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**Informing body checking policy in youth ice hockey in Canada: A discussion meeting with researchers and community stakeholders**

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## **Abstract**

Body checking is the most consistent risk factor for injury, severe injury, and concussion in youth ice hockey. In North America, body checking has typically been allowed starting in the Pee Wee age group (11-12 years old), but it has been shown that Pee Wee players in body checking leagues are at significantly greater risk of injury compared to those in non-body checking leagues. Based on this evidence, Hockey USA implemented a national policy change in 2011 to increase the age of body checking introduction. In Canada, dissemination of research evidence alone was insufficient to drive national policy change. There was considerable public debate around the issue, and hockey governing bodies across the country were at varying stages of readiness to institute policy change. This paper discusses an example of the knowledge exchange process that occurred between researchers and community stakeholders to inform local, provincial, and national policy discussion. This meeting took place in April 2013, prior to a series of provincial and national votes, with the goal of informing the decision-making process. Three major factors that can drive policy change in the sport safety context were identified: the need for decision-making leadership, the importance of knowledge translation, and the role of sport culture as a barrier to change. These highlight the critical need for researcher and stakeholder partnership in facilitating ongoing policy discussion and informing evidence-based policy change.

1 **Informing body checking policy in youth ice hockey in Canada: A discussion**  
2 **meeting with researchers and community stakeholders**

3

4 **INTRODUCTION**

5       Body checking is the most consistent risk factor for injury, severe injury, and  
6 concussion in youth hockey.[1-3] Body checking, defined as a tactic used to gain an  
7 advantage on the opponent with the use of the body, occurs when a player makes no  
8 attempt to play the puck and intentionally plays the body of the opponent; changes  
9 direction or leaves the established skating lane to play the body of the opponent; or  
10 uses hips, shoulders, or arms to push off and separate the opponent from the puck.  
11 It differs from body contact, which is contact that occurs between opponents during  
12 the normal process of playing the puck, providing there has been no overt hip,  
13 shoulder or arm contact to physically force the opponent off the puck and players  
14 maintain established skating lanes and body positioning.[4,5]

15       In North America, body checking has typically been allowed starting in the  
16 Pee Wee age group (age 11-12). In recent years, however, public concern about the  
17 risk of injury (particularly concussion) in hockey and the amassed body of evidence  
18 regarding injury risk factors [3] necessitated that hockey governing bodies review  
19 their policies regarding body checking in youth leagues. The resulting debate  
20 involved administrators, coaches, parents, players, and other members of the

21 hockey community, with arguments both for and against allowing body checking at  
22 the Pee Wee level.

23 In 2010 and 2011, two landmark studies were published that provided  
24 evidence that Pee Wee players in body checking leagues are at a three-fold greater  
25 risk of injury and a four-fold greater risk of concussion, compared to those in non-  
26 body checking leagues.[1] Furthermore, learning to body check in Pee Wee provides  
27 limited protective effect when players graduate to the Bantam age group (age 13-  
28 14).[2] This evidence prompted USA Hockey to institute a nationwide policy change  
29 in the 2011-2012 season, whereby body checking was removed from Pee Wee at all  
30 competitive levels. The purpose of this change was to (1) allow players an additional  
31 two years to develop the fundamental skills of skating, puck control, passing,  
32 shooting, and position play without the distraction of body checking, which might  
33 impede a player's natural development; (2) ensure the safest possible playing  
34 environment for youth athletes; and (3) allow players two more years of body  
35 checking skill development in practice.[6]

36 In Canada, the body checking issue was highly controversial. In 2010, Hockey  
37 Canada set the minimum national age of introduction to Pee Wee, with no  
38 exceptions, but encouraged regional jurisdictions to increase the starting age at  
39 their discretion. Individual associations were also free to restrict body checking to  
40 specific competitive levels (e.g., elite only). As of the 2012-2013 season, Hockey  
41 Quebec was the only provincial branch that delayed body checking until Bantam  
42 across all skill levels, on a platform of player safety and better skill training. In 2011,  
43 the Ontario Hockey Federation and some associations in British Columbia decided

44 to allow body checking in only the most elite levels (top 30% by division of play) in  
45 Pee Wee, Bantam and Midget (ages 11-17).

46 Recognizing that dissemination of research evidence alone was insufficient to  
47 drive national policy change in Canada, a one-day policy discussion meeting was  
48 held in April 2013 to facilitate knowledge exchange between researchers and  
49 community stakeholders. At the time of the meeting, Hockey Canada was not  
50 entertaining a vote on national body checking policy. Three provincial hockey  
51 branches and some regional associations were planning body checking policy votes  
52 in the weeks following the meeting.

53

#### 54 **MEETING FORMAT**

55 Stakeholder interests were represented by 28 individuals from four  
56 Universities (three Canadian and one American) and 15 organizations; Hockey  
57 Canada, USA Hockey, BC Hockey, Hockey Quebec, Hockey Calgary, Hockey  
58 Edmonton, Okanagan Mainline Amateur Hockey Association, Pacific Coach Amateur  
59 Hockey Association, Mayo Clinic Sports Medicine Center, Canadian Paediatric  
60 Society, Parachute, Alberta Centre for Injury Control and Research [ACICR], Safer  
61 Hockey in Canada, Rick Hansen Institute, and Max Bell Foundation. Two invited  
62 youth hockey associations did not attend. A neutral Chair from the Canadian Centre  
63 for Ethics in Sport moderated the discussion. The meeting was supported by the  
64 Max Bell Foundation, which is a “Canadian independent granting organization that  
65 supports the development of innovative ideas that impact public policies and

66 practices with an emphasis on health and wellness, education, and the  
67 environment.” [7]

68 Researchers and stakeholders presented current perspectives on evidence  
69 and policy change, and discussion focused on an a priori set of questions. During the  
70 meeting, participants recorded their organization’s views on each of the discussion  
71 points. These responses were aggregated and coded to allow the identification of  
72 emerging themes. The proceedings of the meeting were also audio recorded to  
73 support the written responses.

74

## 75 **FEEDBACK**

### 76 **What are the perspectives of your organization regarding body checking** 77 **policy in youth hockey?**

78 All hockey association representatives acknowledged that, based on recent  
79 evidence and public pressure, there was a need for body checking policy discussion.  
80 Representatives from two associations indicated that evidence related to injury risk  
81 was sufficient to prompt body checking policy change at the Pee Wee level. Another  
82 representative suggested that additional review of the evidence and better public  
83 education were necessary before addressing current policy.

84 Consistent with a recently published position paper [8], advocacy groups and  
85 researchers unanimously held the perspective that body checking should be  
86 introduced no earlier than Bantam, and should be removed entirely from  
87 recreational and sub-elite leagues in all youth age groups. Additionally, some



88 representatives suggested that a more conservative approach be considered in  
89 delaying body checking to older players (>16 years).

90

91 **What are the perspectives of your organization regarding the current**  
92 **evidence related to body checking policy in youth hockey?**

93 There was agreement that evidence pertaining to body checking age was  
94 valid, consistent, and supported delaying introduction until Bantam; however, those  
95 representing associations that had not yet held a policy vote indicated that the  
96 official position of their organizations was to follow the Hockey Canada mandate of  
97 introduction in Pee Wee.

98 Few associations had restricted body checking to specific levels of play.  
99 Parent representatives felt there was sufficient evidence to remove body checking at  
100 all levels of competition. Conversely, most associations supported removing body  
101 checking from sub-elite leagues, but were reluctant to enforce change at elite levels.

102 Evidence regarding body checking skill training was deemed insufficient.  
103 Hockey Canada had developed a four-step process to teach body checking skills, and  
104 resources to support this process were available to associations and coaches.[3]  
105 Associations and advocacy groups supported this progressive introduction, but no  
106 organization currently enforced the process.

107 Association representatives expressed concern regarding a lack of  
108 knowledge translation between researchers and the grassroots hockey community.  
109 They believed that administrators were “getting the message” about the evidence,  
110 but this information was not reaching parents and players.

111

112 **Are there gaps in the research that need to be evaluated before considering**  
113 **future body checking policy change in youth hockey?**

114 A need for additional evidence regarding injury risk in Bantam and Midget  
115 (15-17 year old) age groups was expressed by most representatives, as was a need  
116 for longitudinal data concerning injury consequences (including drop-out from  
117 sport). Understanding the long-term impacts of concussion was highlighted as a  
118 crucial next step.

119 Associations were concerned with the effect of policy change on skill  
120 acquisition and on-ice performance. Considering that one of the platforms of the  
121 USA Hockey policy change was greater skill development, it was suggested that this  
122 outcome be assessed prospectively.

123 A paucity of information about coaching practices and the validity of the  
124 Hockey Canada model of body checking education was discussed. Additionally, the  
125 influence of referee game management, rule interpretation, and injury risk  
126 awareness were identified as areas lacking in evidence. Information regarding the  
127 economic impact of hockey injuries was also deemed essential to inform policy  
128 decisions.

129

130 **Which factors can drive body checking policy change and how could change be**  
131 **implemented to ensure success?**

132 Several factors were identified, including increased public knowledge about  
133 injury risk and a unified communication strategy to ensure stakeholders were

134 “speaking the same language.” There was a prevailing belief that governing bodies  
135 should provide “active and visible” leadership, and that the executives of these  
136 organizations would need to feel empowered, through public support, to make  
137 policy decisions. Advocacy for policy change by parents and other stakeholders was  
138 viewed as a powerful driver of change.

139 Additional factors included decreased social norming around the role of body  
140 checking in youth hockey, trends toward declining enrollment, health care costs  
141 associated with injury, and legal issues surrounding injury liability. It was suggested  
142 that the successful Hockey Quebec and USA Hockey experiences could help prompt  
143 change, although connecting skill development and safety would be important:

144

145 *“You can only go so far with a negative message or avoiding the*  
146 *negative. It’s much better, if you can, to package it in a positive*  
147 *way... To the extent that we can package this in a way that’s*  
148 *performance-oriented and development-oriented, that will have*  
149 *the intended safety consequence... The perceived benefit can’t just*  
150 *be the benefit of avoiding an injury, it should be the benefit of*  
151 *developing a better player.”*

152

*– University researcher*

153

#### 154 **Are there facilitators that may assist change?**

155 The need for leadership was endorsed unanimously, and public concern over  
156 the potential long-term consequences of concussion was seen as a source of

157 pressure that could drive change. Advocacy by recognizable figures, such as  
158 professional players or media personalities, was also suggested for promoting  
159 awareness and public support:

160

161 *“I think one of the factors that can help drive change is getting*  
162 *elite players, very recognizable players from the National Hockey*  
163 *League [NHL], Olympians, coaches of those national and NHL*  
164 *teams to support this initiative... If we can get the elite players*  
165 *that everyone wants their child to be like – I think we need to*  
166 *connect the dots with those people that have reached that level of*  
167 *play to endorse this.”*

168 *– Governing body representative*

169

170 **What are the barriers to change, and how can they be overcome?**

171 Responsibility for initiating policy change was addressed as a major barrier.  
172 Although policy was under the purview of provincial branches and regional  
173 associations, there was considerable pressure for Hockey Canada to take a national  
174 lead on the issue. Associations expressed concern that if they enacted a policy  
175 change, they would be “the only one,” preventing their teams from competing in  
176 tournaments or provincial competitions against teams from jurisdictions where  
177 body checking was still allowed. These associations were reluctant to place players  
178 at a competitive or developmental disadvantage:

179

180 *“The local organizations don’t want to change for fear of being*  
181 *the only ones who change, and yet Hockey Canada will only make*  
182 *a change if the local organizations come forward. So it turns into*  
183 *kind of a circular argument... How do we make everyone feel like*  
184 *this is their problem? It seems like for every level of hockey*  
185 *organization, the responsibility for [body checking policy*  
186 *decisions] lies at a different level.”*

187 *– University researcher*

188  
189 Another barrier was that most administrators and coaches in Canadian youth  
190 hockey are volunteers, and it was believed that these individuals were provided  
191 with inadequate injury prevention training. Several individuals suggested that  
192 greater accountability for player safety be placed on these individuals, although as  
193 volunteers they may not feel capable of driving change or disseminating injury  
194 information. Furthermore, association representatives reported that it was  
195 challenging to balance parent and player expectations of performance with on-ice  
196 safety, particularly as it related to body checking.

197 Social context was also identified as a barrier. It was noted that public  
198 opinion about body checking is often formed on anecdote instead of evidence, and  
199 the benefits and consequences of policy change were being weighted on hockey  
200 tradition instead of player safety. Constant exposure to professional hockey was  
201 viewed as an influencing factor, specifically around the acceptance of body checking  
202 behaviour. Media glorification of the “big hit” was deemed to reinforce this attitude.

203 While representatives acknowledged that body checking is a necessary skill for  
204 those aspiring to professional careers, the majority of youth players will not go on to  
205 play in these leagues:

206

207 *“The only reason an individual has to learn how to body check –*  
208 *it’s not for a lifetime of competitive hockey – it’s simply if you are*  
209 *going to go on into a professional or semi-professional [varsity]*  
210 *career.”*

211 *– Advocacy group representative*

212

213 **What are the anticipated outcomes following change?**

214 Decreased injury risk was believed to be the most important outcome of  
215 policy change. Other potential benefits included better skill development, greater  
216 (lifelong) participation in hockey, reduction in health care costs, and more fun for  
217 recreational athletes. Although some negative consequences were expected, such as  
218 initial public dissatisfaction, most believed this would be short-lived. From a  
219 financial perspective, however, the costs associated with greater injury/concussion  
220 education alongside a policy change were viewed as a potential problem. It was also  
221 indicated that increasing enrollment and greater long-term participation would put  
222 additional stress on already overburdened facilities:

223

224 *“If we are successful and outcomes are that (1) kids stay in the*  
225 *game longer, and (2) that we attract more players... that’s just*

226 *going to add to not only [the youth] pool of athletes, but that in*  
227 *the adult game. I'm sure every large urban organization is*  
228 *already feeling significantly pinched that way."*

229 *– Hockey association representative*

230

231 **What factors contribute to policy discussion in your organization?**

232 Association representatives noted that, although injury evidence was a  
233 foundation for discussion, it was not the driving force behind ongoing debate. Media  
234 coverage of concussion incidents and policy change was perceived as highly  
235 persuasive, but it was seen as both helpful and detrimental. In some cases it was  
236 argued that evidence for and against body checking was portrayed as more balanced  
237 than it actually was. There was also comment upon the incongruous messages being  
238 delivered by the media, whereby they promoted safety in youth hockey while  
239 celebrating "hard hitting" professional games. Popular media was viewed as a  
240 crucial method of communicating evidence to parents and players, but framing of  
241 the message was believed to impact public perception of the issues.

242 Perspectives varied on the role of elite hockey development in the policy  
243 debate. Some associations indicated that elite groups received balanced  
244 consideration in policy discussion, but others found this to be disproportionate.  
245 Association representatives highlighted the need to balance safety with their  
246 responsibility to provide elite players with necessary skill development. Although  
247 this was acknowledged as a significant barrier to change, it was also proposed to be  
248 facilitator. Specifically, concern over losing elite players prematurely due to

249 concussion, and coaches not selecting players with a concussion history, could be a  
250 powerful motivator for improved safety.

251

## 252 **POLICY IMPLICATIONS**

253 Three major themes emerged during the meeting: (1) need for leadership;  
254 (2) knowledge translation; and (3) hockey culture as a barrier to change.

255 Difficulties surrounding leadership were primarily related to ownership over  
256 policy decisions. Although Hockey Canada clearly placed decision-making in the  
257 hands of its branches, associations felt that body checking policy should be  
258 championed at the national level. Dissonance between the bottom-up Hockey  
259 Canada approach and the top-down directive sought by the community was a major  
260 source of conflict. Stakeholders expressed frustration that enacting policy change  
261 was more of a “process problem” than an “information problem.”

262 The need for a comprehensive communication strategy was discussed. There  
263 was an identified need to ensure that accurate and current information was  
264 provided to stakeholders, but messages would have to use consistent language and  
265 properly define terms (e.g., body contact versus body checking) to be effective.  
266 Moreover, integrating evidence into policy discussion was challenging because  
267 many stakeholders preferred ideology, anecdotal evidence, and personal experience  
268 to inform their positions. Research evidence would therefore need to be made  
269 accessible and meaningful to end-users.

270 The development of body checking resources was identified as a priority.

271 Ensuring that coaches received standardized training to teach body checking and



272 that officials were able to properly identify legal and illegal forms of contact would  
273 be key in enforcing policy change. Evaluation of knowledge exchange strategies  
274 would be important, but representatives believed that mandating the use of Hockey  
275 Canada body checking training materials was a good approach to immediately  
276 translate evidence into practice.

277 Hockey culture was seen as a contextual factor affecting all aspects of the  
278 decision-making process. The prevailing public belief that “the game cannot change”  
279 was discussed as an impediment to progress. Advocacy groups in particular argued  
280 that, due to the cultural importance of hockey in Canada, many parents were  
281 intimidated by the environment and were afraid to take a stance against body  
282 checking. Parents were also viewed as contributing to policy inertia through  
283 unreasonable expectations of their children’s participation in hockey. Placing  
284 performance goals ahead of player safety and the belief that body checking will  
285 “toughen kids up” were considered barriers to gaining public support for policy  
286 change.

287

## 288 **OUTCOMES**

289 An action item resulting from the meeting was the preparation of a two-page  
290 research brief (Appendix A) for hockey associations to present at their upcoming  
291 annual general meetings. This was constructed with input from researchers and  
292 community stakeholders. Several associations used this brief to inform board  
293 members prior to voting on body checking policy.

294           Subsequent to the Whistler policy discussion meeting, several provincial  
295 branch votes occurred between April-May 2013, with Alberta, Nova Scotia, and  
296 Ontario deciding to delay body checking until Bantam (age 13-14) across all levels of  
297 play. In June 2013, the Hockey Canada Board of Directors voted to enact a national  
298 policy disallowing body checking in Pee Wee. The focus of Hockey Canada continues  
299 to be the appropriate and timely development of body checking skills such that  
300 players are prepared appropriately for body checking in Bantam.

301

## 302 **CONCLUSIONS**

303           There was a critical need for researcher and stakeholder partnership in  
304 informing evidence-based policy change in youth hockey. The engagement of  
305 stakeholders over several years was imperative to inform the research agenda,  
306 maximize public and media involvement, and to facilitate ongoing policy discussion.  
307 This meeting represented a final stage of knowledge exchange that informed  
308 discussion and voting processes that led to a policy change that will have long-term  
309 impact in reducing the risk of concussion and injury in youth hockey players.

310

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319 support for the meeting.

320

#### 321 **CONTRIBUTORS**

322 CAE and WHM were responsible for the initiation of the policy discussion meeting.  
323 CDM conducted all analyses of the written and recorded participant responses and  
324 wrote the first draft of the manuscript. All authors and acknowledged collaborators  
325 contributed to the interpretation of the findings and critical revision of the  
326 manuscript.

327

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329 None.

330

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333

334

335

336

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