

# Children's Ringette in Alberta: Review and Recommendations

*Submitted to Ringette Alberta*



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This report assesses the current (2019-2020) and proposed (2020-2021 and beyond) implementation of Ringette Canada's Children's Ringette programming in the province of Alberta.

## EXECUTIVE SUMMARY

### PURPOSE:

Ringette Canada's guidelines for structuring Children's Ringette are in the process of being implemented across Canada. Included in this restructuring is a proposal that players under the age of 10 should not play on a full ice surface and should play under modified rules and with small goal nets. Ultimately, Ringette Canada plans to move from an age-based development model to one that accounts for differences in skill development, with new skaters having a variety of 'on ramps' to the sport before being placed in the FUNdamentals or Learn to Train contexts.

As part of its efforts to understand the potential impacts of transitioning toward reduced-ice and modified rules for developing players, Ringette Alberta contracted *Caminata Consulting* to conduct primary research to ascertain the implications for players, coaches, officials, parents, and local associations. The research was coordinated with initial investigations being conducted by Ringette Canada.

### FINDINGS:

- There is currently good awareness of the current U10 Step format, which offers players three steps of development between Active Start and U12 play. Similarly, there is good awareness that it is not a requirement for players to progress sequentially through the three-step program in consecutive years. (For each of these two elements of the program, more than 90% of survey respondents were aware of the current protocols).
- Although not quite as well understood, some 83% of respondents indicated that they were aware that teams can be constituted differently from year to year in order to accommodate differences in skill development.
- Three primary areas of skill mastery were identified as being important for players prior to moving to full-ice play: skating, ring skills, and team play skills. However, there was considerable resistance to the notion that skill levels can be objectively measured in order to determine whether a player is 'ready' for full-ice play.
- Skill development was deemed less critical (on average) by Active Start coaches than U10 coaches in determining when a player is ready to progress to full-ice play. However, even among U10 coaches, there is limited support for Ringette Canada's proposal to keep U10 players at half-ice beyond U10 Step 1.
- As with coaches, parents of developing players are not entirely convinced of the benefits of U10 players developing their skills on a reduced ice playing surface area.
- Among local associations, there is generally stronger support for improved skill development at the U10 age. However, concerns were expressed around player retention if they play three years at U10 on a reduced ice surface.
- Local associations are more in favour of mini-tournament play for half-ice than is the case for parents and coaches. The latter, it appears, require further education as to what these mini-tournaments would entail.
- Almost a quarter of officials assigned to half-ice games were first year (which is not recommended under current Ringette Alberta guidelines). Similarly, less than one third (31.8%) reported consistent 90 second shift times (which is the current Ringette Alberta recommendation). However, over three quarters (76.7%) of half-ice officials reported that they explain penalty calls (as is recommended).
- Coaches reported that a number of other Ringette Alberta recommendations for half-ice games are not being following consistently: almost three-quarters (72.6%) reported that they changed goalies during games, and fewer than one fifth (19.6%) reported consistent 90 second shifts. A number of reasons were

given as to why this was the case including, difficulty with programming the timer, agreement between coaches at games that a longer shift was preferable, and players taking too long to change shifts.

- Two games (one U10 Step 1 – half ice; one U 10 Step 2 – full ice) were selected at random for a detailed observation and subsequent analysis. Although not statistically significant because of the small sample size, in the games observed, compared with their full-ice peers, the half-ice players were observed to have 25% more touches, 25% more shot attempts, almost twice as many shots, and 43% more possession after controlling for playing time.

#### RECOMMENDATIONS:

- Proceed as planned in 2020-21 (U10 S-2 half ice) to align with Ringette Canada plans, but with more consistent application of the guidelines that are currently in place for U10 S-1 (notably regarding shift lengths, and goalie changes).
- Work with members to improve key logistics and consistent application of guidelines
  - Athlete placement guidance
  - Team size
  - Shift length
  - Game restart procedure
  - Goalies
- Continue liaison with Ringette Canada research team that is conducting a nationwide review of Children's ringette.
- Urge Ringette Canada to clarify transition from age-based to skill-based progression (development / implementation of Athlete Development Matrix).
- Continue efforts to educate and communicate with coaches, parents, and local associations as to rationale behind the proposed changes.
- Consider trial of mini-tournaments (with increased education about possible benefits) for half-ice play.

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## ACKNOWLEDGEMENTS

This report has been prepared by Caminata Consulting for Ringette Alberta. In large part, the data used were collected and analyzed by Caminata Consulting. However, the research was conducted in coordination with a broader investigation of Children's Ringette across Canada that is being led by Dr. Veronica Allen of York University. Ringette Alberta staff provided logistical support (notably in video recording of selected Children's Ringette games for subsequent analysis), and (under Dr. Allen's direction) students at Queen's University conducted video analysis of games played in Alberta. The analysis and overall results were produced independently of Ringette Alberta to ensure objectivity and impartiality. Caminata Consulting assumes responsibility for results and recommendations made in this report.

## INTRODUCTION AND BACKGROUND

Children's Ringette refers to the format for players aged under 10 years of age. It comprises Active Start (split into two stages) and U10 (consisting of three steps). In the first of these (Active Start) informal cross-ice games are played and small nest are used. For U10, small goal nets are used, but (in Alberta) in 2019-20 only Step 1 played half-ice (and three skaters, plus a goalie), while Steps 2 and 3 played full-ice (and five skaters, plus a goalie).

The Ringette Canada rationale behind Children's Ringette's modified games and formats is that they provide improved opportunity for skill development (as compared with progression to a full-ice surface before fundamentals are mastered). The purported benefits of playing on a reduced ice surface area with smaller teams and goals include:

- Faster pace of games;
- Players show more creativity on a smaller ice surface and with fewer team-mates on the ice;
- Decision making in tight spaces is improved;
- Skill development and mastery are both improved and achieved more quickly;
- Passing and handling are superior;
- More competitive games (closer scores); and
- Greater engagement in play for all players.

Underpinning these advantages is the notion that players need to "slow down to go faster" (i.e., take the time to learn basic fundamentals that will help them to progress in the game more quickly). This entails the following key elements:

- There should be a greater focus on what matters most in the short term;
- The right things, in the right sequence, at the right time
- Better athletes. Sooner.

Also, there is a wealth of empirical evidence and data that indicate that a modified version of the game is superior for player and skill development. This is the case both for other team and individual sports (such as hockey, soccer, and athletics), as well as for Ringette in other parts of the world (most notably in Finland).

In order to provide context specific data in the context of Ringette in Canada, Ringette Canada is coordinating its own research (being conducted independently of the national federation) to inform its decision making. Ringette Alberta has also determined that data-driven and informed opinions will be critical in guiding its own adoption of (or variances from) Ringette Canada's proposals. The underlying objective is to ensure that decisions will be made that will help the most players develop skills most effectively and efficiently, which will (ultimately) lead to their improved enjoyment of, and long-term involvement in, the game.

Various responses have been presented to the question 'when should ringette players progress to full-ice?' The theoretical answer is 'when the individual player is ready' (with 'readiness' being extrapolated from the Ringette Essentials / Athlete Development Matrix, Ringette Canada's guide for placing players). However, in terms of practical application and administrative convenience, the current practice is to determine full-ice readiness by division and level of player. The downside of this approach is that the development of players does not fit into this model and approach.

Progression to full-ice ringette is predicated upon proper athlete placement (based on skill) rather than a gut feeling that players are 'ready' for full-ice. However, there are currently no consistent criteria to determine such readiness,

and assessments are administered inconsistently. If players truly are ‘ready’, they may currently be placed in divisions/levels that offer full-ice play.

**CURRENT SITUATION AND PRELIMINARY PROPOSALS**

The current (2019-2020) offerings for Children’s Ringette in Alberta are summarized in the following table.

	Active Start	U10 Step 1	U10 Steps 2 &3
Ice	Cross	Half	Full
Nets	Small	Small	Small
Rules	Modified*	Modified	Adult

\* Only if games played (not recommended at Active Start)

It is Ringette Canada’s current intention to implement modified game play for all players aged 9 and under by 2021-2022. However, in the longer term (the timeline for which had not yet been determined), Ringette Canada intends to move from an age-based development system to one that focuses on skill. The future will feature ‘on-ramps’ for new skaters, with two stages of FUNdamentals development (both featuring half-ice games), and two stages of Learn to Train (both featuring full-ice games). Neither FUNdamentals nor Learn to Train would accommodate new skaters.

**RINGETTE CANADA – PRELIMINARY PROPOSAL (2021-22)**

	Active Start	U10 Steps 1-3	U12 +
Ice	Cross	Half	Full
Nets	Small	Small	Large
Rules	Modified*	Modified	Adult

**RINGETTE ALBERTA PROPOSAL (2020-2021)**

Based on Ringette Canada’s intentions, and on development currently observed, Ringette Alberta announced its intention to add an additional stage of U10 at half-ice in 2020-2021 (predicated on proper athlete placement), as depicted below:

- Cross Ice
  - Active Start
- Half ice
  - U10-1
  - U10-2
- Full ice
  - U10-3

▪ U12

RECOMMENDED FORMAT FOR CHILDREN'S RINGETTE (REDUCED ICE)

The recommended format for Children's Ringette is summarized as follows:

- Half Ice
- Small nets
- 3 v 3 (+ goalies)
- Must pass over ringette line
- 10-player roster (9 + goalie) (or 7, or 13)
- Goalie rotates between (not during) games – goalie equipment optional
- Equal ice time
- Game sheets (only to record attendance)
- No scores announced or posted (including tournaments)
- No standings
- 5-minute warm up
- 90 second shifts (buzzer)
- Referee (2+ years' experience)
- Continuous play (after goal, infraction, etc.)
- No penalties (education only)

## RESEARCH OBJECTIVES

The objectives of the research conducted in Alberta in the spring of 2020 can be summarized as follows:

- To identify current practice in Children's Ringette and determine the extent to which guidelines are being followed.
- To gather information and opinions from coaches, parents, administrators, and officials regarding current and proposed Children's Ringette formats.
- To provide Ringette Alberta with information and recommendations that would assist it in determining whether or not to proceed with plans to modify Children's Ringette in the 2020-2021 season and beyond.

In the initial stages of the research being conducted in Alberta, Ringette Canada announced that it was conducting its own nation-wide research program (led by Dr. Veronica Allen of York University) to determine how to proceed with implementing and promoting appropriate athlete development across the country. The objectives of Ringette Canada's research were identified as follows:

*"The purpose of the proposed research is to evaluate the impact of Ringette Canada's newly introduced guidelines for structuring Children's Ringette. These guidelines are in the process of being implemented for all programs involving children under the age of 10 years who are being introduced to ringette for the first time. In partnership with Ringette Canada, the research team will use the RE-AIM Framework to evaluate the Reach, Effectiveness, Adoption, Implementation, and Maintenance of the following mandate: Beginning in the 2019-2020 season, all games for players under the age of eight years (U8 category) should be played on an area that does not exceed half the ice surface (i.e., small-area games). This change will be introduced at the U9 and U10 levels in 2020-21 and 2021-22."*<sup>1</sup>

In order to ensure coordination of research efforts, Caminata Consulting collaborated with Dr. Allen in the design of the current research protocols.

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<sup>1</sup> Allen, V., Fraser-Thomas, J., & Martin, L. "Evaluating the Impact of Small-Area Games in Children's Ringette" SSHRC Research Proposal, December 2019.

## RESEARCH METHODOLOGY

Information was obtained on all aspects of Children's Ringette in Alberta in 2019-2020, targeting the following stakeholder groups via online surveys.

- Coaches
- Parents
- Officials and assignors
- Local association board members

In addition to the online surveys, a limited number of game observations were made.

## STAKEHOLDER SURVEYS

A total of 1,789 invitations to complete the stakeholder survey (see Appendix 1) were sent to coaches, parents, and local association board members who were included in the Ringette Alberta database as part of their 2019-2020 registration process. It was subsequently pointed out that some local associations had not submitted email addresses for all parents / coaches as part of the registration process. In order to provide those individuals with the opportunity to complete the survey and provide input, a web-based link to the survey was provided and made available for circulation.

A total of 399 officials who were registered in the Ringette Alberta database were contacted by email to complete the officials' survey (see Appendix 2). Similarly, a web-based link to this survey was also provided and made available for circulation.

A total of 22 local association officials' assignors who were registered in the Ringette Alberta database were contacted by email to complete the officials' assignors survey (see Appendix 3). A web-based link was also provided for those who were not contacted directly.

In each instance, several follow-up reminders were sent to individuals who had not responded, or only submitted partial responses. These reminders were sent over a four-week period in March-April of 2020, thus ensuring ample opportunity for stakeholders from across the province to provide input.

## GAME OBSERVATIONS

Game observations were conducted at a Children's Ringette tournament that took place on February 14-15, 2020 in Spruce Grove, Alberta. It was originally intended to conduct additional game observations later in the season (in March), but the events at which these were to be completed were cancelled as a result of the COVID-19 pandemic.

One observation was made of a U10 Step 1 game, and one observation was made of a U10 Step 2 game. At the targeted games, GoPro cameras and a larger tri-pod mounted camera were used to record the on-ice play. Coaches and parents / guardians were informed about the research being conducted via on-site direct contact. Signs were posted around the tournament venue stating that games would be video-recorded. All video recordings were uploaded to a password-protected computer, with each file being encrypted with a password (for data security reasons). A Ringette Alberta representative was identified and available at the event who could be contacted by coaches, parents, and guardians if they had questions or concerns about the recordings.

Analysis of the game play was conducted by graduate research assistants at Queen’s University in Ontario. The protocol used is outlined in Appendix 4.

## RESPONSES

- Overall, a total of 1,117 responses were received from coaches, parents, and local associations. Of these 827 were complete responses (i.e., answered all relevant questions). Based on this response rate, results can be considered accurate to within at least +/- 2.5% nineteen times out of twenty.
- For officials, a total of 226 responses were received, of which 114 indicated that they had officiated at least one half-ice game in 2019-2020. Of this number, 86 provided complete responses. Based on this response rate, results can be considered accurate to within at least +/- 8.0% nineteen times out of twenty (assuming that 200 officials in the province officiated at least one half-ice game).
- For officials’ assignors, 9 responses were received, of which 6 were complete. No statistical inference can be drawn from the results of this survey. However, a number of local associations provided input on questions that were asked of officials’ assignors.

The following numbers of responses were received for identified groups of stakeholders.

- Active Start (cross ice) – 159 responses (coaches and parents) – no game observations
- U10 Step 1 (modified game) – 193 responses (coaches and parents); 1 game observation
- U10 Step 2 (adult game) – 294 responses (coaches and parents); 1 game observation
- U10 Step 3 (adult game) – 140 responses (coaches and parents) – no game observations
- Local Association Board Members – 100 responses
- Officials’ Assignors – 6 responses
- Officials – 114 responses

Player Year of Birth	# of Responses	Percent
2009 or earlier	18	2.4%
2010	198	25.9%
2011	210	27.5%
2012	189	24.7%
2013	103	13.5%
2014 or later	46	6.0%
<b>Total</b>	<b>764</b>	<b>100%</b>

Responses by Player Age

Division / Level	Number	Percent
Active Start	123	16.1%
Step 1	193	25.3%
Step 2	294	38.5%
Step 3	140	18.3%
Other / Unsure	14	1.8%
<b>Total</b>	<b>764</b>	<b>100%</b>

Responses by Player Division / Level

## RESULTS

This section provides a summary of the results of the analysis of the survey data. More detailed data were provided to the Ringette Alberta board in the form of links to mini-presentations that segmented the sample into a variety of subsets (e.g., U10 Step 1 coaches, U10 Steps 2 and 3 coaches, Active Start coaches, etc.)

### OVERALL RESPONSES

#### AWARENESS OF CURRENT FORMAT

- 90% awareness of current format (Step 1 half ice; Steps 2 & 3 full ice)
- 90% awareness of ability to progress non-sequentially from season to season (e.g., Step 1 to Step 3)
- 83% awareness that team make-up can change from season to season (to accommodate differences in skill development)

Overall, there is good awareness of the current format and the ability of players to move non-sequentially through the U10 Steps. However, some respondents from smaller local associations indicated that it might be difficult to accommodate players who are proficient enough to 'skip' a step if that means that there would be insufficient players at a level to form a team.

#### SKILL LEVEL PROFICIENCY TO PROGRESS FROM HALF TO FULL ICE

- 16-20% had insufficient knowledge to assess
- Of those that indicated what was required to progress, the most important skills cited were:
  - Skating skills
  - Ring skills
  - Team play skills

However, a number of respondents indicated that trying to assess skill levels objectively in ringette had proven difficult in the past. Also, a number of respondents questioned whether it was appropriate to identify proficiency of certain skills as a prerequisite for progression to full ice. Some noted that even U19 players did not consistently display proficiency at basic skills.

#### SKATING LESSONS AND OTHER SPORTS

Approximately 30% of the 930 parents of U10 and Active Start players who responded indicated that their child took skating lessons outside of ringette team practices. Meanwhile, over 50% of the same number of parents who responded indicated that their child played other team sports. The majority of these other team sports (e.g., soccer, baseball, basketball, softball) employed some form of modified rules for players of this age.

#### SUPPORT FOR MINI-TOURNAMENT FORMAT

Mini-tournaments, modelled on the experience in Finland in which four teams play a round-robin three game tournament over a two-hour ice time, were suggested as a way for U10 half-ice games to be less time-consuming and involve less travel. When asked the extent to which they were likely to support mini-tournaments, parents and coaches responded as follows:

- 9.0% Very Likely
- 22.7% Likely
- 23.9% Neutral

- 18.6% Unlikely
  - 25.6% Very Unlikely
- Although just under one third of respondents were generally supportive of trialing a mini-tournament format for half-ice games, almost a half (44.2%) were not supportive. In large part, this lack of support appears to be attributable to a misunderstanding of what mini-tournaments might entail and how they could result in less travel and time commitment for players and parents.

## RESPONSES FROM U10 COACHES

A total of 222 Coaches of U10 or Active Start (including 2 non-parent coaches) submitted responses. Of this number, 51 were U10 Step 1 coaches. The responses from these coaches indicated the following:

- Some local associations appear to be reluctant to keep players in same Step for consecutive years;
  - Certain skills (carrying / passing) are more critical than others (backhand / protecting / backward skating) for progression to full-ice play;
  - Skill development is deemed less critical by U8 (Active Start) coaches than U10 coaches for player progression to full-ice play;
  - Many coaches believe that players learn full-ice game by playing it; and
- Overall, there is limited support among coaches for Ringette Canada proposals for half-ice for U10, especially after Step 1. The general consensus among coaches (and particularly those at U10) is that any more than one year at half-ice will lead to players losing interest and not being sufficiently prepared to progress to full-ice play once they are in the U12 age group. However, some U10 coaches did see the benefits associated with half-ice play in terms of skill development.

## RESPONSES FROM PARENTS

A total of 681 non-coaching parents of Active Start and U10 players responded to the survey. Of these, 294 had a child who played either half- or cross-ice in 2019-2020 (i.e., Active Start or U10 Step 1), and a further 387 had a child who played full-ice (i.e., U10 Step 2 or 3). The key findings were as follows:

- Many parents feared that players will lose interest in the game if they play on half-ice until they begin U12;
- Transition to full-ice at U12 considered 'too late' by many parents;
- An oft-cited mantra among parents (particularly those currently in U10 Step 1 who played half-ice in 2019-2020 and, even if they progress to Step 2 in 2020-2021 would, under the current proposals, remain at half-ice) is 'why change?'
- There was little acknowledgement that a player who is deemed 'ready' for full-ice can currently play U12 even if they are still U10;
- Many parents remain unconvinced that half-ice games offer benefits for development when skill levels are not highly advanced. Clearly, more education and research-based evidence are needed on 'benefits' of half-ice games for development.
- Why change?

## RESPONSES FROM OFFICIALS

A total of 224 officials responded to the survey, of which 113 (50.5%) officiated half ice in 2019-2020. The respondents reported the following:

- 25.6% of half-ice officials were first year officials (which is not recommended under current Ringette Alberta guidelines);
- 25.6% of half-ice officials had officiated at least 5 years;
- Only 31.8% reported consistent 90 second shift lengths (the recommended time) for half-ice games;
- The vast majority (90.7%) used the free play line to mimic the blue line during half-ice games (as is recommended under current guidelines);
- Over three quarters (76.7%) explained penalty calls to players (as is recommended).  
Officials reported that they observed improved skill development in players during half-ice games, as compared with players of similar skill level in full-ice games.

## RESPONSES FROM LOCAL ASSOCIATIONS

A total of 47 local association board members provided responses. Local associations from all regions of the province were represented. In general terms, local associations reported the following:

- There is strong support for improved skill development at younger ages as is promoted by cross-ice and half-ice games prior to progression to full-ice play;
- Board members expressed similar concerns to those identified by both parents and coaches about half-ice for U10 Steps 2 & 3 (especially around player retention);
- However, local associations illustrated more support (than parents / coaches) for trialing the ‘mini-tournament’ format for half-ice games.

## GAME OBSERVATIONS AND PLAYING CONDITIONS

Comparisons were made between players on two randomly selected teams each of a half-ice (U10 Step 1) and full-ice (U10 Step 2) game. While circumstances did not permit a more robust sample size in the 2019-2020 season, preliminary findings indicate strong support for the notion that half-ice games encourage more touches, more shot attempts, more shots, and more possession of the ring as compared with full-ice games of players of similar skill levels. The results of the analysis show that (after controlling for playing time of each skater) there were 25% more touches, 25% more shot attempts, almost double the amount of more shots, and 43% more possession for half-ice players. These results are summarized in the following two tables.

	Events / minute playing (controlling for playing time)			
	Half-Ice		Full-Ice	
	Mean	SD	Mean	SD
Touches	1.26	0.47	0.97	0.43
Pass Attempts	0.57	0.24	0.54	0.23
Successful passes	0.35	0.26	0.35	0.21
Unsuccessful passes	0.22	0.13	0.19	0.10
Shot attempts	0.41	0.24	0.31	0.24
Shots	0.30	0.24	0.17	0.20
Missed shots	0.11	0.12	0.07	0.08
Possession / Playing time	10.3%	6.0%	7.2%	3.5%

Observation	Difference
Touces	25% more for half-ice
Shot attempts	25% more for half-ice
Shots	Almost double for half-ice
Possession / Playing time	43% greater for half-ice

Two aspects of half-ice game play (roster size and game format) were assessed from the survey responses to determine the extent to which Ringette Alberta guidelines were being followed during the 2019-2020 season.

#### ROSTER SIZE (U10 STEP 1)

The following were reported by coaches of U10 Step 1 teams:

- 43.2% of teams had 10 or fewer players;
- 3.9% of teams had more than 16 players;
- An average of 10.2 players dressed per game;
- Team roster size was between 9 and 16 players, with an average roster size of 11.3.

These findings align closely with Ringette Alberta guidelines.

#### GAME FORMAT (U10 STEP 1)

The following game formats were reported by coaches of U10 Step 1 teams:

- 72.6% played all games 3 v 3;
- 11.8% played all games 5 v 5;
- The average game length was 46.2 minutes;
- The average game ice slot for games was 59.3 minutes;
- Only 19.6% of coaches reported consistent 90 second shift lengths;
- Almost two thirds (64.7%) of coaches reported at least 75% of all shifts were 90 seconds;
- An average of 18.2 games were played in 2019-2020 (recommendation is 10 league games + 2 tournaments, which if each tournament involved four games would be in line with the overall recommendation);
- An average of 29.0 on-ice practices were held in 2019-2020 (the recommendation is 20);
- An average of 7.1 practices were held before first game (recommended minimum is 3);
- Almost three quarters (72.6%) changed goalies during games (i.e., between shifts) (the recommendation is not to change during games, but to rotate goalies between games).

While many of the current Ringette Alberta guidelines (particularly regarding game length, roster size, number of players dressed for each game, and number of games) are being followed, it is notable that neither the 90-second recommendation for each shift nor the recommendation to keep the same goalie for the entire game are not being applied consistently. That over one in ten U10 Step 1 coaches reported having played full-ice (5 v

5) games further highlights that not all Ringette Alberta recommendations for this step are being followed consistently across the province.

## SUMMARY OF CONCERNS

Taken as a whole, several concerns were expressed by coaches, parents, local associations, and officials with the current format and proposed changes to Children's Ringette in Alberta. These can be categorized as follows:

- Player retention is seen to be an issue if players feel that they are being 'held back' by playing on reduced (cross- or half-) ice for 'too many' seasons before progressing to the full-ice game. It is suggested (by both coaches and parents) that players may lose interest in ringette if they are not allowed to play the 'real' game. It should be noted that no attempt was made in the current research to obtain feedback directly from developing players. However, the Ringette Canada investigation of Children's Ringette does aim to generate such data.
- Delaying the transition to full-ice may result in challenges when the change is finally made as players will be experiencing a different game format later in their development. However, it is generally acknowledged by all stakeholders that players who are deemed to be 'ready' to progress to the full-ice game before they are ten years of age (under the current age-based format) are permitted to play on a U12 team.
- Smaller associations were seen to be at a potential disadvantage in dividing players based on their stage of development. This is because there is generally a greater variability of skills within teams. Local associations must then determine which format is most appropriate, which results in the game played by some players not aligning with their level of skill development (i.e., some players with demonstrably advanced skill levels will play half-ice in order for a local association to form a team, and vice versa).
- Despite considerable efforts made on the part of Ringette Alberta in explaining the rationale for the current and proposed formats of Children's Ringette, there is a need for more education of stakeholders regarding the benefits of reduced-ice play at earlier stages of development. Evidence from other sports and ringette in other countries of modified games to enhance skill development is not seen by many stakeholders as being sufficient to support the current direction being taken by Ringette Alberta and Ringette Canada. However, both the current study and the broader analysis of Children's Ringette across Canada will help provide the data that either supports or refutes the arguments in favour of reduced-ice play.
- A number of stakeholders are operating under the assumption that the previous full-ice approach to ringette development is appropriate and that there is little reason to change.
- Perhaps supporting the current opposition by some stakeholders to the half-ice game is the fact that current guidelines are being inconsistently applied. This makes it difficult to draw definitive conclusions regarding the benefits of the approach.

## SUMMARY OF SUPPORT

While a number of concerns were expressed by stakeholders, it should not be concluded that there is no support for Children's Ringette (either in its current format or for proposed changes to its delivery). Numerous comments were submitted by parents, coaches, and local associations that collectively indicate that there is general agreement that game modifications (such as reduced ice, fewer players on the ice, and small nets) are beneficial for ringette development. There is little, if any, argument that Active Start and early stages of U10 game play should be conducted on reduced ice. The concerns (as outlined above) appear more to be around when it is appropriate for players to progress.

The limited empirical data on comparisons between half-ice (Step 1) and full-ice (Step 2) play seem to support the notion that the purported benefits of increased player involvement are evident in reduced-ice play. Although lacking statistical rigour, the game observations and subsequent analysis do appear to corroborate the conclusions of the research that has been conducted on other team sports. There is little reason to suggest that ringette is unique in this regard.

The concept of mini-tournaments for half-ice games appears to merit further investigation and possible trial. The benefits seen elsewhere (which include reduced time and travel costs, and more efficient use of ice-time) are likely to be evident in Alberta. However, the concept must be explained more clearly to stakeholders in order for the perceived negative aspects of such a format (too long a period for young children to be active, a sense that the format is "too chaotic", the increase in time commitment as compared with single games, etc.) to be addressed.

## RECOMMENDATIONS TO RINGETTE ALBERTA BOARD

Based on the input received from stakeholders, along with a review of research on athlete development in other sports, as well as the limited empirical observations of game play, the following recommendations are made to the Ringette Alberta board of directors:

- Proceed as planned in 2020-2021 (U10 Step 2 half-ice). While there is considerable resistance to this among stakeholders, it aligns with Ringette Canada's longer-term plans to move to reduced-ice for all players aged 9 and under by 2022-2023<sup>2</sup>.
- Review the 2020-2021 season experience (particularly relating to the move to U10 Step 2 to half-ice) prior to making any decisions for the 2022-2023 season.
- Reinforce the notion that players who are deemed 'ready' for full-ice can opt to play U12. This will require the continued cooperation of local associations. In order that players be appropriately placed, Ringette Alberta could consider the development of 'athlete placement guidelines' that are based on any available Ringette-specific research.
- Continue liaison with the Ringette Canada research team that is conducting a nationwide assessment of Children's Ringette.
- Urge Ringette Canada to clarify the timelines and details of the proposed transition from age-based to skill-based progression (specifically, the development and implementation of Athlete Development Matrix that will be used to guide appropriate player placement).
- Continue and redouble efforts to educate and communicate with key stakeholders (coaches, parents, local associations, and officials) regarding both the current proposals and future direction of Children's Ringette.
- Consider the trial of mini-tournaments for half-ice play during 2020-2021 (with increased education about possible benefits).
  - For example, as a trial, the regular season of ten games could be reduced to six-eight games with the addition of two mini-tournaments (one before the new year, and one later). The former would result in the same number of games being played as is currently recommended, while the latter would result in the same amount of game ice-time as is currently recommended.

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<sup>2</sup> Along with other timeline-based recommendations, this assumes that ringette will return to 'normal' in the wake of the COVID-19 pandemic. If this is not the case (e.g., if a return to play is delayed for the 2020-2021 season), the proposed timelines will need to be adjusted accordingly.

- Work with members (local associations, coaches, and officials) to improve key logistics and consistent application of current Children's Ringette guidelines (particularly as they relate to team size, shift length, goalie changes, game restart procedures, and use of experienced officials).

## Appendices

### Appendix 1 – Children's Ringette Survey (Coaches, Parents, Local Associations)

Ringette Alberta Children's Ringette Survey

 Caminata Consulting

Your role(s) in Ringette in 2019-2020

**You may have a number of roles in Ringette during the current season. Your answer(s) to the following question(s) will direct you to questions specific to your role.**

**All responses will be confidential and reporting to Ringette Alberta will only be in aggregate format**

\* 1. Did you coach a U10 or younger team (or teams) during the 2019-2020 Ringette season?

- Yes  
 No

Ringette Alberta Children's Ringette Survey

 Caminata Consulting

Your role in Ringette in 2019-2020

\* 2. Were you a parent / guardian of a U10 or younger player (or players) during the 2019-2020 Ringette season?

- Yes  
 No

Ringette Alberta Children's Ringette Survey

 Caminata Consulting

Your role in Ringette in 2019-2020

\* 3. Were you a local association board member during the 2019-2020 Ringette season?

- Yes
- No (see below)

Please identify your role if you were not a local association board member in 2019-2020

Ringette Alberta Children's Ringette Survey



Coach Questions

**Please answer the following questions about your experience as a coach of a U10 or younger team during the 2019-2020 Ringette season. If you coached more than one team, please answer only for the oldest team that you coached.**

\* 4. What was the roster size (total number of players) for the team that you coached?

\* 5. What is your best estimate of the average number of players (including goalie) on your team who dressed for each game this season up to March 1, 2020.

0 20



\* 6. For each of the following formats, what proportion (to the nearest whole percentage) of games did your team play in 2019-2020 up to March 1, 2020?

	100%	75-99%	50-74%	25-49%	1-24%	0%
3 on 3 (plus goalie)	<input type="radio"/>					
5 on 5 (plus goalie)	<input type="radio"/>					
Other	<input type="radio"/>					

\* 7. What was the length (in minutes) of the majority of games your team played up to March 1, 2020 in the 2019-2020 season? (only include actual playing time: e.g., 2 x 25 minute halves is 50 minutes playing time, 3 x 15 minute periods is 45 minutes playing time, etc.)

0 Minutes 60

\* 8. What was the length (in minutes) of the ice slot allocated for the majority of games your team played up to March 1, 2020 in the 2019-2020 season?

0 Minutes 100

\* 9. Up to March 1, 2020, how many games did your team play in the 2019-2020 season?

0 Games Played 30

\* 10. Up to March 1, 2020, how many on-ice practices did your team have during the 2019-2020 season?

0 Number of on-ice practices 50

\* 11. How many on-ice practices did your team have prior to the first game of the 2019-2020 season?

0 Number of practices before first season game 25

\* 12. For the majority of games, did your team have the same player as goalie for the entire game?

- Yes
- No

Comment (optional)

\* 13. What proportion (to the nearest whole percentage) of games this season so far have involved the following shift lengths?

	100%	75-99%	50-74%	25-49%	1-24%	0%
90 second shifts	<input type="radio"/>					
120 second shifts	<input type="radio"/>					
Other length shifts	<input type="radio"/>					

\* 14. In addition to being a coach, did you also have a child (or children) who played U10 or younger Ringette in 2019-2020?

- Yes
- No

Ringette Alberta Children's Ringette Survey



Parent / Guardian Questions

**Please answer the following questions about your child's experience with U10 or younger ringette in 2019-2020. If you had more than one child playing U10 or younger ringette, please answer only for the child identified in the invitation that was emailed to you to complete this survey.**

\* 15. With which Association was your child registered with in the 2019-20 season?

\* 16. In which year was your child born

- 2008 or earlier
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016 or later

\* 17. How many seasons has your child played ringette?

- This is their first season
- 2 (including this season)
- 3 (including this season)
- 4 (including this season)
- 5 or more (including this season)

\* 18. In which Division / Level did your child participate during the 2019-20 season?

- Active Start 1
- Active Start 2
- U10 Step 1
- Other (please specify)
- U10 Step 2
- U10 Step 3

\* 19. This season (2019-20) did your child play...

- All cross ice games (i.e., less than half ice)
- All half ice games
- All full ice games
- A combination of cross ice, half ice, or full ice games
- Other (please specify)

\* 20. Did your child take skating lessons this season in addition to playing ringette?

- Yes
- No
- Unsure

\* 21. Does your child play other team sports?

- Yes (please specify below)
- No
- Unsure

If yes, please identify the other team sports

\* 22. In addition to being a parent / guardian, were you also a local association board member in 2019-2020?

- Yes
- No

Ringette Alberta Children's Ringette Survey



Administrator, Coach, and Parent / Guardian Questions

**A 2018 Ringette Canada [Competition Review and Restructuring Report](#) recommended the implementation of small-area games for developing participants (i.e., approximately ages 5 to 10 years) as a crucial next step for Children's Ringette. The report cited evidence from other sports that suggests that small-area games have the potential to provide benefits for Children's Ringette participants.**

The ensuing national guidelines for Children's Ringette stipulated that, beginning in the 2019-2020 season, all games for players under the age of eight years should be played on an area that does not exceed half the ice surface. By 2021-22 these national guidelines will be extended to players under the age of 10.

The following questions are seeking your opinion on the appropriateness of different formats of play.

\* 23. Are you aware that the current (2019-20) format for Alberta Ringette players in U10 is as follows:

U10 Step 1 - Half Ice

U10 Step 2 - Full Ice

U10 Step 3 - Full Ice

- Yes
- No
- Unsure

Comment on the current format for U10 Ringette in Alberta (optional)

\* 24. Are you aware that it is not a requirement for players to progress from Active Start to Step 1 to Step 2 to Step 3 sequentially (in other words, it is possible to play Step 1 in one season and then Step 3 the following season, or remain at the same step for consecutive seasons)?

- Yes
- No
- Unsure

\* 25. If an individual is ready to transition to full ice, but their team-mates are not, it may be more appropriate for that player to join a different team at a higher level. Are you aware that team make ups may change from year to year to accommodate differences in skill development?

- Yes
- No
- Unsure

Comment (optional)

Ringette Alberta Children's Ringette Survey



Transition from cross-, to half-, to full-ice

The following questions seek to identify your understanding of the skills required for players to progress through different formats of Ringette.

\* 26. How proficient should a player be with the following skating skills to show they are capable to transition to a full ice game (i.e., on what proportion of attempts can the player successfully perform this skill)?

	Less than 25% of the time	Between 25% and 45% of the time	Between 46% and 65% of the time	Between 66% and 85% of the time	More than 85% of the time	Don't know enough to have an opinion
Acceleration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stop (both directions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tight turns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pivots	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Backwards skating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

\* 27. How proficient should a player be with the following ring skills to show they are capable to transition to a full ice game (i.e., on what proportion of attempts can the player successfully perform this skill)?

	Less than 25% of the time	Between 25% and 45% of the time	Between 46% and 65% of the time	Between 66% and 85% of the time	More than 85% of the time	Don't know enough to have an opinion
Carrying the ring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Protecting the ring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Passing – forehand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Passing – backhand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leading the receiver (passing anticipating where the receiver should be)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stabbing / receiving the ring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Forehand shot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Backhand shot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

\* 28. How proficient should a player be with the following team playing skills to show they are capable to transition to a full ice game (i.e., on what proportion of attempts can the player successfully perform this skill)?

	Less than 25% of the time	Between 25% and 45% of the time	Between 46% and 65% of the time	Between 66% and 85% of the time	More than 85% of the time	Don't know enough to have an opinion
On ice positioning (open space, spread out, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Passing across the line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

29. Research in other team sports has shown a number of benefits associated with smaller playing surface for developing athletes. To what extent are you willing to forego the following reported benefits in order to move a child to a larger playing surface?

	Definitely Not	Probably Not	Possibly	Probably	Very Probably	Definitely
Increased pace of games	<input type="radio"/>					
Promote creativity and experimentation	<input type="radio"/>					
Encourage quick decision-making	<input type="radio"/>					
Enhance skill development	<input type="radio"/>					
Teach passing and handling in tight situations	<input type="radio"/>					
Make for a more competitive game	<input type="radio"/>					
Increased time engaged in the play	<input type="radio"/>					

Comment (optional)

30. Some logistical issues have been identified for teams playing on reduced size ice. Please offer any suggestions for dealing with the following...

Dressing room congestion

Goalie changes

Other (please specify and comment)

\* 31. In order to reduce travel and ice costs, one option for half-ice Ringette is to establish four-team mini round-robin tournaments involving 2-hour ice slots (in which each team plays 3 x 25 minute games with free skating in between games while goalies change).

How likely would you be to support such a change?

- Very likely
- Likely
- Neither likely nor unlikely
- Unlikely
- Very unlikely

Please elaborate on your response

Ringette Alberta Children's Ringette Survey



Additional comments about Children's Ringette

**The final section of the survey asks you provide any additional comments about the proposals for Children's Ringette in Alberta beyond 2019-2020.**

32. Please provide any additional comments or suggestions regarding Children's Ringette

## Appendix 2 – Children's Ringette Survey (Officials)

Ringette Alberta Children's Ringette Survey - Officiating



Your role(s) in Ringette in 2019-2020

You may have a number of roles in Ringette during the current season. This survey relates specifically to your experiences as an official in 2019-2020.

All responses will be confidential and reporting to Ringette Alberta will only be in aggregate format.

\* 1. Did you officiate at least one game that was not played on full-ice (i.e., was half-ice or cross-ice) during the 2019-2020 Ringette season?

Yes

No

Ringette Alberta Children's Ringette Survey - Officiating



Officials' Questions

Please answer the following questions about your experience as an official of half-ice or cross-ice games (i.e., U10 Step 1, or younger) during the 2019-2020 Ringette season. If you officiated both full-ice and reduced-ice (half-ice or cross-ice) games, please provide answers only for your reduced-ice officiating experience.

\* 2. In which Local Association(s) did you officiate reduced-ice games during the 2019-20 season? (check all that apply)

Airdrie

Beaumont

Black Gold Rush

Bow View

Calgary East

Calgary Northwest

Calgary Open (including Olds)

Central Alberta Sting

Central Alberta Wiggers Open

- Cochrane
- Drayton Valley
- Edmonton Federation of Community Leagues Ringette Association
- Edmonton Ringette Club
- Foothills
- Fort McMurray
- Fort Saskatchewan
- Hinton
- Hussar
- Indus
- Lacombe
- Leduc
- Lethbridge
- Medicine Hat
- Mighty Peace Ringette
- Northern Alberta Women's Ringette Association
- Peace Country Ringette (Grande Prairie)
- Pembina
- Red Deer
- Ringette Calgary
- Riviere Qui Barre Open
- Rockyford
- Sherwood Park
- South Calgary
- Spruce Grove
- St. Albert
- Strathmore
- University Ringette
- Women's Ringette Association of Calgary

\* 3. How many years have you been officiating in Ringette (include the current season, and include ALL formats of Ringette, not just reduced-ice)?

- 1 (this was my first year officiating)
- 2-4
- 5-10
- 11-15
- 16 or more

\* 4. What is your best estimate of the number of reduced-ice games that you officiated during the 2019-2020 Ringette season?

- 0 (I did not officiate any reduced-ice games)
- 1-5
- 6-10
- 11-15
- 16-20
- 21 or more

\* 5. For each of the following formats, what proportion (to the nearest whole percentage) of reduced-ice games did you officiate in 2019-2020 up to March 1, 2020?

	0%	1-24%	25-49%	50-74%	75-99%	100%
3 on 3 (plus goalie)	<input type="radio"/>					
5 on 5 (plus goalie)	<input type="radio"/>					
Other	<input type="radio"/>					

\* 6. What was the length (in minutes of playing time) of the majority of reduced-ice games you officiated in the 2019-2020 season?

- 45 minutes
- 48 minutes
- 60 minutes
- Other (please specify)

\* 7. What proportion (to the nearest whole percentage) of reduced-ice games in 2019-2020 that you officiated involved the following period lengths?

	0%	1-24%	25-49%	50-74%	75-99%	100%
3 x 20 minute periods	<input type="radio"/>					
4 x 15 minute periods	<input type="radio"/>					
4 x 12 minute periods	<input type="radio"/>					
3 x 15 minute periods	<input type="radio"/>					
3 x 12 minute periods	<input type="radio"/>					
Other (specify below)	<input type="radio"/>					

Other (please specify)

\* 8. What proportion (to the nearest whole percentage) of reduced-ice games in 2019-2020 that you officiated involved the following shift lengths?

	0%	1-24%	25-49%	50-74%	75-99%	100%
90 second shifts	<input type="radio"/>					
120 second shifts	<input type="radio"/>					
Other length shifts	<input type="radio"/>					

9. For the majority of games that you officiated on reduced-ice, did you use the free play line from full ice games to mimic the blue line (over which players must pass to a teammate)?

- Yes
- No
- Unsure

Please comment on your use of this rule modification

10. For the majority of games that you officiated on reduced-ice, after calling a penalty, did you explain the reason for the penalty to the offending player?

- Yes
- No
- Unsure

Please comment on your use of this rule modification

11. Please outline any advantages of reduced-ice that you noticed from an officiating perspective

12. Please outline any disadvantages of reduced-ice that you noticed from an officiating perspective

13. What impact do you think reduced-ice games will have on officials' development?

14. Please provide any additional comments or suggestions regarding Children's Ringette

## Appendix 3 – Children's Ringette Survey (Officials' Assignors)

Ringette Alberta Children's Ringette Survey - Officials' Assignors



Your role(s) in Ringette in 2019-2020

**You may have a number of roles in Ringette during the current season. This survey relates specifically to your experiences as an officials' assignor in 2019-2020.**

**All responses will be confidential and reporting to Ringette Alberta will only be in aggregate format.**

\* 1. Did you assign at least one game that was not played on full-ice (i.e., was half-ice or cross-ice) during the 2019-2020 Ringette season?

Yes

No

Ringette Alberta Children's Ringette Survey - Officials' Assignors



Officials Assignors' Questions

**Please answer the following questions about your experience as an assignor of officials of half-ice or cross-ice games (i.e., U10 Step 1, or younger) during the 2019-2020 Ringette season. Please provide answers only for your reduced-ice officials' assigning experience.**

\* 2. In which Local Association(s) did you assign officials to reduced-ice games during the 2019-20 season? (check all that apply)

Airdrie

Beaumont

Black Gold Rush

Bow View

Calgary East

Calgary Northwest

Calgary Open (including Olds)

Central Alberta Sting

Central Alberta Wiggers Open

- Cochrane
- Drayton Valley
- Edmonton Federation of Community Leagues Ringette Association
- Edmonton Ringette Club
- Foothills
- Fort McMurray
- Fort Saskatchewan
- Hinton
- Hussar
- Indus
- Lacombe
- Leduc
- Lethbridge
- Medicine Hat
- Mighty Peace Ringette
- Northern Alberta Women's Ringette Association
- Peace Country Ringette (Grande Prairie)
- Pembina
- Red Deer
- Ringette Calgary
- Riviere Qui Barre Open
- Rockyford
- Sherwood Park
- South Calgary
- Spruce Grove
- St. Albert
- Strathmore
- University Ringette
- Women's Ringette Association of Calgary

\* 3. Did you provide any information to your officials before they went on the ice for reduced-ice games during the 2019-2020 Ringette season?

- Yes
- No
- Unsure

If you answered 'yes' what type of information did you provide (e.g., a Ringette Alberta handout or other instructions)

\* 4. For each of the following experience level of official, what proportion (to the nearest whole percentage) of reduced-ice games did you assign to officiate in 2019-2020?

	0%	1-24%	25-49%	50-74%	75-99%	100%
First year officials	<input type="radio"/>					
Second to Fourth year officials	<input type="radio"/>					
Fifth to tenth year officials	<input type="radio"/>					
Officials with more than ten years experience	<input type="radio"/>					

5. Please outline any challenges you experienced in assigning reduced-ice officials in 2019-2020

6. What impact do you think restricted-ice games will have on officials' development?

7. Please outline (in point form) any feedback you received from parents about the reduced-ice format

8. Please outline (in point form) any feedback you received from officials about the reduced-ice format

9. Please outline (in point form) any feedback you received from your local association about the reduced-ice format

10. Please provide any additional comments or suggestions regarding Children's Ringette from your perspective as an officials' assignor

## APPENDIX 4 – GAME OBSERVATION TEMPLATE (MASTER CODING)

### Ringette Canada Master Coding Sheet

#### Outcomes

##### Playing Time

- 'Playing time' will be recorded as the amount of time a player spends on the ice during regulation play. In the case of a penalty shot, the time recorded from the commencement of their penalty shot until the referee stops the play will be added to 'playing time'.

##### Time Engaged in the Play

- The 'time engaged in play' will be recorded as the length of time a player has control of the ring. In addition, 'time engaged in the play' will account for the length of time a player has intention of gaining control of the ring within the distance of one stick length from an opposing player with control of the ring.

- For a goalkeeper, the 'time engaged in play' will be recorded as the time where the opposing team is in the free play zone and on the offensive.

o Rationale: In either of these zones, an attacking player could attempt a shot on net.

##### Possession Time

- 'Possession time' will be recorded from the instance a player gains control of the ring via their stick, or by intentionally kicking or batting, and until they lose control of the ring.

##### Number of Touches

- A 'touch' will be coded if the player gains control of the ring. A player gains control when a skater places their stick into the ring, propels the ring with the stick or bats or kicks the ring with intention (1).

o Batting the ring is when a player intentionally moves the hand, arm, or head to make contact with the ring while in motion (1).

o Kicking the ring is when a player intentionally moves the foot or leg to make contact with the ring while in motion (1).

- A 'touch' will constitute the entire time the player has control of the ring. If the player loses control of the ring without an opponent or teammate gaining control, another 'touch' will not be recorded if control is regained by the original player.

- A 'touch' for a goalkeeper constitutes when the ring is prevented from entering the net by the goalkeeper and comes to rest inside the goal crease. A 'touch' will also be recorded if the ring is propelled using a stick or is batted or kicked to prevent the ring from entering the net by a goalkeeper<sup>1</sup>.

- Deflections by or off a player are not considered having control of the ring and therefore, are not a 'touch' (1).

### Handling

- The 'handling' metric will be recorded as the successful control of the ring when an opposing player challenges or is checking to obtain control of the ring. A challenge is considered when an opposing player is within one stick length from the player with control of the ring and has intention to steal possession.

### Passing (Passing Attempt, Successful Pass and Unsuccessful Pass)

- A 'passing attempt' will be recorded as the delivering of the ring with the use of a stick, or by kicking or batting the ring from one player to a specific teammate with the intention. A 'passing attempt' will not be recorded if there is no intention of delivery of the ring to a specific teammate and a teammate gains control of the ring.
- A 'completed pass' will be recorded if the player intended to receive the ring gains control of the ring via a 'pass' (2).
- An 'incomplete pass' will be recorded if the intended teammate does not gain control of the ring after a teammate delivers them a 'pass' (2).

### Shots on Goal

- A 'shot on goal' is defined as when a team in possession of the ring legally propels the ring towards the goal and a combination or one of the following outcomes occurs (1):
  - o The ring enters the net
  - o The ring contacts a goal post or the cross bar
  - o The ring contacts the goalkeeper or acting goalkeeper within the goal crease
  - o The ring contacts the goalkeeper outside the goal crease and that contact prevents the ring from entering the net
- A 'shot on goal' will not be recorded if a goal is awarded to the player who 'touched' the ring due to an opposing player scoring on their own net.

### Attempted Shots on Goals

- An 'attempted shot on goal' will be defined as any 'shot on goal' or any intentional movement of the ring towards the net that does not make contact with the net, the goalkeeper or the acting goalkeeper.
- An 'attempted shot on goal' will not be recorded if a player 'passes' the ring to their own goalkeeper or delivers a 'shot on goal' at their own net.

### **References**

1. Ringette Canada. Official rules of ringette 1989-1991. Toronto, Ont.: Ringette Canada; 1989.
2. Gyarmati L, Stanojevic R. QPass: a Merit-based Evaluation of Soccer Passes. ArXiv160803532 Cs Stat [Internet]. 2016 Aug 8 [cited 2020 Mar 25]; Available from: <http://arxiv.org/abs/1608.03532>