 27.1 of subsection 8(1) of the Education Act, school boards are required to report to the Ministry of Education upon implementation of board policies to ensure full compliance with the memorandum. All school boards in Ontario were required to have their concussion policy fully implemented no later than January 30, 2015. However, it is unknown how school boards involved different stakeholder groups mentioned above in the creation of their concussion policy or how these groups collaborated to ensure policy implementation.

As the implementation of PPM No. 158 is in its early years, few studies reporting its impact have been published. A recent cross-sectional survey of 39 high school principals working in the Toronto District School Board reported that 92% of schools had return to play protocols in place after PPM No. 158 was implemented (Hachem, Kourtis, Mylabathula, & Tator, 2016). Importantly, only 77% of schools had return to learn protocols in place and only 43.6% of schools delivered concussion education to parents. In a qualitative study exploring concussion knowledge, skills, and attitudes of Ontario elementary school teachers (Jorgensen, 2016), some teacher participants shared their experiences of students returning to the classroom while still symptomatic. In the opinion of these teachers, students may have benefited from more time at home; however, these teachers also expressed empathy regarding the parent or guardian’s inability to stay home from work for extended periods, in order to take care of their child. Similarly, an independent qualitative study examining teacher perspectives on concussion reported
parent/guardian support as a barrier to facilitating successful student return to Ontario classrooms after experiencing a concussion (Bach, 2015). Some participants in this study indicated that students were being sent to school too soon, which may have delayed their overall recovery. Further, balancing the individual needs of a student requiring limited distractions and noise may be challenging for some teachers who implement various collaborative learning strategies in their classroom (Jorgensen, 2016).

1.2 Purpose of the Study

The purpose of this study is to understand how school boards in Ontario interpreted PPM No. 158 in the development of board concussion policies and administrative procedures. Given that PPM No. 158 establishes the Ophea Concussion Protocol (Ophea, 2017) as the minimum standard for school board policies, it is reasonable to expect that concussion policies across the province are similar. However, population demographics, geographic characteristics, and availability of collaborative partnerships (e.g., with medical, academic, or athletic institutions) vary amongst school boards. These factors may influence how school boards in Ontario interpret PPM No. 158 when creating their own concussion policy.

1.3 Research Question

This research addressed the question: How did school boards in Ontario interpret PPM No. 158 in the development and implementation of board concussion policies and administrative procedures? To gain an understanding of the development and implementation process school boards underwent to meet the requirements of PPM No. 158, a hermeneutic interpretive policy analysis was conducted. This methodology presupposes multiple, intersubjective realities of situated knowers; both the positionality of the researcher and the researched. English-language Ontario school board concussion policy documents and administrative procedures available online to the general public were analyzed. To further contextualize these policy documents and administrative procedures, interviews were conducted with school board administrators involved in the development and implementation of board concussion policies and administrative procedures.
1.4 Significance of the Study

The retrospective descriptive nature of this study design aims to move beyond an analysis of concussion policy content to capture the contextual elements influencing how different school boards across the province interpreted PPM No. 158. Health and education policy often serve as social artifacts that represent the values, beliefs, and agendas of stakeholders involved with an issue and rarely exist in a vacuum. As Ontario was the first province in Canada to have both a Ministry policy on concussion and concussion legislation, the findings of this study are significant for other jurisdictions as they develop their own concussion policies.

1.5 Plan of Presentation

This dissertation is presented in monograph format. Chapter Two presents an overview of concussion identification, treatment, and management, as well as the various aspects of concussion policy and legislation relevant to youth concussion in North America. Various concussion guidelines are summarized, as are the roles multiple stakeholder groups have in youth concussion awareness, prevention, identification, management, and treatment.

Chapter Three describes the methodological underpinnings of this research study and the methods used therein. An interpretive policy analysis founded on Gadamer’s (1960/1998) philosophical hermeneutics is explicated. The implications of this philosophical stance on the research design of this policy analysis are discussed, as are the implications for the role of the researcher in creating meaning and generating knowledge claims within an interpretivist paradigm. A methodologically coherent, iterative, research design is explained, with methods of data generation, thematic analysis, quality criteria, and ethical considerations identified.

Chapter Four presents the findings from this interpretive policy analysis of school board concussion policies in Ontario. How school boards in Ontario relied on partnerships across the domains of education, health, and safety in order to fulfill the requirements of PPM No. 158 is explored.
Chapter Five presents a discussion of the findings of the present study in relation to other studies conducted on the implementation of PPM No. 158 in Ontario schools. Findings are also discussed in relation to the broader peer-reviewed literature, tempered by my experience as an Ontario Certified Teacher. Implications of these findings for research, policy, and the teaching profession are discussed, as are recommendations for future research, policy initiatives, and the professional practice of teachers. Finally, the limitations of this study are considered and conclusions are discussed.
Chapter 2

2 Literature Review

This chapter presents an overview of concussion identification, treatment, and management, as well as the various aspects of concussion policy and legislation relevant to youth concussion in North America. Various concussion guidelines are summarized, as are the roles multiple stakeholder groups have in youth concussion awareness, prevention, identification, management, and treatment.

2.1 Concussion as a Subset of Traumatic Brain Injury

TBI has been called “the most complicated disease of the most complex organ of the body” (Marklund & Hillered, 2011) as there remains no objective means for diagnosis, symptom presentation and duration are heterogeneous in patient populations, and evidence in support of effective treatment is limited and emerging (Kenzie et al., 2017). According to the Berlin consensus statement established at the 5th International Conference on Concussion in Sport held in Berlin, Germany by the Concussion in Sport Group, concussion is a subset of TBI caused by biomechanical forces to the head or body that result in short-lived impairment of neurological function (McCrory et al., 2017). The fifth iteration of the consensus statement is newly conceptualized within the 11 Rs: recognize, remove, re-evaluate, rest, rehabilitation, refer, recover, return to sport, reconsider, residual effects, and risk reduction. Multiple stakeholder groups with specific areas of expertise such as medical doctors, nurse practitioners, and physical therapists are involved during different phases of concussion identification, management, and prevention. While scientific evidence for the objective diagnosis and management of concussion emerges, the Berlin consensus statement on concussion in sport “remains the most likely gold standard for care of those who suffer from sport related concussion” (Pusateri, Hockenberry, & McGrew, 2018, p. 30).

A recent population-based survey of Canadian community health reported that in 2014, approximately 1 in 200 Canadians over the age of 12 reported concussion or other brain
injury as their most significant injury associated with disability in the previous year (Gordon & Kuhle, 2018). In 2009 alone, researchers estimate there were more than 133,000 visits to Ontario emergency departments as a result of TBI (Fu, Jing, Mcfaull, & Cusimano, 2016). The associated health and economic burden of these emergency department visits is estimated to be approximately $945 million (CAD) in lifetime costs (Fu et al., 2016). A New Zealand study estimates first-year and lifetime costs per person with mild TBI to be $3395 (US) and $4636 (US), respectively (Te Ao et al., 2014). In their review of the international impact of TBI, Maas and colleagues suggest that “despite the lower treatment costs of mild TBI for individual cases, the high incidence of mild TBI results in a total treatment cost across patients of nearly 3 times that for moderate-to-severe TBI” (Maas et al., 2017, p. 1000).

The diagnosis of concussion involves assessment of a range of domains including “clinical symptoms, physical signs, cognitive impairment, neurobehavioral features, and sleep/wake disturbance” (McCrory et al., 2017, p. 3). Clinical domains include one or more of the following:

a. Symptoms: somatic (e.g., headache), cognitive (e.g., feeling as if you are in a fog) and/or emotional symptoms (e.g., lability)
b. Physical signs (e.g., loss of consciousness, amnesia, neurological deficit)
c. Balance impairment (e.g., gait unsteadiness)
d. Behavioural changes (e.g., irritability)
e. Cognitive impairment (e.g., slowed reaction times)
f. Sleep/wake disturbances (e.g., somnolence, drowsiness). (McCrory et al., 2017, p. 3)

Most individuals will recover in 10-14 days (McCrory et al., 2017); however, Davis and colleagues (2017) report that children and adolescents are more likely to take between 2-4 weeks to recover from concussion symptoms. In a systematic review of the difference in concussion management in children compared with adults, the expected duration of symptoms associated with sport-related concussion was estimated to be less than four weeks, with prolonged recovery defined as symptomatic for greater than four weeks in
2.2 Concussion Management

The aforementioned signs and symptoms of concussion are a particular challenge for children and adolescents as they attempt to return to the activities of their daily lives. The signs and symptoms related to concussion can have a particularly negative impact on a child or adolescent’s ability to pay attention, process information, and recall previously learned information while engaged in the activities associated with their primary “job”—learning (Gioia, 2016; Halstead et al., 2013; Purcell, Davis, & Gioia, 2018). Beyond learning, school is an environment that supports the physical, social, and emotional aspects of child and adolescent development. In this next section, return to learn/school and return to physical activity/sport/play are summarized. The language and changes in protocol surrounding these aspects of concussion management are briefly explored, as are the implications for policy implementation.

2.2.1 Return to learn/school.

Within the scholarly literature, returning children and adolescents to school and learning activities takes precedence over return to physical activity and sport (Gioia, 2016; Master, Gioia, Leddy, & Grady, 2012; McAvoy, Eagan-Johnson, & Halstead, 2018; McCrory et al., 2017; Purcell, 2014; Purcell et al., 2018; Ransom et al., 2015). Prior to the Berlin consensus statement, no specific return to learn protocol was recommended. However, the previous consensus statement suggested “school attendance and activities may also need to be modified to avoid provocation of symptoms” and that “[c]hildren should not
return to sport until clinically completely symptom-free, which may require a longer time than for adults” (McCrory et al., 2013, p. 255). The Berlin consensus statement now includes a graduated return to school strategy that begins with daily activities at home that do not provoke symptoms, progressing to school activities (e.g., reading, homework) outside of the classroom, then a return to school part-time, and then finally return to school full time (McCrory et al., 2017). Further new additions include:

Schools are encouraged to have an SRC [sport-related concussion] policy that includes education on SRC prevention and management for teachers, staff, students, and parents and should offer appropriate academic accommodation and support to students recovering from SRC. Students should have regular medical follow-up after an SRC to monitor recovery and help with return to school, and students may require temporary absence from school after injury. Children and adolescents should not return to sport until they have successfully returned to school. However, early introduction of symptom-limited physical activity is appropriate. (McCrory et al., 2017, p. 7)

These more prescriptive guidelines provide direction for school boards tasked with developing and implementing concussion policies that support students through their recovery. The use of return to “school” as opposed to “learn” is also a meaningful update as it reflects a change in focus from a graduated return to cognitive tasks associated with learning, to the broader spectrum of tasks associated with gradually returning students to the school environment, with considerations made for physical, social, and emotional development as well. Any stakeholder group using the most recent iteration of the consensus statement may find themselves out of step with organizational policies and procedures that were developed using the previous version.

2.2.2 Return to physical activity/sport/play.

The Berlin consensus statement continues to stipulate a 6 stage graduated return to sport protocol; however, what was previously the first stage (“no activity/symptom limited physical and cognitive rest”) is now “symptom-limited activity/daily activities that do not provoke symptoms” beginning after a period of 24-48 hours of both relative physical and
cognitive rest (McCrory et al., 2017, p. 3). This change in the role of physical and cognitive rest reflects emerging evidence that either too much or too little activity when recovering from a concussion can be equally detrimental to individuals. As concussion is a clinical diagnosis, regular follow-up with a licensed health care provider is essential for protecting the health and well-being of athletes prior to full return to sport. The most recent changes to the graduated return to sport strategy also include the use of “sport” instead of “play.” As indicated in the section on concussion guidelines below, some organizations refer to this process as “return to physical activity.” For the purposes of this research, these terms will be used synonymously with the assumption that there is a risk of concussion associated with many of the normal daily activities in a child or adolescent’s life. In order to address these pervasive risks and the pressing public health concern, jurisdictions in North America have begun to pass legislation and enact policies that regulate the roles and responsibilities stakeholders from various domains have in the prevention and management of child and adolescent concussion.

2.3 Concussion Policy and Legislation

2.3.1 Concussion legislation in America.

In 2009, Washington became the first state in the United States of America to pass concussion legislation. What would become a template for all 50 states and the District of Columbia, the Zachary Lystedt Law was named after Zachary Lystedt, an adolescent football player who was permanently disabled from second impact syndrome after returning to play following an earlier concussion (Lowrey & Morain, 2014). Most state concussion laws contain three elements: pre-season concussion education for coaches, parents, and students; immediate removal from play if a concussion is suspected; and mandatory medical clearance prior to return to activity (Cook, King, & Polikandriotis, 2014; Lowrey & Morain, 2014). Bompadre and colleagues (2014) investigated the impact of the Zachary Lystedt Law on injury and concussion documentation in Seattle, Washington public high schools. Researchers compared the documented concussions of high school athletic teams across multiple sports in the school years before and after the law was enacted. These researchers found the total number of documented concussions
across sports more than doubled, with 48 concussions in the 2008-2009 school year compared to 114 concussions in 2009-2010 (includes male and female high school athletic programs). Whereas among a group of elite female soccer plays aged 12 to 15 years old in the Puget Sound region of Washington State, researchers found that despite legislation, 59.3% of players continued to play with symptoms and only 44.1% of concussed players were evaluated by a health care provider (O’Kane, Levy, Neradilek, Polissar, & Schiff, 2014). However, among those evaluated by a health care professional, players were 2.1-fold (95% CI, 1.0–10.1) more likely to receive a concussion diagnosis after the law was passed. In Wisconsin, researchers investigated sport-related concussion reporting and state legislative effects from 1999 to 2013. These researchers reported that the rate of concussion in high school and collegiate athletes did not differ from pre-legislation levels (16.6% vs. 15.3%, $p = 0.558$) but that athletes were significantly more likely to report their concussions after legislation was passed (70.6% vs. 47.3%, $p = 0.011$) (LaRoche, Nelson, Connelly, Walter, & McCrea, 2016). These findings suggest that incidence of concussion may not increase after legislation, but athlete reporting and health care provider diagnostic practices may be altered as greater attention is paid to concussion. To investigate this, Gibson, Herring, Kutcher, and Broglio (2015) explored health care utilization trends in states before and after the passage of concussion legislation. They conducted a retrospective statistical analysis of health care utilization rates of commercially insured children age 12-18 from all 50 states and the District of Columbia between 2006 and 2012. States that did not yet have a concussion law in effect during this period were still included in the analysis to compare overall health care utilization trends. Gibson and colleagues (2015) reported that between the 2008-2009 and the 2011-2012 school years, states with enacted legislation experienced a 92% increase in concussion-related health care utilization (as measured by insurance claims), while states without concussion laws in place during the same time period saw a 75% increase in concussion-related care utilization. They concluded that concussion legislation has had a seemingly positive effect on health care utilization, but the overall increase may be partially attributed to increased injury awareness. It is also worth noting that these study periods resemble those within a recently published study of pediatric concussion visits to emergency departments and physician offices in Ontario, reporting a 4.4-fold increase in
pediatric concussions from 2003 to 2013 prior to the enactment of youth concussion policy or legislation (Zemek et al., 2017).

The majority of current laws in America target athletes participating in public school athletic programs following the Zachary Lystedt Law model. While concussion education and prevention strategies are important, supporting students as they return to their primary occupation of learning should also be a priority (Purcell, Harvey, & Seabrook, 2016). In a review of concussion laws in all 50 states and the District of Columbia, Lowrey and Morain (2014) found a paucity of concussion legislation regulating student return to school after concussion. A more recent review of state concussion laws reports that 12 states have specific return to learn laws (Potteiger, Potteiger, Pitney, & Wright, 2018). These authors argue that significant variance exists between laws and not all children and adolescents are protected equally. Others conclude that this area of concussion legislation is vague and requires guidelines based on evidence-based practices (Thompson et al., 2016).

Contrary to this position, Halstead, McAvoy, and Brown (2016) argue “advocating for additional state legislation for return to learn is a potentially unnecessary exercise as educational support frameworks currently exist to aid students with medical disabilities who rise to the level of more intensive intervention” (pp. 1-2). Most concussions will resolve within a month and these students require the application of fast, flexible, and temporary accommodations to suit individualized needs (McAvoy et al., 2018). Zirkel (2016) conducted a review of American case law decisions specific to student eligibility claims for learning accommodations upon return to school after a concussion within existing support frameworks to aid students with more complex needs for intervention. Plaintiffs (typically parents or guardians) made claims on behalf of their minor children under Section 504 of the Rehabilitation Act, Americans with Disabilities Act, or the Individuals with Disabilities Education Act asserting that their child was denied access to neuropsychological testing (mandated as per the Child Find identification clause of the Individuals with Disabilities Act), appropriate educational accommodations, or additional resources required for activities of daily living such as learning. Zirkel (2016) found that most of these decisions were in favor of school districts because plaintiffs in these cases...
failed to exhaust “the available administrative mechanisms of the impartial hearing under the *Individuals with Disabilities Education Act* before proceeding to court” (p. 9) or failed to file appropriate documents within the statute of limitations. It is suggested that premature formal academic accommodations for students returning to school after concussion may actually experience a delay in supports due to the length of time required to put these formal supports in place (McAvoy et al., 2018). As concussion best-practice necessitates a clinical diagnosis, it is recommended that

> Pediatricians need to be better equipped to understand the process of school culture and should encourage the school to implement academic supports quickly and fluidly, with input from the pediatrician regarding the medical diagnosis and related symptom presentation. Because a concussion is not an outwardly visible injury, on-going communication between student and teacher is essential.

(Halstead et al., 2016, p. 2)

### 2.3.2 Concussion policy in Ontario.

On March 19, 2014, the Ontario Ministry of Education issued PPM No. 158 (Figure 1) requiring all school boards in the province to establish a board policy on concussions (Ministry of Education, 2014a). This memorandum applies to all publicly funded elementary and secondary schools in the province and does not apply to private schools or licensed child-care providers. Each school board is tasked with developing their own concussion policy that serves the needs of school community members while adhering to a Ministry established minimum standard of practice. This method of education policy development and implementation is consistent with Ontario’s long history of balancing centralization of authority under the direction of a provincial Ministry, with the needs of local school boards to serve the communities within their boundaries (Allison, 1991; Wotherspoon, 2014).

PPM No. 158 (Ministry of Education, 2014a) specifies only a medical doctor or nurse practitioner can make a concussion diagnosis. All boards were required to develop a concussion policy that addresses issues of awareness, prevention, identification, management, and staff training using the Ophea Concussion Protocol as a minimum
standard (discussed below). School boards were “encouraged to consult with school staff, students, parents, teacher federations, education staff unions, and other education partners as appropriate” when developing their policy (Ministry of Education, 2014a, p. 3). In accordance with paragraph 27.1 of subsection 8(1) of the Education Act, school boards were required to report to the Ministry of Education upon implementation of board policies to ensure full compliance with the memorandum. All school boards in Ontario were required to have their policy fully implemented no later than January 30, 2015 (Figure 1).

2.3.3 Concussion legislation in Ontario.

On June 9, 2016, Ontario was the first province in Canada to successfully pass concussion legislation (Figure 1). Named after Rowan Stringer, a 17-year-old rugby player who died after experiencing multiple concussions in close succession, Bill 149, Rowan’s Law Advisory Committee Act, 2016 called for the assembly of a 15 member advisory committee. This committee was composed of persons nominated by the Ministers of Children and Youth Services, Education, Health and Long Term Care, Training, Colleges, and Universities, and Tourism, Culture, and Sport with the purpose of reviewing the verdict of the Coroner’s jury inquest into the death of Rowan Stringer. This collaboration across multiple Ministries also reviewed legislation, policies, and best practices from other jurisdictions in an effort to make recommendations that would increase concussion awareness and prevention initiatives in Ontario. Rowan’s Law Advisory Committee submitted their final report to the Minister of Tourism, Culture, and Sport in September 2017 (Figure 1). Bill 39, Education Amendment Act (Concussions), 2012 preceded this legislation and was introduced in the Ontario Legislative Assembly on March 6, 2012 (Figure 1). This bill failed to get a second reading when the parliamentary session prorogued. The second attempt at provincial legislation, Rowan’s Law Advisory Committee Act, 2016, was a temporary first step in the development of a permanent piece of legislation as it was repealed on December 9, 2017.
Figure 1: Timeline of key events in Ontario concussion policy and legislation.
The verdict of the Coroner’s jury inquest into the death of Rowan Stringer was issued on June 3, 2015 (Figure 1) and included 49 recommendations made by jury members (Ontario Office of the Chief Coroner, 2015). Recommendations for increased concussion awareness and prevention initiatives span multiple Ministries and organizations at both federal and provincial levels. Many recommendations mimic Washington State’s Zachary Lystedt Law model of preseason concussion education for parents/guardians and student athletes, immediate removal from play if concussion is suspected, and mandatory medical clearance prior to return to play. Recommendations were also made to extend these practices to community sport organizations and private schools not currently covered by Ministry of Education concussion policy PPM No. 158. The verdict of the Coroner’s jury inquest calls for the widespread adoption of the Concussion in Sport Group’s consensus statement on concussion as the standard of practice for identification and management. The report identifies the Canadian Institute of Health Information (including Ontario Trauma Registry), National Ambulatory Care Reporting System, Public Health Agency of Canada’s Canadian Hospitals Injury Reporting and Prevention Program, Ontario Ministry of Health and Long Term Care, Ministry of Tourism, Culture, and Sport, Ministry of Education, Ophea, and the Ontario School Boards’ Insurance Exchange as key agencies ideally positioned for the reporting and tracking of concussions to gain more accurate data regarding incidence rates and to assess intervention efficacy. The jury recommends the Royal College of Physicians and Surgeons of Canada, College of Family Physicians of Canada, Canadian Medical Association, and Ministry of Training, Colleges and Universities include mandatory course components covering the diagnosis and management of concussions in medical education training programs. The presence of a certified Athletic Therapist at school and community high-risk sport games and practices (e.g., football, rugby) is recommended to serve as an expert in concussion on-field response prior to formal diagnosis by a physician or nurse practitioner off site. Regarding return to learning protocols and inclusion of concussion education in the Ontario curriculum, jury members made no new recommendations that are not already in effect as they relate to PPM No. 158 except for the extension of such policies to include private schools and community organizations using school property.
After reviewing the 49 recommendations included in the verdict of the Coroner’s jury inquest into the death of Rowan Stringer, Rowan’s Law Advisory Committee submitted their final report to the Minister of Tourism, Culture, and Sport in September 2017. Within their report, *Creating Rowan’s Law: Report of the Rowan’s Law Advisory Committee* (2017), they recommended 21 different actions ranging from legislation, surveillance and reporting mechanisms, prevention strategies such as a player Code of Conduct in sport, detection measures such as training for coaches, information management solutions to keep relevant stakeholder informed, and concussion awareness campaigns. Additional actions such as expansion of recommendations toward a national concussion policy and the inclusion of First Nations leaders in dissemination and implementation were also recommended.

On December 14, 2017 the first reading of Bill 193, *An Act to enact Rowan’s Law (Concussion Safety), 2017* was reviewed by the Legislative Assembly of the Province of Ontario. Within months the final version of the Act received Royal Assent. In its final form, *Rowan’s Law (Concussion Safety), 2018* was passed on March 7, 2018 (Figure 1). The Act requires individuals (and their parents if under the age of 18) to confirm that they have reviewed concussion awareness resources approved by the Minister of Tourism, Culture, and Sport prior to registration with a sport organization. Coaches and other prescribed positions associated with the sport organization must also confirm they have reviewed these resources. Sport organizations must establish a Code of Conduct for players, parents, coaches, and other positions involved with the organization and these individuals must confirm that they have reviewed it. Sport organizations must establish a removal from sport and a return to sport protocol indicating immediate removal from play for suspected concussion and a gradual return to play upon recovery. Sport organizations must designate persons who are responsible for the implementation of their protocol. The Bill also amends the *Education Act* to require school boards and private schools to comply with policies and guidelines related to student concussion safety consistent with *Rowan’s Law (Concussion Safety), 2018*. This Act also establishes the last Wednesday in September as Rowan’s Law Day. At present, the mechanisms through which this Act will be regulated are being established as the public consultation period ended May 7, 2018. Regulations under consideration include: the definition of a sport
organization and levels of competition; what age groups are impacted (e.g., some collegiate athletes could be under 18 years of age during competition while the rest of their team could be over); and how interprovincial competitions and Ontario athletes representing Canadian National teams are regulated.

In review of legislation for youth sport concussion in Canada, researchers found that six concussion bills were introduced in provincial legislatures, two in Ontario, two in Nova Scotia, and one each in British Columbia and Quebec. Additionally, two bills were introduced in federal parliament before July 27, 2016 (Russell, Ellis, Bauman, & Tator, 2017). Since the end of the review period considered in this study, Ontario has successfully passed Rowan’s Law (Concussion Safety), 2018 and Manitoba has introduced a piece of legislation addressing youth concussion (however it has not moved beyond a first reading). In a review of state concussion laws in America, Potteiger and colleagues (2018) concluded that the high variation in legislation from state to state left some children and adolescents minimally protected compared with others. These findings are transferable to the current status of Canadian provincial and territorial concussion law: not all children and adolescents are equally protected. What becomes apparent is that in both the scholarly literature and in legislation, concussion awareness, prevention, identification, management, and training is a collaborative effort across multiple stakeholder groups. Moving toward a Canada-wide concussion strategy such as the one outlined in Parachute Canada’s Canadian Guideline on Concussion in Sport (2017), as discussed below, is a step toward ensuring that all Canadians are equally protected and informed with respect to concussion safety.

2.4 Concussion Guidelines

To support youth, families, educators, coaches, health care providers, and legislators in the prevention and management of concussions, numerous concussion guidelines have been developed by various Canadian agencies that are freely available to the public. In subsequent chapters, we will explore how school boards in Ontario used these concussion guidelines to develop their school board policies and implement their administrative procedures.
2.4.1 Ontario Physical and Health Education Association.

The Ophea Concussion Protocol is published annually every September. These guidelines are the result of a collaborative partnership between Ophea, Ministry of Education, ThinkFirst Concussion Education and Awareness Committee (part of Parachute Canada), and the Recognition and Awareness Working Group of the Mild Traumatic Brain Injury/Concussion Strategy. The concussion protocol is evidence-based and is designated by the Ministry of Education as the minimum standard to which school boards must adhere. Awareness, prevention, identification, management and training strategies are outlined within the concussion protocol, with specific responsibilities for students, parents/guardians, teachers, principals, administrators, coaches, and health care providers. The concussion protocol requires parents or guardians to seek evaluation by a medical doctor or nurse practitioner if their son or daughter is suspected of having a concussion. Parents or guardians are required to communicate the results of their child’s medical evaluation (positive or negative) to the school principal prior to the student returning to school. The school principal is then required by the concussion protocol to file written documentation of the medical examination in the student’s Ontario Student Record and “inform all school staff (e.g., classroom teachers, physical education teachers, intramural supervisors, coaches) and volunteers who work with the student of the diagnosis” (Ophea, 2017, p. 9). Principals are encouraged to refer to their school board protocol for sharing student information with volunteers prior to doing so. While not explicitly stated in the concussion protocol, all school boards are required to have privacy policies in place compliant with the Municipal Freedom of Information and Protection of Privacy Act regarding student educational information. Also not explicitly stated within these guidelines is how schools boards will comply with the Personal Health Information Protection Act regarding student health information.

Management procedures for a student returning to school after being diagnosed with a concussion are required to be individualized, medically supervised, graduated in trajectory, and facilitated by a collaborative team. The collaborative team is led by the school principal and includes “the concussed student, his/her parents/guardians, school staff and volunteers who work with the student, and the medical doctor or nurse
practitioner” (Ophea, 2017, p. 11). All team members are required to regularly monitor the student and maintain ongoing communication as a return to learn/return to physical activity plan is carried out in a stepwise fashion. Each step requires a minimum of 24 hours and the student cannot progress onto the next step if symptomatic (Ophea, 2017).

The first step of the concussion protocol requires the concussed student to stay at home for a minimum of 24 hours and engage in cognitive and physical rest. Cognitive rest is described in the concussion protocol to include the limiting of “reading, texting, television, computer, video/electronic games” while physical rest includes “restricting recreational/leisure and competitive physical activities” (Ophea, 2017, p. 12). When the student and parents/guardians determine that the student’s symptoms are gone or beginning to improve enough to return to school, the parents/guardians are responsible for communicating this information to the school principal. The school principal then designates a school staff lead to serve as the main point of contact for all members of the collaborative team. As described in the concussion protocol,

The designated school staff lead will monitor the student’s progress through the Return to Learn/Return to Physical Activity Plan. This may include identification of the student’s symptoms and how he/she responds to various activities in order to develop and/or modify appropriate strategies and approaches that meet the changing needs of the student. (Ophea, 2017, p. 13)

The second step is divided into two paths; one for students who are returning to school without symptoms (“Step 2b”) and one for students who are still experiencing symptoms but feel well enough to attend school with individualized classroom adjustments (“Step 2a”). The student returning to school without symptoms can begin regular learning activities, but will be monitored, against the possibility that they may become symptomatic again. Parents or guardians of students who no longer have symptoms are required to communicate this to the school principal. Students without symptoms can also begin a gradual return to activity plan where the objective is to gradually progress from light aerobic activity (“Step 2”) to full participation in contact sports (“Step 6,” if applicable). If symptoms return, the student is to return to the previous step and not
advance to the following step until they have been without concussion symptoms for 24 hours (Ophea, 2017).

Students who are still experiencing symptoms but feel well enough to attend school with individualized classroom adjustments (“Step 2a”) are monitored by the designated school staff lead and work with the collaborative team to develop appropriate learning strategies that meet their needs. The objective of this step is for the student to gradually return to their regular learning activities without exacerbating concussion symptoms. Each student is unique, as are the type, frequency, duration, and intensity of symptoms each student may experience as a result of a concussion. The concussion protocol (Ophea, 2017) provides a list of cognitive, emotional, and behavioural difficulties students may experience as a result of their concussion, the potential impact these symptoms may have on learning, and potential strategies or approaches members of the collaborative team can implement to support students as they return to the learning environment. The remaining steps are focused on return to physical activity and are based on the Concussion in Sport Group’s consensus statement summarized above.

2.4.2 Parachute Canada.

In consultation with Ophea in the development of their concussion protocol, ThinkFirst (which would later become part of Parachute Canada) has been involved with the development of Ontario school board concussion policies since PPM No. 158 was issued in March 2014. As will be explored in subsequent chapters, many of the fact sheets targeting different stakeholder groups were incorporated in school board concussion policies and procedures in Ontario. These resources highlighted the importance of gradual return to learning and return to sport, consistent with the Concussion in Sport Group’s consensus statement.

Parachute Canada recently released the Canadian Guideline on Concussion in Sport (2017). These guidelines were authored by many of the same experts who contributed to the other concussion guidelines summarized in this section and were informed by current scientific evidence. This resource also highlights the importance of gradual return to school and return to sport, consistent with the Concussion in Sport Group’s consensus
statement. Considering their early involvement with the development of Ophea’s concussion protocol, the updated return to learn strategy is notable. The current return to learn strategy as described by Ophea (2017) is comprised of 3 steps: rest at home (“Step 1”), return to school with adjustments (“Step 2a”), and return to school without adjustments (“Step 2b”). The updated return to school strategy contained in the Canadian Guideline on Concussion in Sport (2017) progresses from asymptomatic daily activities at home (“Stage 1”), school activities outside of the classroom (“Stage 2”), return to school part-time (“Stage 3”), and return to school full-time (“Stage 4”). The return to sport strategy is similar aside from the use of “sport” instead of “physical activity” and the use of “stages” instead of “steps.” The different language regarding return to learn/school and return to sport/physical activity may cause confusion among end users. The target audience of these guidelines is any stakeholder group that interacts with athletes in both school and non-school based organized sports activities. Listed stakeholder groups include athletes, parents, coaches, officials, teachers, trainers, and licensed health care providers.

2.4.3 Ontario Neurotrauma Foundation.

In 2014 the Ontario Neurotrauma Foundation released Guidelines for Diagnosing and Managing Pediatric Concussion (Zemek et al. 2014). This document was designed to meet the needs of multiple stakeholder groups. The primary target audience is health care providers and the secondary and tertiary users are parents/caregivers, schools and/or community sports organizations/centers. The development process involved consultation with multiple stakeholder groups from across Canada, collaboration with a team of experts from multiple pediatric disciplines in North America, an extensive search of the research literature, the development of consensus on each aspect of guideline recommendations, and external review. These guidelines contain tip sheets and recommendations for each of their target audiences while also providing concussion assessment tools useful in a health care setting. Gradual return to learning and return to sport is outlined, consistent with the Concussion in Sport Group’s consensus statement. Guidelines for Diagnosing and Managing Pediatric Concussion (Zemek et al. 2014) includes a copy of PPM No. 158 and the Ophea Concussion Protocol. Also within these
guidelines are early versions of Parachute Canada’s concussion resources for parents and caregivers.

In 2018 the Ontario Neurotrauma Foundation released *Concussion Information for Patients and Families* for people of any age who have been diagnosed with concussion or are taking care of someone who has. This booklet is directed specifically to a patient/family audience and provides a list of different licensed health care professions that play a role in concussion diagnosis, treatment, and management.

**2.4.4 Canadian Concussion Collaborative.**

In August 2016, the Canadian Concussion Collaborative released *A Roadmap for Developing and Implementing Concussion Management Policies and Protocols in Sport*. The target audience of this document is “any group or organization aiming to adapt and implement a concussion management policy or protocol in a specific sport or context (school-based or non school-based)” (p. 1). Within this document the roadmap to sport-specific concussion management is outlined: prevention, identification, management, tools and expertise; dissemination and education; and evaluation and review. The roles of multiple stakeholder groups are addressed in the development and implementation of concussion policy and include athletes, coaches, parents, health care providers, school staff, officials, and others (such as spectators, media). Gradual return to learning and return to sport is outlined, consistent with the Concussion in Sport Group’s consensus statement. As it pertains to school board concussion polices in Ontario, PPM No. 158 is briefly identified as an example of a concussion management policy.

Across the concussion guidelines summarized in this section, it is important to note the high degree of similarity. In a qualitative document analysis of sport safety resources from six national Australian Football organizations, Bekker and Finch (2016) found a “duplication of resources addressing the same issue suggests a piecemeal approach and lack of strategic accumulation of existing safety knowledge and initiatives” (p. 5). The authors advocate for a comprehensive and collaborative approach that takes into account the needs of the end user from the beginning. The Concussion Harmonization Project associated with Parachute Canada’s *Canadian Guideline on Concussion in Sport* (2017)
is one way of ensuring all Canadians have access to consistent and reputable concussion information. These concussion information end users are comprised of multiple stakeholder groups with varying degrees of responsibility. What follows in the next section is a summary of the relevant literature as it relates to different stakeholder groups and the role they play in supporting children and adolescents after concussion.

2.5 Role of Multiple Stakeholders

2.5.1 Students.

Students are an important part of the collaborative return to learning team. Ontario Ministry of Education concussion policy documents (2014a) and the associated concussion protocol (Ophea, 2017) encourage students to actively participate in the collaborative team supporting their learning. Students are an important source of information and feedback when deciding what learning strategies and alterations support their gradual recovery process. Edwards and Parks (2015) found that students returning to school after a concussion who were able to choose from a list of possible accommodations found it helpful to individualize their recovery. Some of these students also found it beneficial to learn about their diagnosis so that they were able to advocate for the help they needed from school staff who were less familiar with concussions. Davies (2016) suggests that all student members of the school community have an important role in changing the school and sport culture around concussions. Educating all students about concussions can highlight the importance of prevention and reporting. Depending on the comfort level of the individual student and their parents or guardians, Davies (2016) also suggests that an injured student who has successfully recovered from concussion may serve as a source of support for a peer recovering from a similar diagnosis. This type of peer support can prevent students from feeling isolated but is contingent on the comfort level of the student and parental consent for the sharing of personal health information with another student.
2.5.2  Families.

Parents, guardians, siblings, and extended family members are all a source of support for the concussed student returning to school. Halstead and colleagues (2013) recommend that the “role and responsibility of the family team is to enforce rest and to reduce stimulation to the student during recovery” (p. 951). Ultimately, it is the parents or guardians, in conjunction with their child, who will decide when the student returns to school (Halstead, et al., 2013; Ophea, 2017). In a qualitative study exploring concussion knowledge, skills, and attitudes of Ontario elementary school teachers, Jorgensen (2016) found that some teachers felt the need to manage parental expectations regarding when the student was ready to return to school after injury. Some teacher participants shared their experiences of students returning to the classroom while still symptomatic. In the opinion of these participants, students may have benefited from more time at home; however, these teacher participants also empathized with the parent or guardian’s inability to stay home from work for another day. In a different qualitative study conducted on teacher perspectives of concussions in Ontario classrooms, Bach (2015) also reported parent/guardian support as a barrier to facilitating successful student return to school after experiencing a concussion. Some participants in this study shared that students were being sent to school too soon which may have delayed their recovery overall.

While most state laws in America require mandatory parent and student concussion education before the start of each school year, research conducted in various regions of the country found that parental knowledge was inadequate (Chrisman, Schiff, Chung, Herring, & Rivara, 2014; Faure, Moffit, & Schiess, 2015; LaBond, Barber, & Golden, 2014; Mannings, Kalynych, Joseph, Smotherman, & Kraemer, 2014). Concussion education initiatives for students and their families are imperative for students to receive the support they need as they return to school after a concussion. Maintaining ongoing and clear communication of common goals and expectations is vital when implementing a collaborative team approach as outlined in PPM No. 158.
2.5.3 Teachers and administrators.

There is a wealth of information available for teachers to increase their knowledge and awareness of difficulties students might encounter as they return to school (Davies, 2016; Davis & Purcell, 2013; Halstead et al., 2013; McGrath, 2010; Sady, Vaughan, & Gioia, 2011). The Ophea Concussion Protocol (2017) identifies cognitive, emotional, and behavioural difficulties students may experience as a result of their concussion, the potential impact these symptoms may have on learning, and potential strategies or approaches members of the collaborative team can implement to support students as they return to the learning environment. For example, students might experience headache or fatigue after prolonged periods of concentration and may have difficulty paying attention as a result. The Ophea Concussion Protocol (2017) encourages teachers to remove distractions from the classroom and provide students with frequent breaks before symptoms are exacerbated. Similar to managing the expectations of parents, Jorgensen (2016) also found that balancing the individual needs of a student requiring limited distractions and noise was challenging for some teachers who implement various collaborative teaching strategies in their classrooms.

Given the highly variable and unique nature of concussions, teachers are encouraged to be flexible when supporting students through their recovery. Frequently assessing student progress and maintaining regular communication with the collaborative team serve to provide the student with individualized care. In the context of Ontario schools, this may also mean using teaching strategies typically used when working with students diagnosed with learning disabilities without the formal development of an Individualized Education Plan. Varying the content, process, and product of assessment strategies (e.g., differentiated instruction) while altering the learning environment to meet the needs of the student (e.g., universal design for learning) are the hallmarks of inclusive educational practices in Ontario.

In a recent cross-sectional survey of 39 high school principals working in the Toronto District School Board, Hachem, Kourtis, Mylabathula, and Tator (2016) report that 92% of schools had return to play protocols in place. While data was collected after the mandated implementation of PPM No. 158; only 77% of schools had return to learn
protocols in place and only 43.6% of schools delivered concussion education to parents. As per the Ophea Concussion Protocol (2017), the principal serves as the primary facilitator of the return to learning process until he or she designates a school staff lead. Ensuring all members of the collaborative team are informed of student recovery progress and have the resources they need to support the student and family are important ways school principals can support students after concussion.

2.5.4 Health care providers.

Medical examination and clearance by a medical doctor or nurse practitioner is required for students returning to school after a concussion. The collaborative return to learn/return to activity plan requires medical supervision and input (Ophea, 2017). There is currently a large body of scientific literature regarding consistency of diagnostic criteria used by pediatricians (Carl & Kinsella, 2014; Davis & Purcell, 2013; Purcell, 2014), general practitioners (Carson et al., 2016; Garcia-Rodriguez & Thomas, 2014; Zemek, 2014), and emergency department physicians (De Maio, et al., 2014; Grubenhoff, Deakyne, Comstock, Kirkwood, & Bajaj, 2015; Meehan & Bachur, 2015; Thomas, 2015; Zemek et al., 2016). This research suggests that physicians are generally knowledgeable about concussion diagnosis but there is a lack of consistency in terminology used (concussion as compared to mild TBI) (DeMatteo et al., 2010) and physician follow-up after initial physical examination of patient (Fridman et al., 2018). There is evidence of physician use of consensus guidelines for patient treatment recommendations (Davis & Purcell, 2013; Gordon, Thompson, & McFaull, 2014; Zemek et al., 2014). However, Zemek and colleagues (2014) reported considerable knowledge gaps in primary care provider application of graduated return to learn and return to play protocols. Issues of consistency in recommendations of treatment plans also extends to prescription of cognitive and physical rest and in what quantities (Baker et al., 2014; Burke, Fralick, Nejatbakhsh, Tartaglia, & Tator, 2015; Carson et al., 2014; Eastman & Chang, 2015; Majerske et al., 2008; Moser, Schatz, Glenn, Kollias, & Iverson, 2015; Olympia, Ritter, Brady, & Bramley, 2016; Rabinowitz, Li, & Levin, 2014; Thomas, Apps, Hoffmann, McCrea, & Hammeke, 2015). Increased physician awareness of concussion diagnostic criteria and treatment guidelines are crucial. More research is needed to create evidence-
based guidelines that are not solely based on expert consensus, as is currently the practice.

There is a wide representation of different allied health professionals working in schools and communities as part of the interdisciplinary support of students returning to learn and activity after concussion. Some of these professions include: occupational and physical therapists (Hunt et al., 2016; Yorke, Littleton, & Alsalaheen, 2016); speech language pathologists (Ciccia, 2015; Duff & Stuck, 2015); school psychologists (Jantz, Comerchero, Canto, & Pierson, 2015; Lewandowski & Rieger, 2009); and social workers (Buck, Laster, Sagrati, & Kirzner, 2012; Buck, Laster, Sagrati, & Kirzner, 2013; Moore, 2013). Each professional group brings to the collaborative team their disciplinary knowledge, skills, and values in an effort to support students through the recovery process. The most widely represented allied health professional group in return to learning concussion literature is nurses (Garofano, 2015; Olympia, Ritter, Brady, & Bramley, 2016; Selekman & Calamaro, 2014; Weber, Welch, Parsons, & McLeod, 2015; Wing et al., 2016). School nurses are in a prime position to monitor changes in student health while they transition back to school, and are able to confer with the child’s primary care physician if part of the student’s circle of care. School nurses are also able to collaborate with school administrators and teachers regarding student learning needs and provide concussion information to students and their families. According to PPM No. 158, nurse practitioners are recognized as one of two medical professionals appropriately trained to make a clinical diagnosis of concussion in Ontario. Not only is there evidence that nurses are a well-positioned profession to educate students and their families about concussions, they also have the professional knowledge, skills, and values that other students can benefit from (e.g., Ontario Ministry of Education Healthy Schools initiatives which include healthy eating, physical activity, mental health, and personal safety and injury prevention). In my personal experience working in Ontario schools and reiterated by some of the participants of the current study, school nurses do not currently have the consistent and visible presence in schools as reported of their American counterparts. Currently, school and public health nurses in Ontario are involved in various health promotion programs including smoking cessation, vaccination, and sexual health and are assigned to multiple schools on a rotating basis.
2.5.5 Legislators and policymakers.

In their evaluation of the experiences of state-level policymakers responsible for the development and implementation of concussion laws, Lowrey and Morain (2014) interviewed 36 officials from 35 American states representing state departments of health and education as well as members of related athletic and activity associations. Interviews combined with concussion policy analysis across all 50 states and the District of Columbia revealed that while there appears to be uniformity “on the books” across states implementing laws similar to Washington State’s Zachary Lystedt Law there is a large degree of variation in practice. Variation was most notable in the implementation of concussion education for students, parents or guardians, teachers, and coaches. Lowrey and Morain (2014) reported that some states provided active learning sessions led by experts in concussion prevention and treatment while in other states education took on the more passive form of an informational brochure sent home with students. This may be a result of the observed trend for policymakers to implement concussion legislation that is budget neutral (Lowrey & Morain, 2014). Without supplying necessary funding for training and educational materials to agencies charged with implementing concussion legislation, policymakers may inadvertently exacerbate already existing disparities across their jurisdiction (Lowrey & Morain, 2014). Cook, King, and Polikandriotis (2014) also reported variation in the medical professionals different states designated to diagnose concussion and provide medical clearance after recovery. In jurisdictions with large rural populations or limited financial resources to provide training and resources, this translates into students not receiving a medically supervised gradual return to learning and activity as legislated. Cook, King, and Polikandriotis (2014) recognize policy development and implementation are iterative processes with progress made slowly over time. It is recommended that policymakers in Ontario consider disparities in resources across the province so access to appropriate concussion prevention and treatment is available to support students returning to school after a concussion.
2.6  Summary

Concussion in children and adolescents is a growing public health concern and research in this area is rapidly evolving. Concussion policy and legislation in Ontario are being implemented to address these issues in the absence of high quality evidence, calling on many organizations and stakeholder groups to work together collaboratively. What is unknown is how these organizations, such as school boards, developed and implemented concussion policies in response to PPM No. 158. In the following chapters we explore how school boards in Ontario relied on partnerships across the domains of education, health, and safety in order to fulfill the requirements of PPM No. 158.
Chapter 3

3 Methodology and Methods

This chapter describes the methodological underpinnings of the present research study, and the methods used. Gadamer’s (1960/1998) philosophical hermeneutics and its application across the disciplines of health, education, law, and policy are summarized. The implications of this philosophical stance on the research design of this interpretivist policy analysis are discussed, as are the implications for the role of the researcher in creating meaning and generating knowledge claims within this paradigm. A methodologically coherent, iterative, research design is explained, with methods of data generation, analysis, quality criteria, and ethical considerations identified.

3.1 The Interpretive Tradition

According to Yanow (2007),

The hallmark of the interpretive turn in the social sciences is its focus on meaning as central to individual and collective endeavors. Any analysis of such human endeavors must take into account what is meaningful to actors in those situations, as well as to how the analyst’s or researcher’s own meaning-making takes place. (p. 111)

The interpretive tradition presupposes that we live in a world of multiple, intersubjective realities that are embodied in the social artifacts humans create (Schwartz-Shea & Yanow, 2012). Schwartz-Shea and Yanow (2012) go on to suggest that the meaning embodied within these artifacts “can have other meanings to other (groups of) people who encounter and/or use them, for knowledge is situated and contextual (or local), as are “knowers” (including researchers)” (p. 43). Philosophical hermeneutics is situated within the interpretive tradition and conceptualizes these intersubjective realities as component parts of a greater whole of understanding.
3.1.1 Hermeneutics.

This study is situated within an interpretivist hermeneutic theoretical perspective as explicated by the philosopher Hans-Georg Gadamer (1960/1998). Gadamer puts forth an iterative interpretative process in his conceptualization of the hermeneutic circle; moving from component parts of the issue to the issue as a whole in an interpretive act of understanding (1960/1998). Knowledge claims produced from research using a hermeneutic methodology are tentative, evolving, and highly contextualized. This methodology is particularly appropriate for the current study as the concussion policy and legislative landscape in Ontario is rapidly changing (even dramatically so within the course of this study as depicted in the timeline in Chapter Two, Figure 1). Further, a hermeneutic methodology that presupposes knowledge claims that are highly contextualized is also appropriate given each policy involved in this analysis is specific to different school boards with unique priorities, resources, and individuals within their local communities.

A hermeneutic circle of data collection, analysis, and synthesis were used to gain a contextual understanding of issues, stakeholders, and related policies shaping how school boards interpreted PPM No. 158 in the development of resultant concussion policies. The development and implementation of concussion policy is a collaborative effort and is dependent on the expertise of stakeholders working across multiple disciplines. Instead of providing a review of the long history of hermeneutic philosophy, the application of hermeneutic interpretation across the disciplines of health, education, law, and policy are summarized. These disciplines converge on concussion policy development and implementation and all were equally vital in my interpretive process.

3.1.1.1 Hermeneutics and health research.

Within the context of health research, hermeneutics is frequently applied to the lived experience of research participants while investigating specific phenomena. Hermeneutic phenomenology, as described by Laverty (2003), embraces the previous experiences of both researcher and participant as they move toward a refined understanding of a
phenomenon. According to Gadamer (1960/1998 in Laverty, 2003, p. 25), “language is the universal medium in which understanding occurs. Understanding occurs in interpreting.” In a research context, language can take the textual form of transcribed audio-recorded interviews, journal articles, policy documents, best practice guidelines, and news media.

The research question takes on further meaning within hermeneutic research as it represents a dialogic process between researcher and various texts to gain understanding:

Understanding is always more than merely re-creating someone else’s meaning. Questioning opens up possibilities of meaning, and thus what is meaningful passes into one’s own thinking on the subject…To reach an understanding in a dialogue is not merely a matter of putting oneself forward and successfully asserting one’s own point of view, but being transformed into a communion in which we do not remain what we were. (Gadamer, 1960/1998 in Laverty, 2003, p. 25)

Crotty (1998), in summarizing the work of Gadamer (1960/1998), suggests that as the researcher engages with texts using a hermeneutic questioning methodology, a conversation ensues which fuses what Gadamer refers to as the horizon of the past (the tradition in which the text is situated) and the horizon of the present (the positionality of the interpreter). “Understanding is to be thought of less as a subjective act than as participating in an event of tradition, a process of transmission in which past and present are constantly mediated” (Gadamer, 1960/1989 in Crotty, 1998, p. 101, emphasis in original). Within Gadamer’s fusion of horizons, the interpreter acknowledges the historic tradition in which the text is situated, the previous experiences that comprise their own historically effected consciousness, and the meaning that is made and remade in the hermeneutic space where these contexts intersect. The interpretation and understanding that results echoes an aphorism Yanow (2007) attributes to Heraclitus’ observation in Ancient Greece that “one never steps in the same river twice” (p. 118). Meaning, all understanding is constantly being mediated by the intersection of the tradition in which the text belongs, our evolving understanding of that tradition through dialogue with the
text, and the running accumulation of experiences we bring to our understanding of the text as interpreter. Both the interpreter and the text under interpretation are altered through the dialogic act of interpretation. Knowledge claims produced from research conducted using a hermeneutic methodology are thus tentative, evolving, and highly contextualized.

3.1.1.2 Hermeneutics and education research.

The use of hermeneutics in education research provides an example where legislation, policy, research, and philosophy intersect. Jardine (2006) reflects on Gadamer’s discussion of aesthetic experience in *Truth and Method* (1960/1998) as pointing to a commonplace experience many teacher-researchers are well accustomed:

> Before we adopt any methodological stance, before we “do” any research, before we know it, we enter a classroom and something a student says, some work that they have produced, something they have written, some question they ask, the look in one child’s eyes, some sketch posted on a bulletin board—these simple things sometimes strike us, catch our fancy, address us, speak to us, call for a response, elicit or provoke something in us, ask something of us, hit us, bowl us over, stop us in our tracks, make us catch our breath. (p. 270, emphasis original)

For Jardine (2006), hermeneutics is an evocative dialogic experience with various texts found within a complex learning environment (in Jardine’s example texts include work produced by a student or the emotive resonance of a glance). A hermeneutic method of understanding and interpretation embraces this rich contextual landscape, not in an effort to streamline or clarify but to “bring out this evocative given in all its tangled ambiguity, to follow its evocations and the entrails of sense and significance that are wound up with it and not “betray” it with promises of isolation and clarity and cleanliness” (p. 280). Contextualizing the research environment through a hermeneutic is not the

Amassing [of] verified knowledge and attaining “expertise,” but [is] the process of *becoming experienced*. Hermeneutically understood, the more experienced I become, the more susceptible I become to the difference that the next case might
bring, the more susceptible I become to being addressed. Understanding, understood hermeneutically, means the cultivation of susceptibility in ourselves and others. (Jardine, 2006, p. 286, emphasis in original)

What is “known” or “understood” is then an ongoing dialogue members of a research team have with each other, with themselves, and with the wide array of texts in which they are susceptibly attuned. This process of engaging and re-engaging texts under analysis alters the researcher’s understanding so that even a fourth or fifth reading of texts can bring to light new perspectives.

3.1.1.3 Hermeneutics and legal interpretation.

Rooted in the long tradition of theological hermeneutics, legal hermeneutics “tries to describe the conditions for the practice of interpreting the law rather than legislating a “method” or “theory” that will stand outside the practice of legal interpretation, grounding and guiding it” (Hoy, 1992, p. 180). Bruns (1992) describes legal hermeneutics as

An event in which the question of the law is opened up, placed into question, no longer resolvable in its usual terms but released from the terms in which it is familiar to us, exposed to what look like crazy ideas, made radically questionable…A hermeneutics of anything always begins by detaching the thing in question from its dogmatic contexts, the fixed or institutionalized ways of thinking it. (p. 32)

In the present study, this meant reflecting on legislation pertaining to the teaching profession in Ontario (as summarized in Chapter Two) in light of the school board concussion policies and administrative procedures included in this analysis, and in consideration of recently passed Rowan’s Law (Concussion Safety), 2018. In my process of reflection and analysis I relied on a set of hermeneutical questions outlined by Dallmayr (1992) such as
How can the law or its content be fully known apart from any contextual concretization—given that the law can never exhaustively stipulate its range of application? Moreover, how can the “sameness” of the rule or the sameness of its application be grasped apart from interpretation—given that individuals and concrete situations are never entirely identical or exchangeable? (p. 12)

In the context of Rowan’s Law (Concussion Safety), 2018 and the school board concussion policy documents and administrative procedures included in this analysis, communities in Ontario do not all have equal access to the health care and educational resources concussion policies and legislation mandate families seek out if their child sustains a concussion. Concussion itself is a clinical diagnosis made in the absence of positive imaging scans and is determined by patient self-report of a long list of signs and symptoms. Therefore, the lack of “sameness” in clinical presentation and community access to resources necessitates careful consideration of how concussion law and policy are interpreted given the lack of concrete situations that are “never entirely identical or exchangeable” Dallmayr (1992, p. 12).

Dallmayr (1992) goes on to conclude that given the close connection between jurisprudence and public life, the study of hermeneutics is appropriate for all human sciences. The application of legal hermeneutics enables one to consider the role of context during the time legislation was first passed and the implications of that legislation across time. In the context of the present study these considerations are particularly appropriate given that our understanding of the biological, psychological, and sociological nature of concussion is rapidly evolving and the consensus statement guiding concussion diagnosis and management is updated regularly.

3.1.1.4 Hermeneutics and policy analysis.

Similar to legal texts, public policies are social artifacts that have the power to shape the social institutions in which they are enacted. Dryzek (1982) identifies different models of policy analysis, each ideal for the specific “value orientations of actors, the constraints upon these actors, and the structure of their reasoning” (p. 310). These models include policy evaluation, advocacy, single framework analysis, social choice, and analysis based
on moral philosophy. As each model is tailored to a specific niche or desired stakeholder outcome, Dryzek includes hermeneutic policy analysis as a final model to be considered in instances of great complexity involving multiple stakeholders. Dryzek (1982) defines hermeneutic policy analysis as “the evaluation of existing conditions and the exploration of alternatives to them, in terms of criteria derived from an understanding of possible better conditions, through an interchange between the frames of reference of analysts and actors” (p. 322). According to Yanow (2007), such a methodology of analysis includes “legislative records, agency correspondence, annual reports, minutes from community board meetings, and…newspaper reports [as a means of] providing contemporaneous accounts of key actors and their views along with more general sentiment at the time” (p. 114).

In her work involving the role of hermeneutics in educational policy analysis, O’Neill (2012) cites Gadamer to demonstrate how one can engage dialogically with a text:

A received body of work is not important in itself. Its importance is expressive: how it expresses a distinct practice of engaging with or comporting oneself toward questions and subject matter and how, in so doing, it clears new dialogical approaches to those subject matters. As sites of dialogical engagement, the works of a canon open and reopen the hermeneutical space of the in-between in which the possibility of becoming different to ourselves is preserved. (1989, in O’Neill, 2012, p. 106, emphasis in original)

Here, the dialogic nature of hermeneutic policy analysis is highlighted. Researcher-analysts attune to various texts in a questioning dialogue where interpretation and understanding occur in the “space of the in-between,” presenting a hermeneutic space in which the analyst is also engaged in mediation. Yanow (2007) reminds us that this process of analysis is far from a linear, prescriptive methodology and focuses

Not only on figuring out what policy-relevant elements carry or convey meaning, what these meanings are, who is making them, and how they are being communicated, but also on the methods through which the analyst-researcher accesses and generates these meanings and analyzes them… Analyst-researchers,
themselves meaning-makers, are also actors in these meaning-making processes as they conduct their analysis. (p. 111)

The positionality of the researcher-analyst relative to the texts and contexts under interpretation is of great importance. Yanow (2007) suggests that when using a hermeneutic policy analysis methodology the researcher-analyst is herself shaping and being shaped by the people, settings, and events that she encounters, thus calling for analyst self-reflexivity. Yanow (2007) argues that analyst self-reflection can only enhance the analysis; making those reflections “public” and transparent in research reports enables others to assess the adequacy of the interpretations and analyses. Moreover, such reflexivity includes a consideration of the power and politics of the researcher or analyst’s relation to the setting and actors on which the analysis focuses. No longer seen as a neutral, tabula rasa, the researcher-analyst is increasingly seen as also participating in generating the data which are then subjected to analysis. (p. 116)

An interpretivist policy analysis founded on the philosophical hermeneutics of Gadamer (1960/1998) was selected as the most appropriate methodology in which to conduct this research. Not only did this analysis require me to reflect on my professional experience as an educator, but also on my developing experience as an interdisciplinary researcher as this research was conducted. A policy analysis situated within a positivist or post-positivist paradigm would likely call for the removal of these prejudices (a term Gadamer (1960/1998) uses to refer to the pre-judgments inherent in previous experience). An interpretivist policy analysis attempts to account for the high degree of complexity involved in enacting social policies that shape social life. Hermeneutic policy analysis returns “persons, their meanings, and their very human agency to the center of analytic focus” (Yanow, 2007, p. 118).
3.1.2  Policy analysis through an interpretive lens.

In his review of postpositivism and the policy process, Lejano (2013) argues that policy can “no longer be seen as an object that can be objectively determined, neither can we place exactly where policy is crafted and how” (p. 108). Yanow (2007) supports this argument by asserting that

The meaning of the policy document lies not in the text itself nor in legislative intent…but in the experience-based understandings of, for example, constituents on the “receiving” end of policy implementation programs; or the document’s meaning lies in some interaction among policy text, legislators’ intent, and policy-relevant publics’ experiences. (p. 116)

In an attempt to explore the meaning made by policies and the experienced-based understandings of receivers of these policies, Yanow (2000) suggests a recursive research methodology that embraces intersubjectivity and contextuality. The recursive process involved with conducting an interpretive policy analysis as delineated by Yanow calls researchers to:

1. Identify the artifacts (language, objects, acts) that are significant carriers of meaning for a given policy issue, as perceived by policy-relevant actors and interpretive communities
2. Identify communities of meaning making/interpretation/speech/practice that are relevant to the policy issue under analysis
3. Identify the “discourses”: the specific meanings being communicated through specific artifacts and their entailments (in thought, speech, and act)
4. Identify the points of conflict and their conceptual sources (affective, cognitive, and/or moral) that reflect different implementations by different communities. (2000, p. 22)

This recursive process has been used in a wide variety of research contexts. Yanow applied this methodology to a policy analysis of community center development in Israel (1996), while Smith-Merry and Gillespie (2016) recently applied this methodology to an investigation into Australian mental health policy implementation. Interestingly, in their research on taxation and Japanese energy policy using quantitative methods of analysis, Endo, Tsuboyama, and Hara (2016) caution “the necessity to take the notion of
interpretive policy analysis more seriously, which indicates the importance of actual meaning involving public policy that could be complementary to quantitative evaluation of cost and benefits of public policy” (p. 418, emphasis in original). The following sections detail how the recursive process of interpretive policy analysis put forth by Yanow (2000) was used in the present study. The next sections also address the positionality of the researcher and the methods of data collection, analysis, and interpretation conducted in the current study to answer the research question How did school boards in Ontario interpret PPM No. 158 in the development and implementation of board concussion policies and administrative procedures?

3.2 Positionality of the Researcher

My role as researcher in this study is as the primary instrument of data generation, analysis, and interpretation. My training and work experience as an Ontario Certified Teacher and coach has profoundly influenced this research. I am certified to teach Intermediate/Senior (Grades 7-12) Biology and Health and Physical Education, and I have additional qualifications in the Junior Division (Grade 4-6) and Special Education. I have also been involved in school athletics since I was a student, both as a participant and as a coach. As a member of the teaching profession in Ontario, I am bound by the Standards of Practice for the Teaching Profession (commitment to students and student learning, professional knowledge, professional practice, leadership in learning communities, and ongoing professional learning) and the Ethical Standards for the Teaching Profession (care, respect, trust, and integrity) designated by the Ontario College of Teachers (2016a,b). Numerous pieces of legislation impact the teaching profession in Ontario, most notably the Education Act, Child, Youth and Family Services Act, Ontario College of Teachers Act, and the Municipal Freedom of Information and Protection of Privacy Act. Finally, the most recent piece of legislation pertinent to my professional practice as an Ontario Certified Teacher and crucial to concussion policy in Ontario, Rowan’s Law (Concussion Safety), 2018 which received Royal Assent on March 7, 2018.

As described in the previous chapter, the concussion policy and legislative landscape is rapidly changing across multiple jurisdictions. As a doctoral student engaged in
interdisciplinary research that is also changing rapidly across disciplinary boundaries, this research, at times, felt akin to attempting to build a brick house on a sandy shoreline. For example, in the four years of my doctoral research the Berlin consensus statement has been released by the Concussion in Sport Group (McCrory, 2017) that will have implications for all health care providers, educators, coaches, and administrators working with children and youth who are at risk of sustaining a concussion. Even in the final weeks of my doctoral program, Regulations are being formalized that will determine how Rowan’s Law (Concussion Safety), 2018 will be enacted and how school boards in Ontario develop and implement concussion policies. Furthermore, over the last four years there has been an increase in the number of peer-reviewed journal articles on how school boards address concussion policy development, implementation, and facilitate student return to school (a literature that was previously dominated by a focus on athlete return to play). This rapidly changing research, policy, and legislative context, in conjunction with my training and work experience as an Ontario Certified Teacher, make the interpretivist paradigm in which this research is situated the most appropriate. School board concussion policies in Ontario are not something to be “solved” once and for all, but are living documents that will evolve over time.

3.3 Study Context and Location

The context of this study is the publicly funded education system in Ontario. In Ontario, there are 72 school boards comprised of 31 English Public Boards, 29 English Catholic Boards, 4 French Public Boards, and 8 French Catholic Boards. There is one Provincial Schools Authority that includes schools directly operated by the Ministry of Education, serving the needs of students who are deaf, blind, deaf-blind, and severely learning disabled. Finally, there are 10 School Authorities, consisting of 4 geographically isolated Boards and 6 hospital-based authorities. PPM No. 158 defines school board(s) and board in a footnote as referring to district school boards and school authorities. Thus, concussion policies from both district school boards and school authorities were included in this study.
One limitation of this study is the exclusion of French-language school board concussion policy documents in data collection and analysis. While this study is an analysis of school board concussion policy documents in Ontario, it cannot claim to be inclusive of all school boards in the province. The Ontario Ministry of Education Aménagement Linguistique policy (Ministry of Education, 2004) was established to protect and promote the cultural and linguistic well-being of French-language and francophone communities in Ontario. This policy protects the right of French-language school boards to educate and operate in French. My limited ability to understand policy documents published in French is inadequate for the rigor required for the level of interpretation needed in this study. Professional translation of school board concussion policy documents was considered. However, Kinsella (2006) notes that in his comparison of translation and interpretation, Gadamer suggests that both processes involve the selective emphasis and de-emphasis of textual features that influence the understanding gleaned from texts. Thus, the inclusion of translated French-language policy documents would result in three levels of interpretation (e.g., my interpretation of a translator’s interpretation of a school board’s interpretation of PPM No. 158).

### 3.4 Data Generation

#### 3.4.1 Texts.

Data collection, analysis, and interpretation occurred simultaneously and recursively consistent with the methodology of interpretive policy analysis explicated by Yanow (2000). The primary unit of analysis in this study was English-language school board concussion policy documents and related administrative procedures available online to the general public. A list of board websites and contact information for all school boards and school authorities was retrieved from the Ontario Ministry of Education website in November 2016. Publically available concussion policy documents and administrative procedures were retrieved from school board websites from November 2016 to February 2017. For the purpose of this research, the definitions of policy and procedure will be adopted from the Thames Valley District School Board (TVDSB). Policies are defined as “statements of intent, governing principles, or end results that serve to guide the
overarching operations” of school boards, and procedures are defined as “documents that guide the implementation of our policies or other routine system operations” (TVDSB, 2018). In total, 61 school boards and 3 school authorities had concussion policy documents and/or administrative procedures available online (see Appendix A for full document list). A scripted email request for missing concussion policy documents and administrative procedures (Appendix B) was disseminated to school boards and school authorities in April 2018. This data generation method yielded no additional texts. In total, 91 texts comprised of the concussion policies and/or administrative procedures of 64 English-language school boards and school authorities were analyzed. Additional texts were included in data analysis to gain an understanding of the context in which these school board policies were developed. These included the Ontario Ministry of Education’s PPM No. 158 and Ophea Concussion Protocols from 2014 (six versions, see Appendix A for details) to 2017. In total, ten additional texts were included in this textual analysis, making the final document count 101.

3.4.2 Interviews.

Semi-structured interviews were conducted with key informants to deepen my understanding of local policy contexts in school boards and school authorities in Ontario. Interviews were conducted in English and were approximately 1-hour in length. Interviews were conducted via telephone, as this method is a useful means of reaching a geographically scattered population (Rubin & Rubin, 2012). An interview guide (Appendix C) was developed based on questions that arose during the collection, analysis, and interpretation of aforementioned texts. Prompts were used to encourage participants to elaborate and provide examples when possible. Interviews were audio recorded and then transcribed verbatim by a member of the research team. Interview transcripts were reviewed for accuracy and de-identified to remove names of locations, places of employment, colleagues, and other identifiers that could possibly indicated the identity of participants or their employers.

Participants were purposively sampled to include stakeholders explicitly involved in the school board concussion policy development and implementation process. Searching the
aforementioned texts for the names of specific individuals involved in the development or implementation of school board concussion policies identified potential participants. This resulted in a list of 49 potential participants across seven schools boards, comprised mostly of school board administrators and teaching staff. However, one registered nurse and one athletic therapist were also listed in these texts and were therefore included in this recruitment pool. Contact information was accessed via publicly available online staff directories. A scripted recruitment email (Appendix D) was disseminated to potential participants on November 15, 2017 and February 28, 2018. Interviews were conducted in November and December 2017. Interviews were conducted in November and December 2017 with participants who joined the study after the first round of recruitment. A digital letter of information and consent (Appendix E) was sent to each participant before interviews were conducted. Four participants from the same school board consented to participate in this study. This was an unforeseen response to participant recruitment as I had initially intended to set a wide scope to gain an understanding of school board concussion policy and administrative procedure development and implementation across Ontario. Table 1 presents a summary of participant job titles and years of experience working in education.

Table 1: Participant Characteristics

<table>
<thead>
<tr>
<th>Participant</th>
<th>Job Title</th>
<th>Years of Experience in Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secondary School Health and Physical Education Department Head</td>
<td>33</td>
</tr>
<tr>
<td>2</td>
<td>Elementary School Principal, led school board concussion policy development team</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>Retired Elementary School Principal, currently working for “Provincial Principal’s Association”</td>
<td>34</td>
</tr>
<tr>
<td>4</td>
<td>Secondary School Vice-Principal</td>
<td>35</td>
</tr>
</tbody>
</table>
3.5 Thematic Analysis

A thematic analysis of data was conducted as described by Braun and Clarke (2006). According to the authors, thematic analysis is “a method for identifying, analyzing, and reporting patterns (themes) within data” (p. 79). An inductive thematic analysis approach was used which involved “coding the data without trying to fit it into a pre-existing coding frame, or the researcher’s analytic preconceptions. In this sense, this form of thematic analysis is data-driven” (Braun & Clarke, 2006, p. 83, emphasis in original). This method of analysis was selected because it is paradigmatically coherent in that it is compatible with an interpretivist perspective of meaning and experience situated within the individual contexts of those involved with the research process (both participants and researcher alike). Braun and Clarke (2006) are proponents of this approach to data analysis because it encourages researchers to be explicit in how they conducted their analysis. They argue that this approach protects against passive accounts of themes “simply emerging” from data without accounting for the phases the researcher took to get there or their role in creating themes (even if using an inductive approach). A deductive analysis of data and application of extant policy theory was not conducted in this study. Neither practice would be methodological or paradigmatically coherent within the current research design although both are fruitful areas of future research.

Thematic analysis is methodologically coherent with the interpretivist hermeneutic theoretical perspective previously described. Initial coding was conducted electronically using NVivo 12 for Mac (QSR International Pty Ltd; Victoria, Australia). Based on the work of Braun and Clarke (2006), recursive phases of thematic analysis are listed below, along with the specific practices I engaged in during each phase of analysis, as well as a brief description of how component parts at each phase of analysis were considered in relation to a greater whole within a hermeneutic circle of understanding.
1. Familiarization with the data: audio recordings of interviews were listened to multiple times and texts (interview transcripts and school board policy documents) were read in full before generating initial codes.

2. Generating initial codes: codes were inductively generated across the entire data set to reflect interesting features of the data (component parts). Codes were named using key words or phrases used by participants or in documents when possible to remain tethered to these data.

3. Searching for themes: initial codes (component parts) were collated into potential themes by reconsidering these parts in relation to the context of the data set (whole).

4. Reviewing themes: coded extracts of texts were reviewed to assess for internal consistency of proposed themes (component parts), a thematic map of the analysis was created to organize proposed themes and ascertain potential relationships between different themes and within subthemes (whole).

5. Defining and naming themes: proposed themes and the thematic map (component parts) were reconsidered within the context of this study and in relationship to my positionality as researcher and educator (whole).

6. Producing the report: the writing of this document represents the final level of analysis in that vivid, demonstrative examples were selected to represent each theme while discussed in relation to the nested contexts of the study itself (e.g., perspectives from members of one school board in relation to school board documents from across Ontario (component parts)) compared with peer-reviewed literature and contextualized researcher positionality (whole).

3.6 Quality Criteria

The strengths of a hermeneutic interpretive policy analysis are the inclusion of a wide variety of texts related to a complex situation, the overt positionality of the researcher in relation to the activity of interpretation, and meaningful coherence when used with other research methods employed through an interpretivist lens. Denzin (2010) explains:
You can only critique a work from within its paradigm. It makes no sense to apply foundational-positivistic criteria to a poem, or to performance ethnography. In turn performance criteria should not be applied to a piece of statistical analysis. The two projects rest on different politics of representation. To repeat: differences in interpretive criteria must be honored. (p. 41)

In her inductive analysis of 25 canonical qualitative research methods texts regarding the establishment of quality criteria across research paradigms, Schwartz-Shea (2014) suggests the criteria of trustworthiness, thick description, reflexivity, and triangulation/intertextuality are of particular importance for research conducted in an interpretive paradigm. Tracy (2010) includes these criteria within her larger list of criteria for excellent qualitative research. In this next section, trustworthiness, thick description, reflexivity, and crystallization (a specific form of triangulation/intertextuality) will be explored as they relate to the present study.

Lincoln and Guba (1985) describe trustworthiness as being comprised of credibility, transferability, dependability, and confirmability. Schwartz-Shea (2014) suggests that trustworthiness is “an umbrella term for the entire set of evaluative criteria in the sense that a research text that enacts thick description, reflexivity, and the other criteria…is likely to be assessed as a “trustworthy” account of the phenomena it has analyzed” (p. 131). Credibility is described by Schwartz-Shea as research “meriting the reader’s confidence” (2014, p. 131) and can be achieved through thick description, reflexivity, and triangulation. The specific actions taken in the present study to address these aspects of credibility are discussed below.

Transferability is the degree to which study findings are transferable to other contexts. As previously discussed, hermeneutic interpretivist research is highly contextualized, both in time and space. In the present study, findings may be considered transferable to the degree in which they resonate with readers working across multiple disciplines (Tracy, 2010); however, knowledge claims herein are highly contextualized and do not purport to be concretely transferable to other school boards in Ontario, to other provinces in Canada, or other jurisdictions worldwide.
Dependability refers to the accuracy and transparency of data analysis and interpretation throughout the research process. In the present study, a detailed reflexive journal and field notes were continuously maintained. Important decisions I made throughout the research process and the rationale behind them were documented, as were import events and dates pertaining to this study.

Finally, confirmability, as applied through an interpretivist lens, is the linking of assertions, findings, and interpretations in a logical and transparent way. As with other dimensions of quality criteria, this was enacted through the use of a reflexive journal and field notes. Confirmability is further exemplified in the final phase of thematic analysis discussed above: producing the report. It is my intention to present the findings of this research in a logical and transparent way, with assertions tethered to vivid excerpts of texts and my interpretations of these texts well supported with evidence from textual and interview data.

Schwartz-Shea (2014) describes thick description as “the presence in the research narrative of sufficient descriptive detail—of an event, setting, person, or interaction—to capture context-specific nuances of meaning such that the researcher’s interpretation is supported by “thickly described” evidentiary data” (p. 132). To further a thick description of the complexity of research data, Tracy (2010) encourages researchers to show their meaning rather than tell readers what they should derive from the research narrative. In the present study, this was achieved through the use of a few, carefully selected, themes that thoroughly describe the complexity of research data and the context in which it was generated. Where possible, excerpts from concussion policy documents, administrative procedures, and participant transcripts are used in this document to demonstrate to readers how my interpretation was informed by my engagement with the research setting as opposed to simply telling them.

Tracy (2010) identifies reflexivity as one of the most celebrated practices of qualitative research, considered to be “honesty and authenticity with one’s self, one’s research, and one’s audience” (p. 842). Whereas other research methodologies may find researcher bias or prejudice a limitation, hermeneutics explicitly embraces the pre-experiences of the
interpreter for the combined acts of interpretation and understanding to take place. Using a hermeneutic lens, all understanding is the result of a fusion of horizons between textual tradition and interpreter prejudice and a failure to be transparent with this positionality may be considered a limitation of other research paradigms. A detailed self-reflexive journal was maintained throughout the data generation, analysis, and interpretation process. This practice also supported thick description of the research process and allowed me to reflect on how my positionality has influenced this research and how it has changed over time.

Understanding a phenomenon from the various fields that converge at the intersection in which the phenomenon occurs is an example of crystallization, one of Tracy’s (2010) criteria for excellent qualitative research. Tracy (2010) suggests

> Crystallization encourages researchers to gather multiple types of data and employ various methods, multiple researchers, and numerous theoretical frameworks. However, it assumes that the goal of doing so is not to provide researchers with a more valid singular truth, but to open up a more complex, in-depth, but still thoroughly partial, understanding of the issue. (p. 844)

In the present study, multiple texts and contexts across the disciplines of medicine, education, law, and policy were considered to advance understanding. School board concussion policy documents and administrative procedures were analyzed from boards across Ontario. Finally, these policies were further contextualized by the experiences of administrators involved in the development and implementation of concussion policy specific to their local school board.

### 3.7 Ethical Considerations

Ethics approval was obtained from The University of Western Ontario’s Non-Medical Ethics Delegated Review Board (REB ID #109507, Appendix F). There were no known risks to participating in this study. To protect participant confidentiality, pseudonyms are used instead of participant names and participant identity and employment affiliations are not disclosed. All interview transcripts were de-identified to remove names of locations,
places of employment, colleagues, and other identifiers that could possibly indicated the identity of participants or their employers. All participants were given the opportunity to review their interview transcript and delete or modify any of their responses as they saw fit. This was not to ensure the transcript of our interview successfully “captured” the reality of our interaction, but to ensure high-level school board administrators had an opportunity clarify or remove statements that may not represent what they were comfortable sharing with me during an audio-recorded interview.

3.8 Summary

This chapter described the methodological underpinnings of this research study. An interpretive policy analysis founded on Gadamer’s (1960/1998) philosophical hermeneutics was explicated. The implications of this philosophical stance on the research design of this policy analysis were discussed, as were the implications for the role of the researcher in creating meaning and generating knowledge claims within an interpretivist paradigm. A methodologically coherent, iterative, research design was discussed, as were means of data generation, analysis, quality criteria, and ethical considerations.
Chapter 4

4 Findings

This chapter presents the findings from an interpretive policy analysis of school board concussion policies in Ontario. This study was conducted to gain an understanding of how school boards in Ontario interpreted PPM No. 158 in the development and implementation of board concussion policies and administrative procedures. Thematic analysis of 91 texts comprised of the concussion policies and/or administrative procedures of 64 English-language school boards and school authorities, informed by PPM No. 158 and Ophea Concussion Protocols from 2014 to 2017 is shared. This thematic analysis is further informed by interviews conducted with four administrators who were involved in the initial development of their school board’s concussion policy as well as my personal experience as an Ontario Certified Teacher.

The findings presented in the sections that follow explore how school boards relied on partnerships across the domains of education, health, and safety in order to fulfill the requirements of PPM No. 158. Table 2 presents an overview of these three themes and the various subthemes that support this interpretation.

Table 2: Summary of Thematic Analysis

<table>
<thead>
<tr>
<th>Theme</th>
<th>Partners in Education</th>
<th>Partners in Health</th>
<th>Partners in Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtheme</td>
<td>Policy lending</td>
<td>Expert consultation</td>
<td>Safety culture</td>
</tr>
<tr>
<td></td>
<td>Organizational structure</td>
<td>Concussion resources</td>
<td>Risk and liability</td>
</tr>
<tr>
<td></td>
<td>Compliance</td>
<td>Health and well-being</td>
<td>Community connections</td>
</tr>
</tbody>
</table>
4.1 Partners in Education

4.1.1 Policy lending.

The development of school board concussion policies and administrative procedures in response to PPM No. 158 was the result of active and passive partnerships with other school boards in Ontario. School boards regularly borrow policies from other boards and adapt them to suit the needs of the communities within their boundaries. Policy lending constitutes a passive form of educational partnership as one board provides another with materials they have already developed. As shared by Participant 4: “It actually happens quite often. Somebody has already invented the wheel, and so [school boards] just improve upon it based on their own needs, and their own communities.” Table 3 contains a summary of 11 school boards that developed their concussion policy and administrative procedures based on the policies and administrative procedures of other school boards. These 11 school boards explicitly acknowledge the boards they borrowed materials from however Table 3 does not list school boards that may have used materials provided by other boards but where no attribution was made.

The frequency with which some school boards were cited over others is notable. For example, the concussion policy developed by District School Board of Niagara was used by six different boards (Table 3, in bold), while the policies developed by Brant Haldimand Norfolk Catholic District School Board and Wellington Catholic District School Board were used by three and four boards, respectively. In recent years, the District School Board of Niagara has become a leader at the interface of concussion research and public education in Ontario. The board’s Director of Education, Warren Hoshizaki, hosts an annual concussion conference in May and served as a member of Rowan’s Law Advisory Committee. Also of note is that 6/11 school boards borrowed from multiple boards before developing their own concussion policy and administrative procedure.
<table>
<thead>
<tr>
<th>Lender</th>
<th>Borrower</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>District School Board of Niagara, Brant Haldimand Norfolk Catholic</strong></td>
<td>Avon Maitland District School Board</td>
</tr>
<tr>
<td>District School Board of Niagara, Brant Haldimand Norfolk Catholic</td>
<td>Hamilton-Wentworth District School Board</td>
</tr>
<tr>
<td>District School Board of Niagara, Brant Haldimand Norfolk Catholic</td>
<td>Huron-Superior Catholic District School Board</td>
</tr>
<tr>
<td>District School Board of Niagara</td>
<td>Nipissing-Parry Sound Catholic District School Board</td>
</tr>
<tr>
<td>District School Board of Niagara</td>
<td>Ottawa-Carleton District School Board</td>
</tr>
<tr>
<td>District School Board of Niagara</td>
<td>Brant Haldimand Norfolk Catholic District School Board</td>
</tr>
<tr>
<td>District School Board of Niagara</td>
<td>Simcoe County District School Board</td>
</tr>
<tr>
<td>Sudbury Catholic District School Board</td>
<td>Bruce-Grey Catholic District School Board</td>
</tr>
<tr>
<td><strong>District School Board of Niagara</strong>, Brant Haldimand Norfolk Catholic District School Board</td>
<td>Upper Canada District School Board</td>
</tr>
<tr>
<td>Wellington Catholic District School Board</td>
<td>Upper Grand District School Board</td>
</tr>
<tr>
<td>Upper Grand District School Board, Wellington Catholic District School Board</td>
<td>Waterloo Catholic District School Board</td>
</tr>
</tbody>
</table>
Explicitly stated within their concussion policy documents, two school boards made note of their active partnerships with other boards, local medical experts, and a national injury prevention organization. Nipissing-Parry Sound Catholic District School Board developed their concussion policy and administrative procedure in collaboration with Near North District School Board, Nipissing-Parry Sound Public Health Unit, Parachute Canada, and local North Bay physician representatives. While Halton District School Board mentioned efforts to “Haltonize” the Ophea Concussion Protocol through collaborations with Halton Catholic District School Board, the Halton District School Board, and Halton Regional Health Department. This “Haltonization” of the Ophea Concussion Protocol (2017) is the only overt instance of localization in the present study. This finding was surprising as the Ophea Concussion Protocol states:

School boards may localize the components of the concussion protocol, to meet the specific needs of their school district, keeping in mind that they can raise the minimum standards but cannot lower the standards. Although it is important to be familiar with the Ontario Physical Education Safety Guideline Concussion Protocol, educators must ensure that they use their own board’s concussion protocol. (Ophea, 2017, p. 1)

This does not necessarily mean that other school boards did not tailor the concussion protocol to suit their needs; however, there is limited evidence of this in the present study.

4.1.2 Organizational structure.

When conducting an interpretive policy analysis, Yanow (2000) recommends that researcher-analysts

1. Identify the artifacts (language, objects, acts) that are significant carriers of meaning for a given policy issue, as perceived by policy-relevant actors and interpretive communities
2. Identify communities of meaning making/interpretation/speech/practice that are relevant to the policy issue under analysis
3. Identify the “discourses”: the specific meanings being communicated through specific artifacts and their entailments (in thought, speech, and act)
4. Identify the points of conflict and their conceptual sources (affective, cognitive, and/or moral) that reflect different implementations by different communities. (2000, p. 22)

The unit of analysis goes well beyond the artifacts themselves as the researcher-analyst attempts to ascertain how meaning is made within the field of study. In the current study, one dimension of meaning-making is evident through the organizational structure of each school board and how concussion policies and administrative procedures fit within. Table 4 provides a summary of how boards identified and categorized their concussion policy and administrative procedures within their existing organizational structure (full school board listing available in Appendix G). These policy areas within each school board indicate which Superintendent is responsible for the oversight of concussion policy and administrative procedure and how these policies are conceptualized in relation to other board policies such as Facilities Management and Use of Technology in the Classroom. Furthermore, the policy area within the board’s organizational structure may influence how partnerships are formed between the central authority of the school board and the principals ultimately responsible for the administration of these policies and administrative procedures in schools. In Ontario, school boards are responsible for their own organizational structure and are able to categorize areas or groups of policies together that suit the needs of their organization and community.
Table 4: Organizational Structure

<table>
<thead>
<tr>
<th>Policy Area</th>
<th>Number of School Boards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>4</td>
</tr>
<tr>
<td>Student Conduct and Safety</td>
<td>1</td>
</tr>
<tr>
<td>Administration</td>
<td>2</td>
</tr>
<tr>
<td>Students</td>
<td>9</td>
</tr>
<tr>
<td>Student Services</td>
<td>1</td>
</tr>
<tr>
<td>Student Health, Safety, and Medical Matters</td>
<td>2</td>
</tr>
<tr>
<td>School-Community Relations</td>
<td>1</td>
</tr>
<tr>
<td>Achievement and Well-being</td>
<td>2</td>
</tr>
<tr>
<td>Students, Parents, and Community</td>
<td>1</td>
</tr>
<tr>
<td>Schools and Students</td>
<td>2</td>
</tr>
<tr>
<td>Student Health Care</td>
<td>3</td>
</tr>
<tr>
<td>Learning Support Services</td>
<td>1</td>
</tr>
<tr>
<td>School Improvements and Student Success</td>
<td>1</td>
</tr>
<tr>
<td>Client Issues</td>
<td>1</td>
</tr>
<tr>
<td>Curriculum and Instructional Services</td>
<td>1</td>
</tr>
</tbody>
</table>

Concussion policies and administrative procedures do not exist within a vacuum and are situated within a school board’s existing organizational structure. The well-documented interdisciplinary nature of concussion and the requirements for a collaborative team approach consisting of multiple stakeholders as stated in PPM No. 158 may be partly responsible for the diversity of categorization summarized in Table 4. For example, is concussion policy a “Student Health, Safety, and Medical Matter”, related to “School-Community Relations,” “Operations” and “Administration” or “Achievement and Well-being”? Do school boards view concussion as a health matter, safety issue, learning
outcome in the curriculum, something to be accommodated for upon returning to learning within the domain of Special Education, or all of the above? While the present study does not conclusively answer these questions, these findings suggest that where a school board situates their concussion policy and administrative procedures may influence how educational partnerships are formed at the board level and what successful implementation looks like. For example, a school board that situates their concussion policy and administrative procedures within an area of “School-Community Relations” or “Students, Parents, and Community” may have stronger partnerships with parents and guardians compared to a board that situates their concussion policy and administrative procedures within an area of “Student Health, Safety, and Medical Matters” or “Student Health Care” which may have stronger partnerships with community health care providers. A comparative policy analysis of the implementation of school board concussion policies and administrative procedures would be useful in further understanding how meaning is made in different policy contexts. Given the participant sample of the present study was limited to one school board, I was not able to compare the experiences of school board administrators based on differences in how boards categorized their concussion policy and administrative procedures.

4.1.3 Compliance.

For some school boards, organizational structure and the area in which concussion policy and administrative procedures are categorized determines which Superintendent or other entity is responsible for overseeing compliance with board policy. How compliance of multiple stakeholder groups is established and the entity responsible for maintaining this compliance within educational partnerships at the school board level is summarized in Table 5.
<table>
<thead>
<tr>
<th>School Board</th>
<th>Responsible Entity</th>
<th>Mechanism of Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avon Maitland District School Board</td>
<td>The Board</td>
<td>Review concussion board reports</td>
</tr>
<tr>
<td>Hamilton-Wentworth District School Board</td>
<td>Superintendent of Student</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td></td>
<td>Achievement</td>
<td></td>
</tr>
<tr>
<td>Huron-Superior Catholic District School Board</td>
<td>Superintendent of Education</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kawartha Pine Ridge District School Board</td>
<td>Principals, teachers, and other</td>
<td>Implementing monitoring and compliance strategies to ensure that procedures are met.</td>
</tr>
<tr>
<td></td>
<td>staff</td>
<td></td>
</tr>
<tr>
<td>Niagara Catholic District School Board</td>
<td>Family of Schools Superintendents</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td></td>
<td>of Education</td>
<td></td>
</tr>
<tr>
<td>Bluewater District School Board</td>
<td>Administrative Council</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td>Northwest Catholic District School Board</td>
<td>Superintendent of Education</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td>Brant Haldimand Norfolk Catholic District School Board</td>
<td>Superintendent of Education</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implementing monitoring and compliance strategies to ensure that procedures are met.</td>
</tr>
<tr>
<td>St. Clair Catholic District School Board</td>
<td>Superintendent of Education</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td>Thunder Bay Catholic District School Board</td>
<td>Superintendent</td>
<td>Provide support to schools and staff in the compliance of the “Return to Learn” and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Return to Play” guidelines and concussion administrative procedures</td>
</tr>
<tr>
<td>Toronto Catholic District School Board</td>
<td>None listed</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td>Toronto District School Board</td>
<td>None listed</td>
<td>Annual compliance training for employees, school volunteers and community partners</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Upper Canada District School Board</td>
<td>Superintendent of Education</td>
<td>Review concussion board reports annually</td>
</tr>
<tr>
<td>York Catholic District School Board</td>
<td>Director of Education</td>
<td>The procedure shall be reviewed on an annual basis to ensure compliance with Ministry of Education</td>
</tr>
</tbody>
</table>

The mechanisms of compliance summarized in Table 5 are primarily focused on the central authority of the school board ensuring compliance of schools with board concussion policies and administrative procedures, and involve an annual review of concussion board reports submitted to Ontario School Boards’ Insurance Exchange at the end of every January and June. Two study participants vaguely recalled this annual review process in their board:

*There was a lot of [answering questions from teachers] in the beginning, but then as the year went on and the only thing I asked was, I sent out a survey, to find out whether [teachers] thought the protocol was user friendly, how often they had used it this year, and if there were more cases of concussion as a result. It allowed us to navigate through the following year, as to what needed to be done right at the beginning. We made it a standing item at the very first staff meeting of every school. We felt that it needed to be brought to everyone’s attention right at the beginning of the year. After that we found that the number of individuals contacting us diminished. Then policy coordinators were removed from their positions and then I really lost track of everything else that was going on, other than implementing it in my own school.* (Participant 2)

During the same timeframe in the same school board:

*I don’t remember anybody asking me last year if we had any kids who had a concussion. I do recall there being one year when we had to respond to a survey*
asking: did any children have a concussion, and how did the process work? So maybe the first year we did it but then I don’t think we did it ever again, and that would be the case with all of these policies. Somebody has to have the time to ask us to do that and it requires that we fill in paperwork. Somebody has to look at the paperwork; somebody has to deal with that paperwork, right? You actually have to have somebody whose responsibility is to take care of that. And then you also have to look and say, do principals have time to fill in that stuff? For those who are actually following the processes it’s even harder. (Participant 3)

Another level of compliance is situated at the school level and involves the compliance of multiple stakeholder groups listed in school board concussion policies and administrative procedures and their prescribed roles and responsibilities. A barrier to establishing full compliance across all stakeholder groups is that the entity responsible for ensuring compliance of stakeholders (e.g., principal) does not have full authority over all stakeholder groups (e.g., parents and health care providers). Table 6 provides a variety of excerpts from participant interviews demonstrating some of the barriers experienced by administrators attempting to implement concussion policies and administrative procedures in their schools.

Table 6: Barriers to Compliance

<table>
<thead>
<tr>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>“[Parents] just say ‘its my kid it’s none of your business, you know let me manage my own kid.’ It’s really just their call, you know, they’re still minors. The only saving grace is I’m on the bench with the hockey team, and I told the guys on the team, and our head coach, I said that if I see any kid that takes a shot to the head or a heavy check and if I suspect anything that kid is not playing. And so everybody’s in agreement with that. And so at least I can have a little bit of control with the athletes I see.””</td>
</tr>
</tbody>
</table>

Participant 1
“You know this is where all you can do is make the recommendation, and depending on who you are as an individual, if you want to take on some of the parents, then you’d be in a battle with them, but it all depends on the individual.”

Participant 2

“I don’t think there’s any consequence to not following the protocol except the consequence would be if you didn’t and something should happen the board would have a huge lawsuit.”

Participant 3

“Some teachers will just say, ‘well there’s nothing wrong with the kid, he’s just lazy, he just doesn’t want to do his homework, etcetera, etcetera.’ That’s when sometimes we have to sit down with the teacher and give him or her a little bit more education as to what’s going on.”

Participant 1

“There’s that sense of imposition that ‘who are we to say?’ And you will get push back very seldom, but it does happen, where the parents feel that we are now imposing on their role as parents. But that is in the Education Act, and sometimes you feel so pedantic in having to remind them that if the child is here at school, we are their parents, and we act as their parents.”

Participant 4

“During the parental meeting at the beginning of the season, everyone’s on board. Well, halfway through the season and you pull the kid, they are breathing down your neck: ‘my son’s fine, why isn’t he playing?’”

Participant 1
To address the issue of parent/guardian compliance when the need for physician consultation arises in the event of a suspected concussion, eight school boards included the same list of recommendations for principals in their board concussion policy and administrative procedures. These recommendations include:

- Discuss parental concerns (e.g., documentation fees) surrounding the process and attempt to address these concerns;
- Provide rationale for the required steps on the concussion administrative procedure;
- Include the parent/guardian and their child in every step of the recovery process;
- Provide parents/guardians with concussion information to increase their awareness and knowledge;
- Reiterate the importance of obtaining an official diagnosis from trained physician;
- Explain to parent/guardian if staff feels immediate medical attention is required, that they are obligated to call 911 even on parent refusal Inform parent/guardian that school is obligated to follow steps of the "return to learn" and "return to physical activity" process;
- If unsuccessful in acquiring full parental cooperation, seek support from Senior Administration. (Avon Maitland District School Board, 2015, p. 12)

To further address this issue, the Toronto Catholic District School Board developed an “Advisory of Non-Compliance with Doctor’s Order” form that principals can give to parents/guardians who decide to return their child to school against medical advice:

I, as the principal of the school, strongly advise you to follow the doctor’s advice and keep your son/daughter at home until the doctor advises you that it is safe for your son/daughter to return to school. However since it is ultimately your decision, as the student’s parent/guardian, as to when your son/daughter returns to school TCDSB will endeavour to develop a safety plan to help mitigate the chance of new/re-injury. However TCDSB must advise you that TCDSB cannot take responsibility for any further injury. (2014, p. 22)
Barriers to parent/guardian compliance were a topic of concern for all participants of this study. Surprisingly, when participants were asked whether parents/guardians reported concerns regarding medical documentation fees, none reported this as an issue. Instead, all participants suggested that a greater concern was “doctor shopping” for medical notes that cleared students to return after injury. As Participant 3 noted, “if [parents] want to get the child back [to school/activity], then that’s what they want, and they’re not realizing how detrimental it is to a child.”

4.2 Partners in Health

4.2.1 Expert consultation.

According to Algonquin and Lakeshore Catholic District School Board, “effective and meaningful school-community partnerships are an essential component of an effective protocol for concussion management and therefore will include an ongoing relationship with local public health units and co-terminus boards” (2015, p. 1). Table 7 presents a summary of school boards in Ontario that established partnerships with local health units in the development of their board concussion policy and administrative procedures.

<table>
<thead>
<tr>
<th>School Board</th>
<th>Health Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone District School Board, Algonquin and Lakeshore Catholic District School Board</td>
<td>Kingston, Frontenac and Lennox &amp; Addington Public Health</td>
</tr>
<tr>
<td>Nipissing-Parry Sound Catholic District School Board</td>
<td>Nipissing-Parry Sound Public Health Unit</td>
</tr>
<tr>
<td>Greater Essex County District School Board, Windsor-Essex Catholic District School Board</td>
<td>Windsor-Essex Health Unit</td>
</tr>
<tr>
<td>Avon Maitland District School Board</td>
<td>Huron County Health Unit, Perth County Health Unit</td>
</tr>
<tr>
<td>Halton District School Board</td>
<td>Halton Region Health Department</td>
</tr>
<tr>
<td>Huron Perth Catholic District School Board, Simcoe Muskoka Catholic District School Board</td>
<td>“Local Health Units”</td>
</tr>
</tbody>
</table>
London District Catholic School Board | Middlesex-London Health Unit, Oxford County Health Unit, Elgin St. Thomas Health Unit
---|---
Brant Haldimand Norfolk Catholic District School Board | Brant County and Haldimand Norfolk Health Units
Upper Grand District School Board, Waterloo Catholic District School Board, Wellington Catholic District School Board | Wellington-Dufferin-Guelph Public Health
York Catholic District School Board | York Region Public Health
Catholic District School Board of Eastern Ontario | Eastern Ontario Health Unit; Leeds, Grenville, and Lanark District Health Unit

Other types of health-related partnerships were established as school boards consulted with local physicians representatives, a register nurse, an athletic therapist, a local Brain Injury Association, and a noted concussion expert with MD/PhD in neurosurgery. Experts who were named explicitly within school board concussion policy and administrative procedures were recruited to participate in the present study and therefore will not be identified herein.

During two participant interviews it came to light that a concussion expert with MD/PhD in neurosurgery was consulted by the particular school board these participants work for but was not identified in board documents. Although there is no mention of his participation within available policy texts, this medical expert was a valuable resource for participants, both during the policy development and implementation phases:

“[MD/PhD in neurosurgery] was a wealth of information. We put together the protocol and then I was asked to speak at the [local] Hospital concussion seminar that he was running. I attended that conference and my role was simply to discuss how the board was managing the implementation of the protocol that had to be in line with the policy. After that conference, [MD/PhD in neurosurgery] volunteered to vet the protocol for us. I sent the protocol to him and he gave us all of these revisions that we ultimately added to the policy. On the one hand it simplified it, but it also gave us a timeline to work with.”

Participant 2
Here we see that this partnership was mutually beneficial: not only did the school board benefit from his medical expertise, but other health care providers were able to benefit from the knowledge and experience the school board administrator (Participant 2) had regarding the implementation of school board concussion policies and administrative procedures. Participants also discussed how valuable this concussion expert’s contribution was during difficult situations where school administrators were unsure how to proceed:

“If ever I have any questions about concussion [MD/PhD in neurosurgery] is just a phone call away.”

Participant 1

4.2.2 Concussion resources.

While not every school board has access to the expertise of medical doctors who specialize in TBI, boards do have access to a wealth of evidence-informed health information related to concussion. Table 8 presents a summary of resources school boards identified within their concussion policies and administrative procedures for the use of multiple stakeholder groups (associated website addresses are located in Appendix H). While some boards identified these partnerships as active collaborations (e.g., Nipissing-Parry Sound Catholic District School Board, Near North District School Board,), the use of these resources indicates a passive partnership between concussion experts and school boards.

**Table 8: Concussion Resources**

<table>
<thead>
<tr>
<th>Health and Research</th>
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<tbody>
<tr>
<td>Ontario Ministry of Health and Long Term Care website</td>
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<tr>
<td>Dr. Mike Evans “Concussion 101” YouTube video</td>
</tr>
<tr>
<td>Oregon Center for Applied Sciences, Inc. “Brain 101: The Concussion Playbook” website</td>
</tr>
<tr>
<td>Concussion in Sport Group Zurich Consensus Statement on Concussion (McCrory, et al., 2013)</td>
</tr>
<tr>
<td>• Sport Concussion Assessment Tool for Children V.3</td>
</tr>
<tr>
<td>• Concussion Recognition Tool</td>
</tr>
<tr>
<td>Centers for Disease Control and Prevention website</td>
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</tbody>
</table>
Canadian Medical Association “Getting Clear About Concussion Care” (Medical Education Course)

Canadian Paediatric Society “Position Statement on Sport-Related Concussion” (Purcell, 2014)

Ontario Neurotrauma Foundation website

McMaster University and McMaster Children’s Hospital Canchild website

Sunnybrook Office for Injury Prevention Play Safe Initiative website

Hamilton Brain Injury Association Bikes, Blades, and Boards Education Program

BC Injury Prevention and Research Unit website

**Sport and Safety**

Ontario Physical and Health Education Association website

Parachute Canada website

Hockey Canada website

Sport Concussion Library website

Coaches Association of Ontario website

Coaching Association of Canada website

Canadian Centre for Ethics in Sport website

True Sport website

**Other**

Ontario School Boards’ Insurance Exchange website

**Documentary: “Head Games: The Global Concussion Crisis” (2012)**

The majority of the resources identified in Table 8 are freely available online. In some cases (e.g., Concussion in Sport Group Consensus Statement on Concussion) these resources are the same ones directing health care providers in their diagnosis and management of concussion. While this is advantageous for continuity of care between health care providers and educators, issues may arise as concussion research evolves and consensus statements change. During the course of the present study, the Concussion in
Sport Group released the Berlin consensus statement in April 2017 (McCrory et al., 2017); however, no discernable change was made to the Ophea Concussion Protocol in September 2017 (Ophea, 2017). At present, a revised Ophea Concussion Protocol aligned with the Berlin concussion consensus statement and Canadian Guideline on Concussion in Sport (Parachute Canada, 2017) is expected September 2018 as per their website (Ophea, 2018).

4.2.3 Health and well-being.

The Ontario Ministry of Education “recognizes that the health and safety of students are essential preconditions for effective learning” (2014a, p. 1). Like many school boards, the Halton District School Board acknowledges that Educators and school staff play a crucial role in the identification of a suspected concussion as well as the ongoing monitoring and management of a student with a concussion. Awareness of the signs and symptoms of concussion and knowledge of how to properly manage a diagnosed concussion is critical in a student's recovery and is essential in helping to prevent the student from returning to learning or physical activities too soon and risking further complications. Ultimately, the awareness and knowledge could help contribute to the student's long-term health and academic success. (2015, p. 1)

The long-term health and academic success of students are common concerns of educators working in Ontario’s public schools. Table 9 presents a summary of participant experiences of addressing the health needs of students in their care.
Table 9: Health and Well-being

<table>
<thead>
<tr>
<th>Health and Well-being</th>
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</table>

“We’re parents, we’re judge and jury, we’re police officers, we are health care professionals. We’ve always been, it’s just that now [concussion policy] is more scientific and it’s more problematic. We’re more concerned with children’s livelihoods. I’ll tell you that this is a world where people in my opinion are way more anxious than they ever were. There are more kids that are anxious, there are more teachers that are anxious, there are more principals that are anxious, and there are good reasons for that. We almost have created a world of anxiety because as every day goes by, we add more and more to everybody’s plate.”

Participant 3

“We are much more alert in terms of what needs to happen in [concussion] protocol and the steps that need to be followed. What would happen in the past, we would be more the receivers of information, not the managers.”

Participant 4

“I deal with [student] health issues on a daily basis. I feel like sometimes I’m a practitioner in the hospital or in a walk-in clinic. I have students coming to the office, and there’s one or two of them who rely on my medical advice, or my advice to seek out care. I just had a student here today with an issue with his eye, and there’s another one waiting in the wings: ‘well what do you think Ms.? It’s a big part of our day. It’s just become a lot more apparent in the last while, because of reactions to foods and other allergic reactions.”

Participant 4
Educators are increasingly performing the duties of professions outside of their scope of practice. Working as an Ontario Certified Teacher, I receive annual training in anaphylaxis, asthma, and mental health awareness in addition to concussion education. While student health and safety are essential preconditions for learning, monitoring student recovery through the multi-stage concussion protocol, as Participant 2 notes, “is not for the weak of heart.” If educators are to continue to take on a more active role in the management of student health needs (as opposed to the previously passive role as indicated by Participant 4 in Table 9), at what point does this partnership in student health become disadvantageous to stakeholders involved (e.g., teacher burn-out as indicated by Participant 3, Table 9)? By adhering to school board concussion policies and administrative procedures, all stakeholders involved are contributing to the health and well-being of students (e.g., seeking medical care, monitoring symptoms, supporting recovery). What is unknown at present is the capacity of the public education system to address the evolving health needs of the student population.

4.3 Partners in Safety

4.3.1 Safety culture.

Issues of safety go well beyond concussion awareness and prevention and extend to all aspects of injury prevention for students and staff in Ontario’s public schools. Table 10 presents a summary of some of the experiences of study participants as it relates to a broad understanding of safety that encompasses the learning environment, playground, and facilities management plans. Multiple stakeholders are required to work in collaborative partnerships to create a culture of safety-mindedness. To this end, school boards used various means of working toward achieving a culture of safety via clauses in their concussion policies and administrative procedures. For example, numerous school boards included requirements for wearing sport-specific protective equipment, requirements for teachers and coaches to teach proper skill progression and technique, the practice of Fair Play (e.g., “to follow the rules and ethics of play, to practice good sportsmanship at all times and to respect their opponents and officials”, Kenora Catholic District School Board, 2015, p. 13), and the use of Player Codes of Conduct or Active &
Safe Pledges. All of these means are not only useful in preventing concussion, but are also appropriate for the prevention of other injuries as well.

**Table 10: Safety Culture**

<table>
<thead>
<tr>
<th>Safety Culture</th>
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<tbody>
<tr>
<td>“You have to look at your environment, to figure out where concussions could happen, if the concussions are going to happen in your school. Or, any type of injuries, it’s not just a concussion. It’s also a broken leg, you could have any type of serious injury because of the [playground] space.”</td>
</tr>
<tr>
<td>Participant 3</td>
</tr>
<tr>
<td>“There isn’t anybody ever at the [policy development] table who doesn’t want kids to be safe.”</td>
</tr>
<tr>
<td>Participant 3</td>
</tr>
<tr>
<td>“We need to keep our kids safe and healthy, and if they’re not they can’t do their best. It’s vital to the school and the same thing goes with the staff. We only have so much control over that; however, we can keep things as safe as possible in our building and [facilities management] plans.”</td>
</tr>
<tr>
<td>Participant 4</td>
</tr>
<tr>
<td>“Health and safety are challenging areas of our work. As managers of our school and school leaders, we try our very best to do the best possible, but then we are limited, and we’re held back sometimes. Even though we would like to keep everyone safe and healthy there are limitations, so we go as far as we can.”</td>
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<td>Participant 4</td>
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</table>

### 4.3.2 Risk and liability.

The creation of a safety culture requires collaborative partnerships between multiple stakeholder groups, as risk is inherent in many aspects of the typical school day. Within their concussion policies and administrative procedures, many school boards recognize
“that children and adolescents are among those at greatest risk for concussions and that, while there is potential for a concussion any time there is body trauma, the risk is greatest during activities where collisions can occur, such as during physical education classes, playground time, or school-based sports activities” (Dufferin-Peel Catholic District School Board, 2015, p. 1). To address these inherent elements of risk, many school boards require parents and guardians to sign pre-participation forms at the beginning of every school year. Included in these forms is an Elements of Risk Notice:

The risk of injury exists in every athletic activity. However, due to the very nature of some activities, the risk of injury may increase. Injuries may range from minor sprains and strains to more serious injuries, including those affecting the head (concussions), neck or back. These injuries result from the nature of the activity and can occur without fault on either the part of the student, the school board or its employees/agents or the facility where the activity is taking place. The safety and well-being of students is a prime concern and attempts are made to manage, as effectively as possible, the foreseeable risks inherent in physical activity. (District School Board Ontario North East, 2014, p. 5)

The above notice addresses the notion that injuries may occur and are not the fault of the student, the board or its employees/agents, or the facility where the activity took place. While risk of injury is inherent in any physical activity, some participants suggested liability was a barrier for concussion policy implementation. Table 11 presents a summary of some the tensions surrounding liability experienced by two study participants. Difficulties arose when teachers, coaches, or principals felt students were returning to the classroom or physical activity before they were fully recovered from their concussion. In such instances, one participant felt that their moral and ethical obligations outweighed the authority of parents and guardians or health care providers signing off on medical forms. As indicated in Table 11, Participant 3 was well aware of her ultimate responsibility as an elementary school principal but was more motivated by serving the needs of the child than potential risk of liability after a student experienced an injury. Effective partnerships between stakeholder groups increase the likelihood that all
members of the collaborative team are united in supporting students recovering from concussion.

Table 11: Liability

<table>
<thead>
<tr>
<th>Liability</th>
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<tbody>
<tr>
<td>“If the parents signed off they signed off. But morally and ethically as that teacher or as that coach, if you know the kid isn’t right…”</td>
</tr>
<tr>
<td>Participant 1</td>
</tr>
<tr>
<td>“A regular barrier is the differences in opinions, between what can and should be done by first line workers. Whether it should be the responsibility of the teacher, the secretary, the principals, or educational assistants. Whose responsibility should it be if a student has a concussion or comes back with a concussion? That was a huge barrier as to whose responsibility it was and we get caught up in the legal part of this versus the child’s need part of it.”</td>
</tr>
<tr>
<td>Participant 3</td>
</tr>
<tr>
<td>“My staff always knew, we don’t care about the legal part, we care about the right part. So, if we’ve got a kid here who has got a problem what are we going to do? I would say to them all the time, ‘if we are doing the right thing, it’s not going to matter, and you’ll have me, I’ll back you till the cows come home.’”</td>
</tr>
<tr>
<td>Participant 3</td>
</tr>
<tr>
<td>“Letters coming back from a parent for Special Education, because that’s something that I was also responsible for, concussion paper work was something that I was attentive to. But I wouldn’t say that’s necessarily the case for all principals and vice principals, they have a lot on their plate. And yet on a lot of levels it is our responsibility because the liability hits us before it hits anybody else.”</td>
</tr>
<tr>
<td>Participant 3</td>
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</table>
“I don’t really care about the liability, I care about something happening to that child. So, it’s not just that I’ll get into trouble because I didn’t follow the concussion policy process, more importantly if I don’t follow the concussion process, the reason I’m going to get in trouble is because that little boy or girl is going to suffer another concussion really quickly, and that’s more problematic.”

Participant 3

4.3.3 Community connections.

PPM No. 158 “applies to all publicly funded elementary and secondary schools, including extended-day programs operated by school boards for full-day kindergarten. However, this memorandum does not apply to licensed child-care providers, including those operating on the premises of publicly funded schools” (Ministry of Education, 2014a, p. 1). Rowan’s Law (Concussion Safety), 2018 has since amended the Education Act to require schools boards and private schools to comply with policies and guidelines related to student concussion safety and requires sport organizations to establish a Code of Conduct for players, parents, coaches, and other positions involved with the organization. Sport organizations must establish a removal from sport and a return to sport protocol indicating immediate removal from play for suspected concussion and a gradual return to play upon recovery. Sport organizations must also designate persons who are responsible for the implementation of their protocol.

As we have seen in previous sections, school boards in Ontario have addressed many of these requirements prior to the passage Rowan’s Law (Concussion Safety), 2018. Table 12 provides a summary of 30 school boards that, contrary to the requirements of PPM No. 158 but consistent with the requirements of Rowan’s Law (Concussion Safety), 2018, have already extended their concussion policies and administrative procedures to apply to various community organizations using board facilities (full list of school boards in Appendix I).
Table 12: Community Connections

<table>
<thead>
<tr>
<th>Organization</th>
<th>Number of School Boards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community sport organizations, licensed child care providers</td>
<td>24</td>
</tr>
<tr>
<td>YMCA child-care providers</td>
<td>1</td>
</tr>
<tr>
<td>Child and youth organizations, daycare</td>
<td>1</td>
</tr>
<tr>
<td>Summer school, night school, all licensed third party Full Day Kindergarten extended day programs and all community users</td>
<td>1</td>
</tr>
<tr>
<td>Third party Full Day Kindergarten Extended Day Programs and Community Users</td>
<td>1</td>
</tr>
<tr>
<td>Community-based organizations</td>
<td>2</td>
</tr>
</tbody>
</table>

The extension of school board concussion policies and administrative procedures reinforces the partnerships school boards have with community-based organizations in the interest of student safety. As school boards and community-based organizations look to implement the requirements of *Rowan’s Law (Concussion Safety), 2018*, they may find it useful to consult with the boards listed in Table 12 as they have already “invented the wheel.”

### 4.4 Summary

This chapter presented the findings of an interpretive policy analysis of school board concussion policies and administrative procedures in Ontario. The present study highlights the importance of partnerships between multiple stakeholder groups as they support the educational, health, and safety needs of students.
Chapter 5

5 Discussion and Conclusion

This chapter presents a discussion of the findings of the present study in relation to other studies conducted on the implementation of PPM No. 158 in Ontario schools. Consistent with the philosophical presuppositions that underpin this hermeneutic interpretive policy analysis, knowledge claims generated from this research are considered situated and contextual. Findings are also discussed in relation to the broader peer-reviewed literature, tempered by my experience as an Ontario Certified Teacher. Implications of these findings for research, policy, and the teaching profession are discussed, as are recommendations for future research, policy initiatives, and the professional practice of teachers. Finally, the limitations of this study are considered and conclusions are discussed.

5.1 Nested Contexts: Research on Concussion Policy in Ontario

In a recent cross-sectional survey of 39 high school principals working in the Toronto District School Board, Hachem, Kourtis, Mylabathula, and Tator (2016) report that 92% of schools had return to play protocols in place. Data was collected soon after the full implementation of PPM No. 158 was required to take effect; however, only 77% of schools had return to learn protocols in place and only 43.6% of principals reported delivering concussion education to parents. Similar to the findings of this interpretive policy analysis, principals reported widespread use of concussion resources provided by Ophea (84.6%) and Parachute Canada (20.5%) to support awareness and staff training efforts in their schools. Principals reported using these resources to educate parents on concussion identification and management via board information nights (23.1%), pamphlets (12.8%), online video (2.6%), information at occurrence (10.3%), and other means (10.3%). Despite these efforts to educate parents on concussion, principals reported that attendance at board information nights was low and those who were in attendance had children already impacted by concussion. Parent engagement was a significant challenge to the implementation of school board concussion policies in the
school board under study (Hachem, Kourtis, Mylabathula, & Tator, 2016). Further, these researchers reported 82% of principals wanted additional resources to aid parent education on concussion and return to learn/return to physical activity protocols. These findings echo the experiences shared by the participants of the present study, as collaboration with parents and guardians was essential for the supporting students recovering from concussion.

In a qualitative study exploring concussion knowledge, skills, and attitudes of eight Ontario elementary school teachers working in four different school boards, Jorgensen (2016) reports,

> Teachers feel unprepared (due in part to a lack of information, support, and time) to develop and implement a plan for a child’s return to learn. Confounding this overwhelming responsibility was the perceived lack of support from parents to participate fully in the execution of a gradual return to learn plan due to their own obligations. (p. 102)

Jorgensen (2016) suggests that some participants may have reported feeling unprepared due to the job action that occurred during the time PPM No. 158 was expected to be in full effect. The six participants in Jorgensen’s (2016) study were not aware of the existence of PPM No. 158 at the time of study participation and attributed job action to limited participation in staff meetings and professional development opportunities where they typically would have received training on such a policy. Hachem, Kourtis, Mylabathula, and Tator (2016) also credited teacher job action in Ontario as a potential cause for the delay in full implementation of PPM No. 158.

In addition to a sense of overwhelm felt by teachers as they attempt to implement PPM No. 158 in Jorgensen’s (2016) study, was a reported lack of support from parents in the present study. As Participant 4 of the present study noted, teachers are required to act in the best interests of children at school in a fashion similar to a concerned parent:

> There’s that sense of imposition that ‘who are we to say?’ And you will get back very seldom, but it does happen, where the parents feel that we are now imposing
on their role as parents. But that is in the Education Act, and sometimes you feel so pedantic in having to remind them that if the child is here at school, we are their parents, and we act as their parents.

The need for a high degree of collaboration between parents/guardians at home and teachers and administrators at school appears to be a source of tension in the implementation of PPM No. 158. To address this tension, Hachem, Kourtis, Mylabathula, and Tator (2016) recommend

All students and parents should receive information packages outlining the signs and symptoms of concussions, the principles of managements, potential long-term consequences, and ways to prevent concussions. It is advised that these documents be distributed at the start of the school year along with the usual school registration forms. (p. 6)

The authors also recommend, “all parents should sign a form stating that they have been educated on the risks of concussions in sports, ways to prevent concussions, along with the potential complications and post-recovery time” (p.6). While these recommendations appear to be incorporated in many of the school board concussion policies and administrative procedures included in the present study, pre-participation Elements of Risk notices, concussion information sheets, and pamphlets are passive ways of educating any stakeholder group on concussion awareness, prevention, identification, and management. Considering that studies conducted one year (Bach, 2015; Hachem, Koutis, Mylabathula, & Tator, 2016), two years (Jorgensen, 2016), and four years (the present study) after the announcement of PPM No. 158 parent/guardian concussion knowledge and collaboration with teachers and administrators continues to be reported as a barrier to concussion policy implementation, more active ways of educating stakeholder groups such as parents/guardians is needed. Jorgensen (2016) goes on to report that “participants also expressed a difficulty balancing their obligation to monitor and protect the child, acting as an advocate for them to stay at home for their recovery, with expressed empathy towards the needs of the parents (to return to work)” (p. 76). The findings of Jorgensen (2016), Hachem, Kourtis, Mylabathula, and Tator (2016), and the present study highlight
the need for parent/guardian concussion education. Effective partnerships in education require compliance from all stakeholders; however, all stakeholders must be adequately informed on concussion prevention, identification, and management to make informed decisions related to student care.

Partnerships in health and well-being were crucial for the development and implementation of PPM No. 158 in Ontario school boards but were also a source of tension. Participant 3 stated “We’re parents, we’re judge and jury, we’re police officers, we are health care professionals” while Participant 4 reported feeling like a “practitioner in the hospital or in a walk-in clinic.” Similarly, Jorgensen (2016) concluded that

The increased expectation of knowledge and responsibility that accompanies the policies and procedures, coupled with the volume of information disseminated through inappropriate venues (email or quick inserts of information during complicated and lengthy staff meetings), produced a feeling of anxiety within participants who felt strained by the extra hats they were asked to wear on top of the teaching hat they were paid to wear. (pp. 103-104)

Jorgensen also reported that participants in her study expressed “that the concussion policy places them in a position of a responsibility for an area that falls outside of their comfort level and area of expertise” (p. 94). One way to ameliorate these tensions was to consult with experts in various health professions to vet school board policies, as suggested by Participant 2 of the present study, or establish partnerships with health care providers in the community, as reported by Bach (2015).

In a qualitative case study conducted of teacher perspectives of concussions in Ontario classrooms, Bach (2015) reported that teachers developed strong connections with health care providers in their school community including a physical therapist, sports medicine doctor, and primary care physician. Participants reported developing partnerships with these health care providers over time as parents and educators felt comfortable working with them in their community. Furthermore, one participant developed a partnership with a primary care physician who went on to provide concussion workshops for Health and Physical Education department heads and teachers.
Similar to the findings previously discussed, Bach (2015) also noted that parent/guardian-school collaborations were challenging as her participant Claire shared “sometimes the hardest people to sell this on is the parents” (p. 71). This became apparent when Claire reported that she routinely experienced parents allowing their child to play on a community hockey team while that same child was not allowed to play on the school team because of the school concussion policy in place. This highlights the need for a culture of safety-mindedness as students move from home, to school, and out into the community. As Rowan’s Law (Concussion Safety), 2018 comes into force we may begin to see scenarios like the one described by Claire less and less. To further address the need for parent/guardian compliance with school board concussion policies and administrative procedures, Bach (2015) suggests the need for more parent/guardian education on concussion. Unfortunately, similar to the findings reported by Hachem, Kourtis, Mylabathula, and Tator (2016), Bach (2015) also attended a school community concussion meeting and found that most parents in attendance were parents of students who had already experienced a concussion. While it is beneficial for parents of students who have a concussion to attend these information nights, parents that are difficult to reach are likely not getting the information they need that would reinforce the seriousness of concussion and how to support their child through the protocol the school has in place. Not only do parents/guardians need to be informed about concussions after their child is diagnosed with one, they should also be aware of the risk of concussion associated with physical activity, the signs and symptoms of concussion so they know what to look for, and concussion prevention strategies to prevent injury in the first place.
5.2 Widening the Scope: Connections to the Broader Research Literature

5.2.1 Partners in education.

5.2.1.1 Policy lending.

The partnerships in education, health, and safety that school boards in Ontario relied on to fulfill the requirements of PPM No. 158 have also been reported in various studies examining concussion policy development and implementation across jurisdictions. In the present study, the sharing of policy documents and administrative procedures between school boards was commonplace and enabled boards to select policy elements from other boards and adapt them to suit their local needs. In my analysis of school board concussion policy documents and administrative procedures, there appears to be a high degree of policy lending between boards and only subtle changes made to borrowed policies. As noted by Participant 4, “somebody has already invented the wheel.” In Ontario school boards, policy lending is an efficient practice that does not appear to have negative consequences for policy implementation as all school boards in Ontario are governed by the same administrative policies of the Ministry of Education and provincial and federal laws. In their national study of state experiences implementing youth sports concussion laws in America, Lowrey and Morain (2014) reported that policy lending between states could have negative consequences for policy implementation. One respondent reported that their state legislature had copied the text of another state’s law, with little consideration for the different agency structures or existing relevant statutory language within their own state. The result was confusion regarding what qualifications were necessary for a “qualified medical provider” to diagnose, manage, and provide clearance for athletes with suspected concussions, leading many medical providers to refuse to provide care citing licensing concerns (Lowrey & Morain, 2014). If Canada is to strive for a national concussion strategy, it is vital that the existing agency structures and different provincial laws are considered. The development and implementation of school board concussion policies and administrative procedures in Ontario benefited from policy lending because of the shared provincial policy and legislative context. Other provinces
and territories in Canada may benefit from adapting the concussion policy and legislative framework Ontario has established, with careful consideration to their local contexts.

5.2.1.2 Organizational structure.

The pre-existing structure of agencies and organizations impacted by concussion policies and administrative procedures is of critical importance for successful policy implementation. In the present study, partnerships in education were based on organizational structure of school boards. Different school boards in Ontario identified and categorized their concussion policy and administrative procedures within their existing organizational structure. These policy areas within each school board indicate which Superintendent is responsible for the oversight of concussion policy and administrative procedure and how these policies are conceptualized in relation to other board policies. Situating concussion policies within “Student Health, Safety, and Medical Matters”, “School-Community Relations,” “Operations” and “Administration” or “Achievement and Well-being” may influence how educational partnerships are formed at the board level and what successful implementation looks like. The Thames Valley District School Board categorized their concussion policy in “Learning Support Services,” while York Region District School Board positioned their concussion policy under the umbrella of “Curriculum and Instructional Services” (Table 4). Both boards situated their concussion policies and administrative procedures within policy areas traditionally associated with Special Education in Ontario.

Within the traditional lexicon of Special Education policy and procedure in Ontario, accommodations are “individualized teaching and assessment strategies, human supports, and/or individualized equipment” (Ministry of Education, 2010, p. 72) that do not alter the curriculum expectations for the student. Modifications are changes to “the grade-level expectations for a subject or course in order to meet a student’s learning needs. Modifications may include the use of expectations at a different grade level and/or an increase or decrease in the number and/or complexity of expectation relative to the curriculum expectations for the regular grade level” (Ministry of Education, 2010, p. 72). The precision of language used surrounding accommodating students and modifying curriculum expectations is important when referring to Ontario Ministry of Education
policy documents. These meanings do not necessarily translate to medical research or legal literature from other jurisdictions advocating for specific educational interventions to be put in place for students returning to school after concussion. Further, other Special Education policies in Ontario may provide resources to students with prolonged symptoms when they return to school after concussion. Policy/Program Memorandum No. 8 (PPM No. 8), Identification of and Program Planning for Students with Learning Disabilities (Ministry of Education, 2014b) may serve as a means of gaining access to appropriate resources for students suffering from prolonged concussion symptoms as “any other students who demonstrate difficulties in learning and who would benefit from Special Education programs and/or services that are appropriate for students with learning disabilities are eligible for appropriate programing” (Ministry of Education, 2014b, p. 1, emphasis in original). Using inclusive teaching strategies such as universal design for learning (UDL) is one way to accommodate the diverse needs of a student population and the transient learning needs of a student recovering from concussion. Within the classroom, UDL implies that the learning environment should be flexible to meet the needs of the learner as opposed to requiring the learner to meet the needs of the environment (Ministry of Education, 2013). Learning for All, K-12 (Ministry of Education, 2013) also highlights differentiated instruction (DI) as an important pedagogical strategy to meet the needs of a diverse student population. With DI, learners are appropriately challenged by varying “the content of learning (what students are going to learn, and when); the process of learning (the types of tasks and activities); the products of learning (the ways in which students demonstrate learning), and the affect/environment of learning (the context and environment in which students learn and demonstrate learning)” (Ministry of Education, 2013, p. 17, emphasis in original). These teaching strategies and professional practices are the bedrock foundation upon which the inclusion of all students is based. Inclusion, as described by Timmons (2006), “is a philosophy that one embraces when teaching, working, and communicating within a society characterized by diversity” (p. 471). Inclusive education in Ontario then, is not relegated to the estimated 15.5% of Canadian school-aged population identified with behavioral, communication, intellectual, physical, or multiple exceptionalities (Timmons, 2006), but extends to everyone. When supporting students returning to school after being
diagnosed with concussion, teachers in Ontario may find benefit on relying on the professional skills they use to meet the needs of a diverse student population. By leveraging the current Special Education policy framework in Ontario, teachers and school board administrators may be better able to meet the needs of a student population returning to school after concussion; for concussion is characterized by diversity in symptomatology, severity, and duration.

In a recent systematic review of factors affecting return to school and accommodations for return to school following concussion, Purcell, Davis, and Gioia (2018) found that 17-73% of students were provided with academic accommodations or experienced difficulty when returning to school. Of the studies included in this review, students were more likely to receive academic accommodations in schools with a concussion policy if they had medical documentation (Purcell, Davis, & Gioia, 2018). Considering most concussions will resolve quickly and educational support frameworks currently exist to aid students with medical disabilities (such as the Special Education framework in Ontario described above), McAvoy and colleagues (2018) advocate for the application of fast, flexible, and temporary accommodations to suit individualized student needs after concussion, with only a small fraction of students requiring formalized supports such as an Individualized Education Plan (IEP). The implementation of concussion policy and administrative procedures must be contextualized within these existing organizational policy structures to ensure efficacy. In the concussion policy documents and administrative procedures included in the present study, 51 of 64 school boards represented included some mention of accommodation, modification, or individualization, while 23 boards specifically mention the creation of an IEP. In Ontario, the development of an IEP as part of a Special Education program involves the formation of an interdisciplinary Identification, Placement, and Review Committee where the school principal, teacher, parents or guardians, and student (if appropriate) determine if a student fits the criteria of an identified exceptionality and recommend Special Education programs and services that are appropriate for the student. Decisions are based on the input from all committee participants and the results of documented clinical assessments (e.g., neurocognitive assessments). While these procedures appear similar to the return to learn portion of the Ophea Concussion Protocol discussed throughout this thesis, this
process typically takes upwards of one month to complete. Considered specifically in the
context of concussion, the majority of students will be symptom free within 2-4 weeks
after injury (Purcell, Harvey, & Seabrook, 2016), reaching full symptom resolution
before a formal IEP can be assembled. Future iterations of concussion policies and
administrative procedures in Ontario school boards would benefit from better alignment
with existing organizational policy structures such as the Special Education policy
framework already in place. Of those school boards already citing use of Special
Education policy mechanisms in their concussion policies and administrative procedures,
clarity is needed to explicate how these policies are being applied to the transient nature
of concussion recovery.

5.2.1.3 Compliance.

As stipulated in PPM No. 158 and in accordance with paragraph 27.1 of subsection 8(1)
of the Education Act, school boards are required to report to the Ministry of Education
upon implementation of board policies to ensure full compliance with the memorandum.
Beyond this act of reporting to ensure compliance, PPM No. 158 stipulates “school
boards should ensure that a process is in place to support ongoing implementation and
compliance with the board policy at the school level” (Ministry of Education, 2014a, p. 4). In the present study, 14 school boards specifically included provisions related to
compliance in their concussion policy or administrative procedures (Table 5), with most
of the mechanisms of compliance consisting of annual review of concussion board
reports and the provision of “support to schools and staff as required to ensure
compliance” (Brant Haldimand Norfolk Catholic District School Board). While these
mechanisms to ensure compliance with school board concussion policies are vague, the
majority of boards included in the present study (50) did not indicate how they intend to
ensure compliance of individual schools within their jurisdiction. In a content analysis of
the consistency and variation of high school written TBI policies in relation to state youth
sports concussion laws, Coxe and colleagues (2017) found a wide variance in the type of
language used in 71 policies across 26 states and the District of Columbia relating to
policy enforcement, description, and implementation specifications. Analysis included
strictness of language used in each policy, details and definitions of requirements used,
and the specific steps for implementation of requirements included in each policy. Stricter enforcement language and clear-cut implementation steps were recommended to ensure successful implementation of state youth sports concussion laws in high schools (Coxe et al., 2017). In the present study, school board concussion policies and administrative procedures included specific steps for implementation; however, while a minority of school boards did include mechanisms of compliance, the language used was vague.

All participants of the current study reported the compliance of stakeholders outside of the authoritative control of the Ontario Ministry of Education and school boards as a barrier to policy implementation. Specifically, parent/guardian cooperation with teachers and school administrators in the implementation of school board concussion policies and administrative procedures was challenging at times (Table 6). Similarly, Lowrey and Morain (2014) identify parental cooperation as one of the top three obstacles to state concussion law compliance (the other two being access to health care providers and concussion awareness). The authors found several states reported a “small, but persistent practice among some parents for “doctor-shopping” or visiting numerous physicians to find one who would certify their child could return to play” (Lowrey & Morain, p. 296). Further, in a survey of 101 high school Athletic Directors in Idaho, one participant wrote that they felt the biggest challenge of complying with the concussion law was “convincing some parents that their child is concussed” (Faure, Moffit, & Schiess, 2015, p. 15). The importance of partnerships in education across multiple stakeholder groups is well established in the concussion research literature (Davies, 2016; Davis & Purcell, 2013; Halstead et al., 2013; McGrath, 2010; Sady, Vaughan, & Gioia, 2011); however, effective partnerships cannot be legislated or codified in a policy document. Further, the authority of the policy documents and administrative procedures included in this analysis is limited to school board employees, volunteers, and third parties using board property. While school administrators can encourage other stakeholder groups such as parents/guardians and health care providers to adhere to a board’s concussion policy requirements, there does not appear to be formal consequences if the policy is not followed.
5.2.2 Partners in health.

5.2.2.1 Expert consultation.

In their recommendations for policy development regarding sport-related concussion prevention and management in Canada, the Canadian Concussion Collaborative highlight the importance of having access to proper expertise and tools that guide gradual return to school and return to play (Frémont, Bradley, Tator, Skinner, & Fischer, 2015). Strong partnerships are essential to support students recovering from concussion for, “medical and school systems must be prepared partners to support the school return of the student with mild TBI. Medical providers must be trained in assessment and management skills, with a focused understanding of school demands. Schools must develop policies and procedures to prepare staff to support a gradual return process with the necessary academic accommodations” (Gioia, 2016, p. 93). In a review of the clinical implications of youth sports concussion laws in America, Bell, Master, and Lionbarger (2017) advise health care providers to reach out to local health departments, schools, and community organizations to understand how state laws are being interpreted by these stakeholder groups. By developing partnerships with the communities they serve, health care providers can determine how local concussion policy and legislation impact their clinical practice while biding by relevant ethical and legal responsibilities (Bell, Master, & Lionbarger, 2017). In an international study on educators’ perceptions of children with TBI, teachers identified the need to collaborate with experts to create consistency across home, school, and medical settings to best support students (Kahn, Linden, McKinlay, Gomez, & Glang, 2018). In addition to identifying health care providers as a source of concussion expertise, teachers also identified parents as a valuable source of expertise on the health needs of their child (Kahn et al., 2018). In the present study, two participants shared how much they valued their partnership with a local concussion expert with MD/PhD in neurosurgery. This medical expert consulted on the school board’s initial draft of their concussion policy and administrative procedures and also provided guidance on specific concussion cases that were challenging for school administrators. In line with the recommendations made by Bell, Master, and Lionbarger (2017), the partnership with MD/PhD in neurosurgery was mutually beneficial as one of the
participants of the present study shared his expertise on the educator’s perspective of concussions at a local hospital concussion seminar for health care providers run by the MD/PhD in neurosurgery. In light of my discussion of parental barriers to compliance above, the findings of Kahn and colleagues (2018) highlight the importance of collaborative partnerships between home, school, and health care providers. Parents and guardians are an important source of health information as it relates to their child which is perhaps why parent/guardian non-compliance was a barrier identified by participants of this study.

5.2.2.2 Concussion resources.

In the present study, school boards in Ontario identified numerous resources that were used to develop and implement board concussion policies and administrative procedures in response to PPM No. 158 (Table 8). Some of these resources were specifically developed for educators (e.g., Ophea, Parachute Canada), while others were developed for other stakeholder groups and repurposed for use in Ontario school boards (e.g., Coaching Association of Canada, Canadian Paediatric Society). In a qualitative literature review of knowledge transfer and concussion education literature, Provvidenza and colleagues (2013) call for the identification of organizational needs and preferred learning strategies of target audiences, coupled with evaluation as key components of a successful knowledge transfer strategy. The Canadian Concussion Collaborative echoes this by recommending knowledge transfer strategies be user-specific, context-specific, and impact-oriented (Frémont et al., 2015). In a qualitative document analysis of sport safety resources provided by stakeholder organizations in Australia, Bekker and Finch (2016) conclude that “the existence of a large number of resources from reputable organizations does not mean that they are necessarily evidence based, fully up to date or even effective in supporting sport safety behavior change” (p. 1). In the present study, school boards used resources to develop and implement their concussion policies and administrative procedures that were both context- and user-specific (as recommended by Frémont et al., 2015) as well as non-specific; however, these is no evidence to indicate if school board organizational needs were considered when developing these resources or if resources were evaluated for effectiveness (as recommended by Provvidenza et al.,
Further, the findings of this study suggest that school boards used a large number of concussion resources without their known efficacy in supporting safety behavior change or if they conducted an evaluation of knowledge transfer once in use. The majority of school boards in Ontario relied on passive partnerships with health and injury prevention organizations for concussion information in the development and implementation of their concussion policies and administrative procedures. In the future, health and injury prevention organizations may seek out more active collaborations with schools boards so that the concussion resources that are provided are targeted to the specific needs of end users and are evaluated for their efficacy in supporting safety behavior change.

5.2.2.3 Health and well-being.

Within the extant literature on the role of schools in supporting students returning to learn after concussion, much of the focus is on the need for collaborative interdisciplinary teams (Davies, 2016; Davis & Purcell, 2013; Halstead et al., 2013; McGrath, 2010; Sady, Vaughan, & Gioia, 2011). In a recent qualitative study of educators’ perceptions of children with TBI in Australia, New Zealand, Northern Ireland, and the United States, researchers found that participants had little knowledge of TBI but reported they would be able to adequately support these students with input from concussion experts (Kahn et al., 2018). Similar to my discussion of existing Special Education frameworks in Ontario, Kahn and colleagues (2018) reported that some participants applied their knowledge of the learning needs of students with other disabilities to support students with TBI, while many also reported that they felt overwhelmed by the growing needs of an increasingly diverse student population. In the present study, two participants reported having a growing involvement in the management of issues related to student health and well-being. Considered together, both studies suggest the role of educators in the management of student health and well-being is expanding as inclusive educational practices become more widespread and student diversity is acknowledged. The need for continued collaborative interdisciplinary partnerships is emphasized as educators balance the health and learning needs of a diverse student population, well beyond concussion.
5.2.3 Partners in safety.

5.2.3.1 Safety culture.

In a scoping review on the culture of concussion in youth and high school sports, Sarmiento, Donnell, and Hoffman (2017) found that the level of awareness and knowledge about concussion among athletes, coaches, and parents has grown in recent years but research is lacking on effective strategies to improve the attitudes and behaviors that contribute to the culture of concussion. Researchers suggest “to improve the culture of concussion safety, it is time for the field to make a paradigm shift from focusing on secondary prevention (reducing the impact of concussion after it has already occurred) to primary prevention (preventing concussion before it occurs) among young athletes” (Sarmiento, Donnell, & Hoffman, 2017, p. 802). In a qualitative study of minor hockey players, their parents, coaches, trainers, league managers, and officials in Ontario, Cusimano and colleagues (2017) found that underreporting of concussions was prevalent and was associated with a culture that encourages underreporting in which parents and coaches were tacitly or overtly complicit. This study was conducted prior to the passage of Rowan’s Law (Concussion Safety), 2018 however the impact of concussion legislation on the culture of concussion is mixed. LaRoche, Nelson, Connelly, Walter, and McCrea (2016) reported that the rates of concussion in high school and collegiate athletes did not significantly change in the 14-year timeframe before and after the passage of concussion legislation in Wisconsin (16.6% vs 15.3%, p = 0.558). However, the percentage of concussions reported to someone did increase significantly over the same period (70.6% vs 47.3% previously, p = 0.011). Whereas O’Kane, Levy, Neradilek, Polissar, and Schiff (2014) reported that despite the passage of Zachery Lystedt Law in Washington State, 59% of concussed female soccer players aged 12 to 15 continued to play with symptoms and only 44% of concussed players reported to a health care provider. Cook, King, and Polikandriotis (2014) acknowledge that legislation is just the first step in moving toward a shift in the culture of safety surrounding concussion. Glang (2018) notes “brain injury is one of the only types of injury that has a legislative mandate to require medical care” and that “effective concussion management requires significant behavioral and cultural shifts among all school members: coaches, school and athletic administrators, educators,
counselors, parents, and students. The convening of collaborative partnerships is critical for addressing the complexities of the issues related to concussions” (p. 250).

Within the extant literature, there is an emerging shift toward a social ecological approach to the study of concussion and safety culture (Kerr et al., 2014; Register-Mihalik, Baugh, Kroshus, Kerr, & Valovich McLeod, 2017). In advocating for this approach, Register-Mihalik and colleagues (2017) suggest that “the physical playing environment for a given school or team, including safety equipment, playing surface, and physical surroundings, may also have a role in [sport-related concussion] prevention and injury outcomes” (p. 199). This was echoed by Participant 3 who notes, “You have to look at your environment, to figure out where concussions could happen, if the concussions are going to happen in your school. Or, any type of injuries, it’s not just a concussion. It’s also a broken leg, you could have any type of serious injury because of the [playground] space.” The inclusion of concussion into the boarder discussion of a general culture of safety-mindedness is in alignment with the recommendations made by Register-Mihalik and colleagues (2017). With the passage of Rowan’s Law (Concussion Safety), 2018 and the implementation of PPM No. 158, Ontario is now a jurisdiction that requires students and young athletes to receive mandatory concussion training and seek out medical care for TBI. There is mixed evidence to support the efficacy of similar policies and legislation to shift the culture around concussion in child and youth populations. The practice of Fair Play and use of Player Codes of Conduct or Active and Safe Pledges, as some of the school boards included in their concussion policies and administrative procedures in the present study, may be an important step in improving the culture of concussion safety by focusing on primary prevention as recommended by Sarmiento, Donnell, and Hoffman (2017). Currently, Regulations for Rowan’s Law (Concussion Safety), 2018 have yet to be determined and the epidemiological data on concussion incidence and utilization of health care services are not yet available. As suggested by Glang (2018), a shift in culture requires collaborative partnerships between coaches, school and athletic administrators, educators, counselors, parents, and students. It will take time to evaluate how much, if at all, concussion policy and legislation in Ontario impacted the culture of safety surrounding concussion.
5.2.3.2  Risk and liability.

According to MacDonald and Katzman (2013), “schools must develop effective concussion management protocols or risk liability for civil claims; to lag behind the trend of increasing concussion awareness is a recipe for liability” (p. 26). In a review of the standard of care with regard to the management of sport-related concussions in American case law, Pachman and Lamba (2017) found that the most common legal theory of liability advanced by plaintiffs was negligence on the part of the school, athletic therapist, or nurse practitioner. As summarized by Pachman and Lamba (2017), negligence “requires that the defendant (1) was owed a duty to the plaintiff but (2) failed to use reasonable care in executing that duty, which (3) caused (4) damages. Such a duty arises in the eyes of the law when a relationship between the defendant and the plaintiff gives rise to an obligation that the defendant act in a certain way” (p. 186). The authors go on to define standard of care as “that of a reasonable professional in that position” (Pachman & Lamba, 2017, p. 186). In Ontario, “teachers have a duty of care to protect their students from all reasonable foreseeable risks of injury or harm. The standard of care is that of the careful or prudent parent” (Berryman, 1998, p. 1). In the present study, the role of teachers and administrators as “prudent parents” during school hours was echoed by Participant 4 when discussing barriers to compliance, “There’s that sense of imposition that ‘who are we to say?’ And you will get back very seldom, but it does happen, where the parents feel that we are now imposing on their role as parents. But that is in the Education Act, and sometimes you feel so pedantic in having to remind them that if the child is here at school, we are their parents, and we act as their parents.”

My analysis of school board concussion policies and administrative procedures indicated that some school boards acknowledged children and adolescents are at risk of concussion during activities where collisions can occur such as physical education classes, playground time, or school-based sports activities. Elements of Risk notices were included in the concussion policies and administrative procedures of some school boards which noted that “these injuries result from the nature of the activity and can occur without fault on either the part of the student, the school board or its employees/agents or the facility where the activity is taking place” (District School Board Ontario North East, 2014, p. 5).
Despite a notice recognizing that concussions can occur without the fault on either part of the student, school board, or facility where the injury occurs, PPM No. 158 and the pending Regulations of Rowan’s Law (Concussion Safety), 2018 raise the duty of care teachers and administrators have with respect to concussion awareness, prevention, identification, management, and training. These concussion policies and legislation have elevated the knowledge and training a reasonable professional working in education and organized youth sport in Ontario is now required to possess. With an increased duty of care comes an increased risk liability for civil claims. In her role as Principal of an elementary school, Participant 3 spoke at length on risk and liability, stating “it is our responsibility because the liability hits us before it hits anybody else.” Ultimately, the needs of the child outweighed any worry of liability for her: “I don’t really care about the liability, I care about something happening to that child. So, it’s not just that I’ll get into trouble because I didn’t follow the concussion policy process, more importantly if I don’t follow the concussion process, the reason I’m going to get in trouble is because that little boy or girl is going to suffer another concussion really quickly, and that’s more problematic.” As the duty of care rises for professionals working in education, collaborative partnerships are essential for ensuring educators are able to meet their legal duties while honouring the wishes of parents and guardians. Risk is inherent to any physical activity yet multiple stakeholder groups now share duties of care with respect to concussion for children and adolescents throughout the course of an average day including at home with parents/guardians, at school with teachers and administrators, and during organized youth sport activities with coaches and athletic trainers.

5.2.3.3 Community connections.

In the present study, it appears that 30 school boards in Ontario extended their concussion policies and administrative procedures to community organizations that use board facilities, going beyond the requirements of PPM No. 158. Schools have traditionally been a central hub for communities in Ontario as the social, emotional, cognitive, and physical development of students is nurtured in their formative years. With passage of Rowan’s Law (Concussion Safety), 2018 youth sport organizations operating in school board facilities in which board concussion policies and administrative procedures were
not extended will soon also be required to have concussion protocols in place. Just as the
duty of care previously discussed, multiple stakeholder groups within the community are
responsible for the protection and safety children and adolescents throughout the day.
Russell, Ellis, Bauman, and Tator (2017) “recommended that provincial government
leaders in health, sport, and education partner to ensure that these laws are equally
applied to all youths participating in school-based sports in both public and private
schools and non-school-based sports including organized private and non-organized sport
settings” (p. 9). Partnerships between school boards and community organizations in
Ontario have been instrumental in the implementation of concussion policy documents
and administrative procedures beyond the typical school day. More and more, concussion
safety is everyone’s responsibility.

5.3 Implications
The partnerships in education, health, and safety school boards relied on in the
development and implementation of concussion policies and administrative procedures
reinforces the need for effective collaborative partnerships between multiple stakeholder
groups. The findings of this study are important for those conducting research on
concussion policy in Ontario as it demonstrates that not all school board policies and
administrative procedures are created equally. The findings of this study are important for
policymakers in Ontario and beyond in that concussion policy is inadequately developed
or implemented without the knowledge and expertise of a variety of stakeholders.
Similarly, the findings of this study have implications for members of these stakeholder
groups. Collaborative partnerships between students, parents/guardians, teachers,
principals, coaches, and health care providers are vital. Education, health, and safety are
frequently shared responsibilities and require strong communication and a shared
understanding of concussion prevention, identification, and management. As a result of
PPM No. 158, teachers and school administrators have increasingly taken on a leadership
role in this regard.
5.4 Recommendations

The findings from this research identify how school boards in Ontario relied on partnerships across the domains of education, health, and safety in order to fulfill the requirements of PPM No. 158. School board concussion policy documents and administrative procedures delineate the contours of what each stakeholder is required to do, but fails to capture the experiences of stakeholders in practice as they negotiate the implementation of these requirements in their daily personal and professional lives. The need for stakeholders to document, communicate, and work collaboratively in the prevention, identification, and management of concussion is ubiquitous throughout the scholarly literature and the documents included in the present study. Unfortunately, effective interdisciplinary partnerships across the domains of education, health, and safety cannot be legislated or codified in a policy document. As the first province in Canada to have a Ministerial policy and legislation on concussion, Ontario is poised to set the tone for the rest of the country. While great progress has been made in the development and implementation of school board concussion policies and administrative procedures in Ontario, our current understanding of the impact these policies have had on the personal and professional lives of Ontarians is insufficient. Before we can progress toward a national concussion strategy in which all children are afforded the same protection and level of care, we must first work to understand the impact of our current concussion policies in Ontario. This requires the development of best practices, informed by the stakeholders they impact. Future research should examine the impact of concussion on the lived experiences of concussed students who have completed the return to learn and return to physical activity protocols required by their school board, as well as the experiences of students’ parents/guardians, teacher(s), principal, coach(es) (where applicable), and healthcare provider(s), as they support and facilitate this recovery process.

Harkening back to the inciting call to action by Ken Dryden quoted in the epigraph at the beginning of this dissertation, “science takes time, but games are played tomorrow.” As we conduct research on the biological, psychological, and sociological impact of concussion, we must develop concussion policy and legislation across Canada to ensure
all children receive the same protection and level of care. As indicated in PPM No. 158, “the health and safety of students are essential preconditions for effective learning” (2014a, p. 1). Furthermore, the recently released ParticipACTION Report Card on Physical Activity for Children and Youth (2018) underscores the important connection between brain health and physical health in that “Canadian kids need active bodies to build their best brains” (p. 2). To ensure a physically and mentally healthy population of children and youth in Canada, children and youth must engage in regular physical activity, recreation, and sport that is safe from coast to coast. As we have seen in the story of Rowan Stringer and the timeline of policy and legislative events summarized in Figure 1, further delay of a national concussion strategy comes at too high a price.

5.5 Limitations

Two limitations of this study have previously been described as they pertain to research methods: the exclusion of French-language school board concussion policy documents in data collection and analysis, and the participation of individuals involved in the development and implementation of concussion policies from one board despite a much broader recruitment pool. The former limitation was related to my inadequate French-language reading comprehension that narrowed the scope of policies included in this analysis, while the latter limitation was an unforeseen response to the recruitment process that limited the scope of this research even further. The unintended representation of only one school board did, however, provide me with the opportunity to conduct interviews with 4 administrators from the same board who worked collaboratively in the development of their concussion policy. This provided deeper context to the study and exposed me to multiple perspectives of the policy development and implementation process, tempered by the unique knowledge and experience of each participant.

One additional limitation of this study, not previously discussed, is the type of stakeholders represented in this research. Policy/Program Memorandum No. 158 encourages school boards to “consult with school staff, students, parents, teacher federations, education support staff unions, and other education partners, as appropriate” (2014a, p. 3) in the development and implementation of board concussion policies and administrative procedures. While these stakeholder groups were represented to varying
degrees in the recruitment pool, only teachers and administrators participated. Further, this research is grounded in my personal experience as an Ontario Certified Teacher (a professional credential I share with study participants). Neither study participants nor I claim to be representative of all members of the teaching profession; however, researchers enculturated in a different profession may have a different interpretation of the findings of this research. Within a different research methodology, the bias implicit within this study and subsequent interpretation would be problematic. However, an interpretivist policy analysis founded on Gadamer’s philosophical hermeneutics was purposefully chosen to embrace the biases of both researcher and participants as all are uniquely positioned in relation to school board concussion policies and administrative procedures in Ontario.

5.6 Conclusion
The purpose of this study was to gain an understanding of how school boards in Ontario interpreted PPM No. 158 in the development and implementation of board concussion policies and administrative procedures. A hermeneutic interpretive policy analysis was conducted that involved the thematic analysis of concussion policy documents and administrative procedures from 64 English-language school boards. This policy analysis was further contextualized by my experience as an Ontario Certified Teacher and interviews with four school board administrators involved in the development and implementation of their board’s concussion policy and administrative procedures. My interpretation of the texts and interview transcripts included in this study has led me to conclude that school boards relied on partnerships across the domains of education, health, and safety in order to fulfill the requirements of PPM No. 158. Within each domain, collaboration between multiple stakeholder groups was essential for the development and implementation of school board concussion policies in Ontario. Future research exploring how these partnerships between multiple stakeholder groups are enacted is recommended to gain a deeper understanding of what school board concussion policies and administrative procedures look like in practice.

Americans with Disabilities Act, 42 U.S.C.A. §§ 12102 et seq.


Individuals with Disabilities Education Act, 20 U.S.C. §§ 1400 et seq..


Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56


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Appendices

Appendix A: List of Documents Included in Policy Analysis.

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<th>Author</th>
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*Note.* N.d. = no date.
Appendix B: Document Request Email.

Western

(to be used when contact information is publicly available or appropriate permissions to use email have been received)

Subject Line: Request for school board concussion policy and administrative procedure documents

Hello,

My name is Amy Robinson and I am an Ontario Certified Teacher who returned to Western University to continue my graduate studies. For my Doctoral research, I am exploring the development and implementation of school board concussion policies in Ontario.

I am contacting you because [insert school board name] does not currently have a concussion policy or administrative procedure publicly available on your website. Can you please send me a digital copy of these publicly available documents?

If you would like more information on this study please contact me at the contact information given below.

Thank you,

Amy E. Robinson, BSc, BEd, MEd, OCT
Health and Rehabilitation Sciences

**********

**********
Appendix C: Semi-Structured Interview Guide.

Beginning of interview:

Telephone interview will begin by providing participant with opportunity to ask any questions about the study or consent process. Participant will be reminded of the voluntary nature of participation in this study and the right to end participation at any time. Participant will be reminded that the telephone interview is being audio-recorded.

Introductory questions:

1. What is your current job title?  
   a. How long have you been in this role?
2. How are you involved in the development or implementation of school board concussion policies and administrative procedures?  
   a. Have you been involved in the development of other school board policies?  
   b. Which ones?

Policy/procedure development questions:

1. How were concussions managed prior to PPM No. 158?  
2. Could you describe for me how this school board developed their concussion policy?  
   a. Is this how other school board policies are created?  
   b. Were there people or organizations that facilitated the development of this policy?  
   c. Were there any barriers to policy development that had to be overcome?  
3. Who was involved in developing this concussion policy and associated administrative procedures?  
   a. How were they selected to participate?  
   b. Who decided they could participate?  
   c. Do you know if anyone volunteered their time?  
4. Did this school board use external resources to prepare their concussion policy and administrative procedures?  
   a. Which ones?  
   b. Who provided these resources?  
   c. Was there a cost associated with these resources?  
5. Concussion research is rapidly changing. Were there any times during the concussion policy or procedure development process when you weren’t sure which direction to take?  
   a. How did you make a final decision?  
6. Was there a resource that would have been helpful when developing board concussion policy and procedures that wasn’t available?  
   a. Is it available now?  
7. What was the reaction of the school board community to the new concussion policy and administrative procedure?
Policy/procedure implementation questions:

1. Who is involved in implementing board concussion policy and associated administrative procedures?
   a. Are they involved in the implementation of other board policies?
   b. Which ones?

2. Could you describe for me how the school board implements their concussion policy and administrative procedures?
   a. How is this process communicated to those involved?
   b. Are there strategies in place that facilitate implementation?
   c. Are there barriers to implementation that need to be overcome?
   d. How can stakeholders support concussion policy and procedure implementation?

3. What does successful implementation look like?
   a. How do you know if concussion policy and administrative procedures are being followed?
   b. How do you measure this?

4. How is individual student information communicated between stakeholders?

Concluding questions:

1. Is there anything you think I should know about the development and implementation of school board concussion policy and administrative procedures?
2. Would you like to receive a digital transcript of this interview?
3. Are you available for follow-up questions via email or telephone for further clarification, which will take no more than 15 minutes of your time?
   a. If so, what is the best way to contact you?

Probes to encourage further explanation:

Such as…?

Could you give me an example?

Can you tell me more about that?

Follow-up questions:

How did this compare to…?

What does it mean to…?
Appendix D: Participant Recruitment Email.

Subject Line: Invitation to participate in research on concussion policy

Hello,

My name is Amy Robinson and I am an Ontario Certified Teacher who returned to Western University to continue my graduate studies. I am studying the development and implementation of school board concussion policies in Ontario. I am contacting you because of your involvement in the development and implementation of school board concussion policies and administrative procedures in Ontario publicly funded school boards. We have received your email address from your organization’s website. You are being invited to participate in a study that I am conducting, as supervised by Dr. Andrew M. Johnson, PhD and Dr. Jacob J. Shelley, SJD at Western University.

Briefly, the study involves a 1-hour telephone interview regarding your involvement in how concussion policies and administrative procedures were developed and implemented in Ontario school boards. After the interview, I may have follow-up questions via email or telephone for further clarification, which will take no more than 15 minutes of your time. You will be emailed a copy of your transcript from this interview and will be able to delete or modify any of your responses if you so choose. This may require an additional hour of your time. All information will be kept private and confidential.

I have attached an electronic version of the Letter of Information and Consent to this email. If you are interested in participating in this research, please read these
documents and complete the forms as indicated. Please send all completed forms to my email address listed below.

If you have colleagues who may be interested in participating in this study and were also involved in school board concussion policy development or implementation you are invited to forward this email to them. If you would like more information on this study please contact me at the contact information given below.

Thank you,

Amy E. Robinson, BSc, BEd, MEd, OCT

Health and Rehabilitation Sciences
Appendix E: Letter of Information and Consent.

AN INTERPRETIVE POLICY ANALYSIS OF SCHOOL BOARD CONCUSSION POLICIES IN ONTARIO

LETTER OF INFORMATION AND CONSENT

Andrew M. Johnson, PhD  Amy E. Robinson, PhD(c), OCT
Principal Investigator  Researcher
Western University  Western University

Introduction

My name is Amy Robinson and I am a graduate student in the Faculty of Health Sciences at Western University. I am currently conducting research on how school boards in Ontario develop and implement concussion policies and administrative procedures and would like to invite you to participate in this study.

Purpose of the study

The aim of this study is to understand how school boards in Ontario interpreted Ministry of Education Policy/Program Memorandum No. 158: School Board Policies on Concussion in the development and implementation of board concussion policies and administrative procedures. To be eligible to participate in this study, you must have been directly involved in the development or implementation of school board concussion policies in the Ontario publicly funded education system. As policy development and implementation varies from school board to school board, you may be a school board
administrator, educator, medical professional, or representative from a community-based organization. You must be able to read and speak English.

**If you agree to participate**

If you agree to participate in this study you will be asked to take part in a 1-hour telephone interview. After the interview, I may have follow-up questions via email or telephone for further clarification, which will take no more than 15 minutes of your time. The information you provide will be audio recorded, reviewed, transcribed, and analysed. Consent to audio recording is required for participation in this study. You will be emailed a copy of your transcript from this interview and will be able to delete or modify any of your responses if you so choose. This may require an additional hour of your time.

**Confidentiality**

The information collected will be used for research purposes only. Data collected in this study may be used for secondary analysis. Results of this study may be published in an academic journal and as a conference paper and may include quotations from your interview. A pseudonym will be used instead of your name and your identity and employment affiliation will not be disclosed. The researcher will take every precaution to maintain confidentiality during and after the interview.

Representatives of The University of Western Ontario Non-Medical Research Ethics Board may require access to your study-related records to monitor the conduct of the research. While we do our best to protect your information there is no guarantee that we will be able to do so. Collection of your name, telephone number, and email address may allow someone to be able to identify you. If data is collected during the project that may be required to be reported by law we have a duty to do so.

All data will be kept confidential and locked at a secure location at Western University for a minimum of five years. You do not waive any legal rights by signing the consent form. All information collected for the study will be kept confidential. Electronic data will be held on encrypted devices, securely located at Western University for a minimum of 5 years.
Risks & Benefits

There are no known risks to participating in this study and you will not benefit from participation. Participation in this study may result in societal benefits such as the improvement of school board concussion policies and administrative procedures. You will not be compensated for your participation in this research.

Voluntary Participation

Participation in this study is voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time. If you decide to withdraw from the study, you have the right to request withdrawal of information collected about you. If you wish to have your information removed please let the researcher know.

Questions

If you have any questions about this study, please contact Dr. Andrew M. Johnson (Principal Investigator) at [contact information]. If you have any questions about the conduct of this study or your rights as a research participant you may contact the Office of Research Ethics, Western University at [contact information].

This letter is yours to keep for future reference.
AN INTERPRETIVE POLICY ANALYSIS OF SCHOOL BOARD
CONCUSSION POLICIES IN ONTARIO

Andrew M. Johnson, PhD
Principal Investigator
Western University

Amy E. Robinson, PhD(c), OCT
Researcher
Western University

CONSENT FORM

I have read the Letter of Information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

I agree to be audio-recorded in this research:

☐ YES ☐ NO

CONTACT FOR FUTURE STUDIES

Please check the appropriate space below and initial:

___ I agree to be contacted for future research studies

___ I do NOT agree to be contacted for future research studies

Name (please print):

Signature:

Date:

Name of Person Obtaining Informed Consent: Amy E. Robinson

Signature of Person Obtaining Informed Consent:

Date:
Appendix F: Ethics Approval.

Principal Investigator: Dr. Andrew Johnson
Department & Institution: Health Science/Health & Rehabilitation Science, Western University

NMRB File Number: 109597
Study Title: An Interpreting Policy Analysis of School Board Concussion Policies in Ontario
NMRB Initial Approval Date: August 18, 2017
NMRB Expiry Date: August 01, 2018

Documents Approved and/or Received for Information:

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The Western University Non-Medical Research Ethics Board (NMRB) has reviewed and approved the above named study, as of the NMRB Initial Approval Date noted above.

NMRB approval for this study remains valid until the NMRB Expiry Date noted above, conditional to timely submission and acceptance of NMRB Continuing Ethics Review.

The Western University NMRB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMRB who are named as investigators in this study do not participate in discussions related to, nor vote on such studies when they are presented to the RFB.

The NMRB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 10000941.
# Appendix G: Organizational Structure.

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Appendix H: Concussion Resources.

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<td><strong>Dr. Mike Evans “Concussion 101” YouTube video</strong></td>
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<td>• Concussion Recognition Tool</td>
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<tr>
<td><strong>Canadian Medical Association “Getting Clear About Concussion Care” (Medical Education Course)</strong></td>
</tr>
<tr>
<td><strong>McMaster University and McMaster Children’s</strong></td>
</tr>
<tr>
<td>Hospital Canchild website</td>
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<tr>
<td>Sunnybrook Office for Injury Prevention Play Safe Initiative website</td>
</tr>
<tr>
<td>Hamilton Brain Injury Association Bikes, Blades, and Boards Education Program</td>
</tr>
<tr>
<td>BC Injury Prevention and Research Unit website</td>
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</tbody>
</table>

**Sport and Safety**

<table>
<thead>
<tr>
<th>Website</th>
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<tbody>
<tr>
<td>Ontario Physical and Health Education Association website</td>
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<tr>
<td>Parachute Canada website</td>
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<tr>
<td>Sport Concussion Library website</td>
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<tr>
<td>Hockey Canada website</td>
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<tr>
<td>Coaches Association of Ontario website</td>
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<tr>
<td>Coaching Association of Canada website</td>
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<tr>
<td>Canadian Centre for Ethics in Sport website</td>
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<td>True Sport website</td>
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### Other

<table>
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<tr>
<th>Website</th>
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<tr>
<td>Ontario School Boards’ Insurance Exchange website</td>
<td><a href="https://www.osbie.on.ca">https://www.osbie.on.ca</a></td>
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## Appendix I: Community Connections.

<table>
<thead>
<tr>
<th>Organization</th>
<th>School Board</th>
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<tbody>
<tr>
<td>YMCA child-care providers</td>
<td>Halton Catholic District School Board</td>
</tr>
<tr>
<td>Child and youth organizations, daycare</td>
<td>Hamilton-Wentworth Catholic District School Board</td>
</tr>
<tr>
<td>Summer school, night school, all licensed third party Full Day Kindergarten extended day programs and all community users</td>
<td>London District Catholic School Board</td>
</tr>
<tr>
<td>Third party Full Day Kindergarten Extended Day Programs and Community Users</td>
<td>Superior-Greenstone District School Board</td>
</tr>
<tr>
<td>Community-based organizations</td>
<td>Thames Valley District School Board, Toronto District School</td>
</tr>
</tbody>
</table>
Curriculum Vitae

Name: Amy E. Robinson

Post-secondary Education and Degrees:
The University of Western Ontario
London, Ontario, Canada
2010 B.Sc.

The University of Western Ontario
London, Ontario, Canada
2012 B.Ed.

The University of Western Ontario
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2013 M.Ed.

The University of Western Ontario
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Honours and Awards:
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2014

Occasional Teacher
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