2017

FARM SAFETY CENTRE

Safety Smarts

EVALUATION REPORT 2017

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Evaluation Highlights *of Safety Smarts*

Since 1998, the Farm Safety Centre (FSC) has offered the Safety Smarts program free-of-charge to schools in rural Alberta. The program consists of seven in-person farm safety presentations with interactive activities and curricula that are tailored to children in Kindergarten to grade six.

The evaluation of Safety Smarts in 2016-2017 sought to understand how the program is implemented in different school contexts and what difference participation makes to current and former students. Multiple mixed methods were used to collect data from program stakeholders.

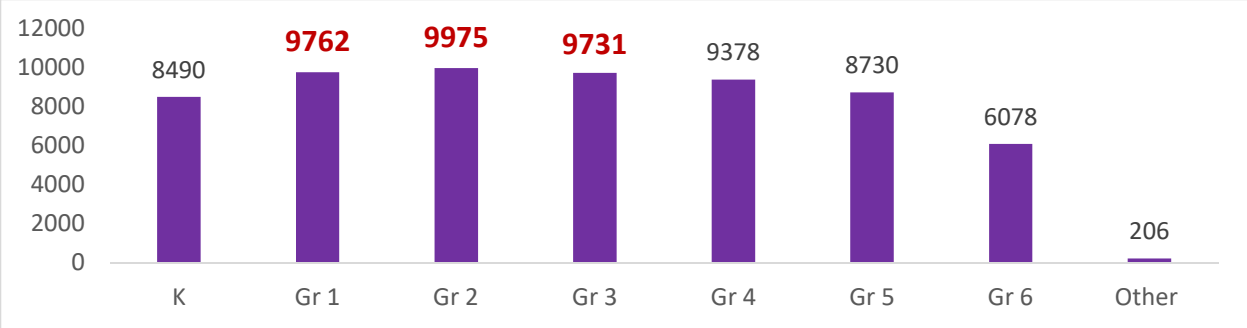
ULTIMATE AIM OF *SAFETY SMARTS*: *Local instructors with farm experience deliver evidence-based, farm safety instruction to rural children to increase their awareness and knowledge of farm hazards and build pro-safety attitudes that endure as they mature*. **Overall, the evaluation results indicate that the ultimate aim of the Safety Smarts program was achieved.** Program implementation was consistent with the logic model.

HOW WAS *SAFETY SMARTS* IMPLEMENTED IN DIFFERENT SCHOOL CONTEXTS?

Safety Smarts is delivered in classrooms by Instructors who are passionate about farm safety, have farming experience and understand children. When scheduling presentations, they accommodate school preferences and *"… make it easy for them… make sure I'm not imposing"* (Instructor). Overall, the Instructors blend their knowledge of schools and the community with tact, discretion and sensitivity.

In 2016-2017, Instructors delivered a total of **3,304 presentations to 65,575 students in 537 Alberta schools and 18 Saskatchewan schools**; grades 1, 2 and 3 were the most common (Figure 1). Most students were from public and separate schools (called Rural); a minority (n=3,205) were Hutterite students (called Colony).

Figure 1: The greatest numbers of students were in Grades 1, 2 and 3 (n= 65,575)



Across all of the grade levels and schools, 98% of classroom teachers believe farm safety is an important topic to discuss with their students. They believe the Safety Smarts curriculum is relevant, age-appropriate and culturally respectful. Nearly all Colony teachers (96%) and 78% of

Rural teachers intend to integrate farm safety messages throughout the school year. Ninety-eight per cent of classroom teachers and 91% of parents of Rural students who responded to the surveys support continued Safety Smarts presentations.

What Difference does Safety Smarts Make?

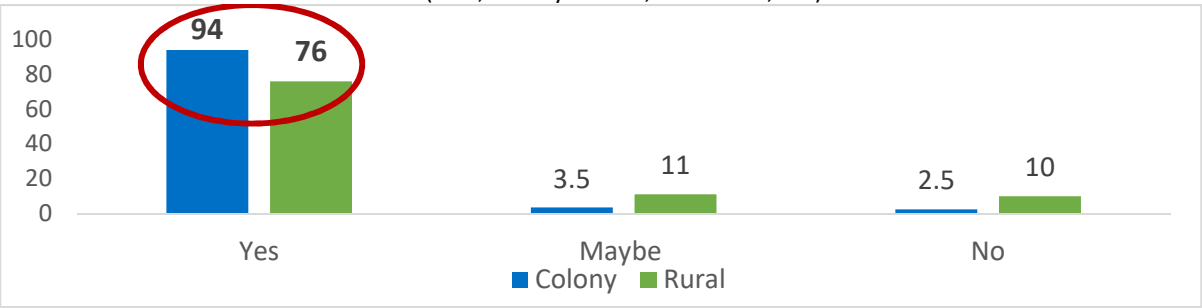
"Grandpa stressed don't touch the PTO… the Farm Safety Lady explained why."

(Young Adult who participated in *Safety Smarts*)

Children find the presentations engaging and understand the safety messages. Three-quarters (76%) of Rural grade 6 students and 94% of Colony students 12 years and older remembered safety messages and slogans from previous presentations (Figure 2). Fifteen years after they attended the program in Rural and Colony schools, young adults recalled the interactive activities, demonstrations and key messages. The face-to-face delivery and interactive explanations provided by the 'Farm Safety Lady' (Instructor) were critical to the lasting impact.

Figure 2: Many students remember messages from previous years, especially on Colonies.

(in %, Colony n =596, Rural n= 3,288)



As they progress through the presentations, students learn and have increasingly positive attitudes towards safety. Most students understand the material and intend to take responsibility for their safety on the farm (Figures 3 and 4).

Figure 3: Rural students intend to be safer.

(%, n=3,288)

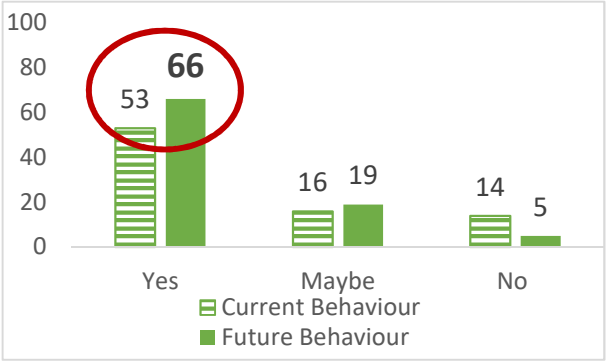
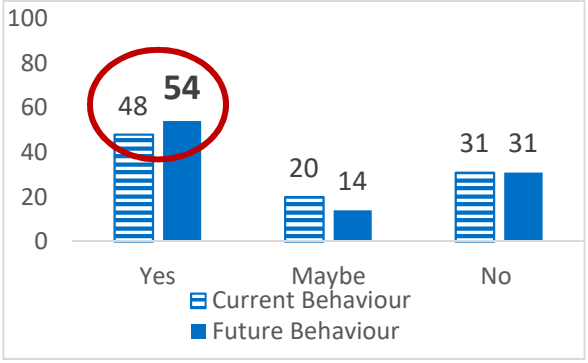


Figure 4: Colony students intend to be safer.

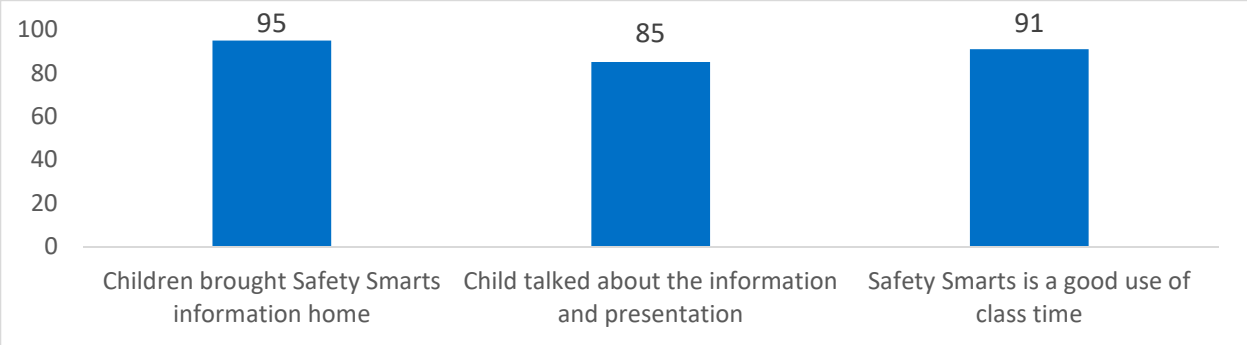
(%, n=596)



While few parents attended the in-class presentations, the safety messages seemed to reach them. More Colony students (76%) than Rural grade 6 students (51%) intended to talk with their parents about farm safety. However, almost all of the Rural parents (95%) surveyed saw the farm safety materials their child brought home and 85% reported that their children talked about the program. Most parents (91%) believed Safety Smarts is a good use of class time (Figure 5).

Figure 5: Farm safety messages reach Rural parents

(in %, n= 780; Children's grade level unknown)



Young adults from Colony and Rural schools who participated in Safety Smarts believe safety is critical to Colony and commercial farm operations. They conceptualize safety as a shared responsibility between an individual and the farm boss or owner. Even though they believe it is important, some Colony young adults acknowledged that *"Sometimes we don't take it seriously, don't take the time to be safe..."* (Hutterite Young Adults).

Conclusions

Following the Safety Smarts presentations, students from different school contexts know the main safety risks on the farm and strategies to stay safe. This knowledge endures and deepens as the children progress through the levels of the program, and beyond. Young adults who participated in the program when they were children have pro-safety mind-sets and value farm safety.

Next Steps

Maintaining Safety Smart's success requires strategic consideration of three areas for continuous quality improvement:

- Optimize professional development content and strategies for Instructors.
- Maintain a relevant, up-to-date curriculum through systematic curriculum review.
- Address other logistical challenges related to travel and working conditions.

1.0 Acknowledgements

We gratefully acknowledge the contributions of Farm Safety Centre staff and contractors (Safety Smarts Instructors). Without their input and efforts, the evaluation would not have been possible.

Laura Nelson	Chris Hogg	Tracy Albiston	Marie McKevitt
Lori Blake	Priscilla Keates	Carol Senz	Louise Phipps
Reanne Dennison	Lydia Hittinger	Carla Richard	

2.0 Background

Since 1998, the Farm Safety Centre (FSC) has offered the Safety Smarts program free-of-charge to schools in rural Alberta. The program consists of farm-specific safety information tailored to each grade level for children in kindergarten to grade six. Safety Smarts Instructors draw on their rural, farm experiences to make the classroom-based program relevant to children living in rural areas.

In 2016, the FSC contracted SWM Consulting Services, in partnership with BIM Larsson and Associates, to evaluate the Safety Smarts program. The evaluation occurred during the 2016-2017 school year.

3.0 Approach to the Evaluation

The evaluators worked collaboratively with the Safety Smarts Coordinator and Instructors, as well as FSC administration, to ensure the evaluation answered FSC's key questions and the evaluation methods respected the unique program contexts. The Safety Smarts Coordinator and Instructors were provided with a customized handout about evaluation to use to describe the rationale and scope of the work to program stakeholders, such as school principals (see Appendix A). Specific feedback from Safety Smarts Instructors about proposed data collection methods in schools, specifically with regard to student data collection, resulted in a revised approach to data collection (see Appendix B). Ultimately, this collaborative approach to designing and implementing the evaluation created a sound evaluation approach and built FSC capacity for future evaluation.

3.1 Understanding the Program

The evaluation started with the joint development of a program logic model for Safety Smarts. The logic model made clear the program components and anticipated outcomes, and guided all evaluation activities (see Appendix C). At the same time, the evaluators reviewed relevant program documents about Safety Smarts and completed a brief scan of peer-reviewed and grey literature on child farm safety.

3.2 Confirming the Areas of Inquiry

When the logic model was complete, the evaluators re-connected with program leadership to confirm the evaluation questions:

- How was Safety Smarts implemented in different school contexts?
- What difference did participation make to children and youth?
- What was the immediate impact of the presentation?
- How, if at all, did participants change over time?

The links between the logic model and evaluation questions are outlined in Appendix D.

3.3 Overview of Evaluation Methods

A full description of the evaluation methods is outlined in Appendix E.

3.3.1 Data Collection

The evaluation had several ways of collecting data from different program stakeholders to ultimately answer the evaluation questions (see Table 1 for an overview of the methods and stakeholders). Overall, 6,895 people provided information to the evaluation. The data collection tools, such as surveys and interview questions, were developed with FSC participation to ensure cultural appropriateness and minimal burden for participants (see Appendix E for copies of the data collection tools). This type of mixed methods approach, which intentionally integrates multiple lines of evidence, strengthens confidence in the evaluation findings.

Table 1: Mixed Methods Data Collection from Multiple Stakeholders

Stakeholder	Method	Number (response rate)
Rural Public and Separate Schools	Systematic observations by each evaluator (separately) of Safety Smarts presentations at each grade level (K-6).	2 Public schools 1 Separate school
Hutterite Colony School	Systematic observation by both evaluators (together) of Safety Smarts presentations in a colony class with a blended age group.	1 Colony school
Students	Surveyed participating students in grade 6	3,288 electronic surveys from students in rural Public and Separate schools 596 Paper surveys from Hutterite students 12 years and older
Classroom Teachers	On-line survey in rural schools Hard copy survey in colony schools	2,068 electronic surveys from teachers in rural Public and Separate schools 131 hard copy surveys from teachers in Hutterite schools
Parents of participating students (K-6)	On-line survey	780 parent surveys
Safety Smarts "alumni"	Focus group with young adults between the ages of 16-23 who participated in program when they were in elementary school.	1 Focus group with young adults who attended Public and Separate schools (n=5) 2 Focus groups with young adults from two different Hutterite colonies (n=9)
Instructors	Focus group	1 focus group (orientation) (n=8) 1 focus group (data) (n=8)
Coordinator and FSC Executive Director	Co-interview	1 interview (n=2)

3.3.2 Data Analysis and Interpretation

Quantitative data from surveys and administrative data sets were analysed using descriptive statistics. Content analysis (open-ended questions) was used for opened ended questions. Further inferential analyses were completed on specific areas of interest in the student data, such as differences across student age groups. See Appendix E.3 for more detailed information.

Qualitative data from observations, interviews and focus groups were analysed using constant comparison techniques.

Data interpretation was guided by an analytic template that was grounded in the evaluation framework (evaluation questions, outcomes, and indicators; see Appendix E). Preliminary results were validated during an in-person meeting with FSC staff and instructors.

3.3.3 Ethical Considerations

The ethical risks inherent to the evaluation approach were screened using the ARECCI ethics decision support tools (online screening tool). The risk rating was *Somewhat More than Minimal*, so specific steps were taken to mitigate ethical risks to participants. See Appendix F for more information on ethical considerations.

EVALUATION RESULTS

4.0 How was Safety Smarts Implemented in Different School Contexts?

4.1 Safety Smart Instructors

Although Safety Smarts is delivered to eight geographical regions in Alberta, and including reach into Saskatchewan, there were at total of nine Instructors in 2016-17. This is because one Instructor retired mid-year and was replaced by a new team member. The program is managed by a Coordinator, who previously was an Instructor.

Recruitment for Safety Smarts positions typically occurs through informal means, such as word of mouth and professional networks. The key requirements for the role are farming experience, a strong belief in farm safety and some experience working with children. Overall, the Safety Smarts team composition is stable, with many members in their positions for several years.

> *"You don't do this job unless you feel passionate about safety."* *(Instructor)*

Across the team of Instructors, several recall slightly different orientation and training processes. The current team of Safety Smarts Instructors were hired between 2005 and 2017. Over this 12 year time period, the orientation and training processes evolved.

According to the program leadership, at this time the training program is planned to include the following components delivered by the coordinator:

- Instructor receives curriculum materials and tools for study and review.
- Two consecutive days of school presentations scheduled in new instructors' area.
- Day one coordinator delivers all 7 presentations and instructor observes, then debrief together.
- Second day instructors delivers all 7 presentations and coordinator observes, then debrief together.
- Coordinator provides frequent and ongoing support to new Instructor as they begin independent delivery of the presentations.

4.2 School Engagement and Participation

Instructors are responsible for maintaining contact with the schools in their geographic area and scheduling times for the presentations. In so doing, they tend to build on previous years' schedules in order to maintain continuity for students. They have found that in-person relationships are key to building and maintaining trust with school personnel. While e-mail correspondence is common, it does not replace phoning or dropping-in to the school.

Most schools see Safety Smarts as a valuable resource. When introducing the program, instructors show principals and other school personnel the Safety Smarts curriculum, demonstrate its alignment with the Alberta K-6 curriculum, and show the interactive activities. They request a separate room for the presentations, but do their best to accommodate school preferences for scheduling or presentation logistics.

"When I call the school, I make it easy for them… Make sure I'm not imposing."
(Instructor)

Sometimes a farm tragedy or close call in the area makes schools more receptive to the program, but other times the incident is still too upsetting for discussions of farm safety with children. At all times, Instructors blend their knowledge of the community with tact, discretion and sensitivity.

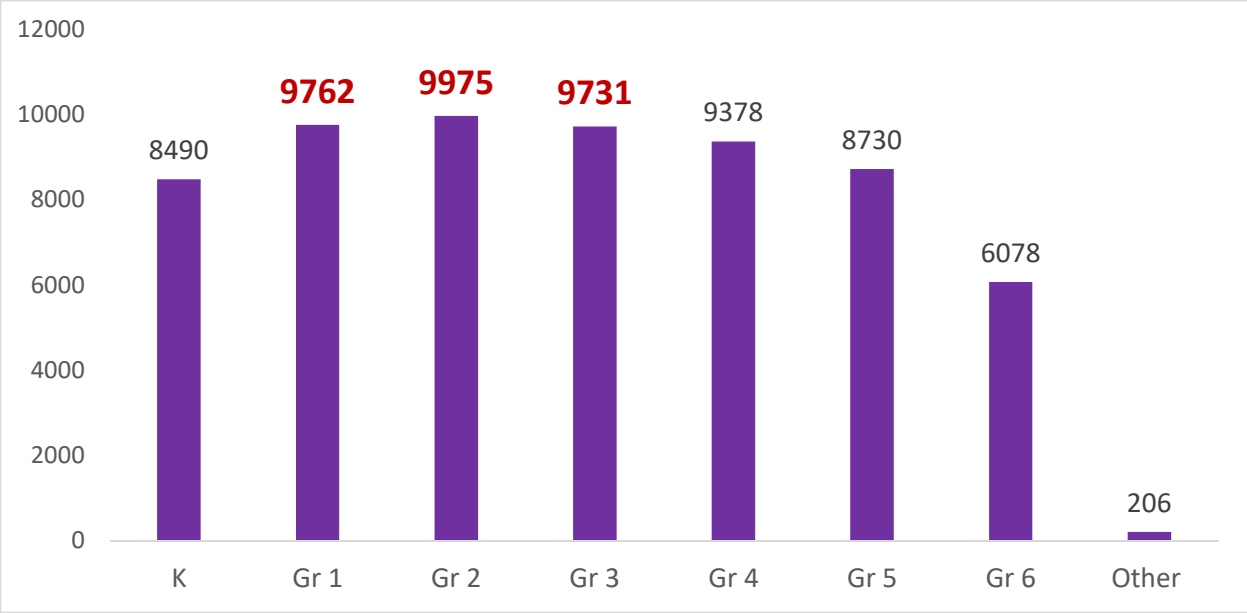
Other constraints, such as time pressures, competing priorities and limited resources, can make it challenging to make inroads into new schools or ensure continuation of the program when the school contact person has changed. Overall, the school engagement model relies extensively on the Instructors' abilities to establish and maintain relationships with local schools and to ensure they present the program in a way that shows its value to students.

"You really need the relationship with the community. It will take 10 years to get."
(Instructor)

4.3 Presentations in Schools

In 2016-2017, a total of 3,304 presentations were delivered to 65,575 students across Alberta and Saskatchewan. Of the 537 schools in Alberta and 18 in Saskatchewan, nearly half (46%) were located in central Alberta. In total, the Instructors traveled 134,494 km to deliver the program. The most common age groups to receive presentations were students in Grades One, Two and Three (Figure 1).

Figure 1: The greatest numbers of students were in Grades 1, 2 and 3 (n= 65,575)



Ninety-five percent of students (n=62,370) were from public and separate schools (called Rural schools in this report), while five percent (n=3,205) were from Hutterite colonies (called Colony schools in this report). Although the percent of the total student population was very small, it should be noted that Hutterite schools were about one-third of all schools engaged by the program (see Figures 2 and 3).

Figure 2: 5% of students are Hutterite

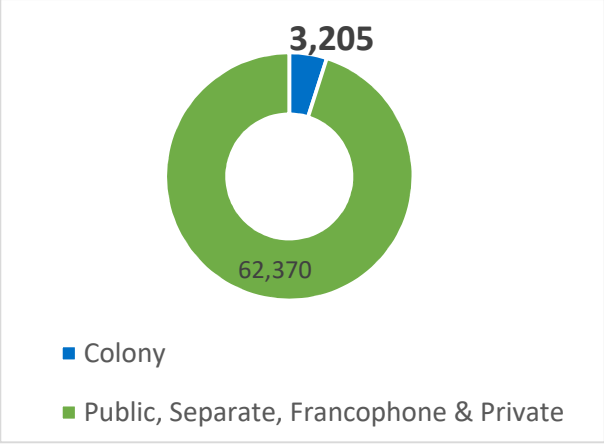
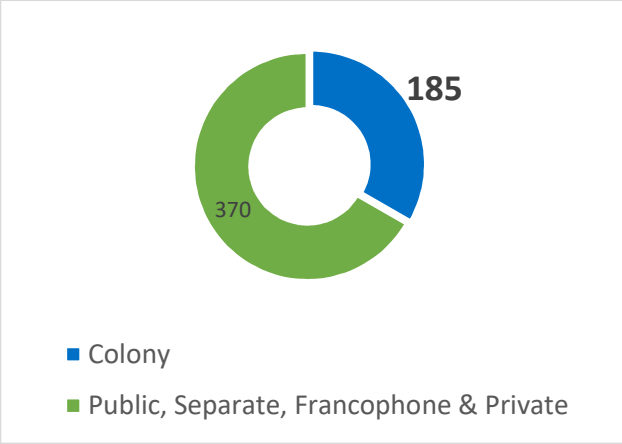


Figure 3: 33% of schools are Colony



The most and least common presentations varied between Rural and Colony schools. Students in Rural schools were most likely to receive the "One Seat, One Rider" presentation (targets Kindergarten). In Colony schools, the most common presentation in 2016-2017 was "Boats Float, I Don't" (targets Grade 2). This difference is related to different processes for determining

presentation topic in Rural vs. Colony schools. In Rural schools, presentation topics are pre-determined by grade level (e.g., Kindergarten students always receive "One Seat, One Rider"). Colonies, on the other hand, have students between grades Kindergarten and Eight in a single classroom. The annual topic is tracked over time, so the students receive a different topic each year.

The least common presentation in Rural schools was "Bigger Faster… But I'm Smarter" (Grade 6). This could be related to typical fluctuations in the age distribution of children in schools. The Safety Smarts team, however, also reported that grade six can be a challenging year for teachers to find time for the presentation, as there are heavier curriculum demands related to Provincial Achievement Tests. It should be noted that Grade 6 teachers' survey data revealed that they do not perceive farm safety information to be less valuable or less relevant to their students than do teachers at other grade levels (to be discussed further in Section 4.4).

Even though Instructors started with the topic specific for a grade level, they adapted content and wove themes from other presentations in response to issues that students raised. For example, during observations of presentations by different instructors, at two different grade levels, a strong theme in students' stories was co-riding with a parent on the lawnmower. In both classes, the Instructors adapted the presentation to include a video about a young boy who lost a leg in a lawnmower incident.

4.4 Teacher Perceptions of Farm Safety and the Program

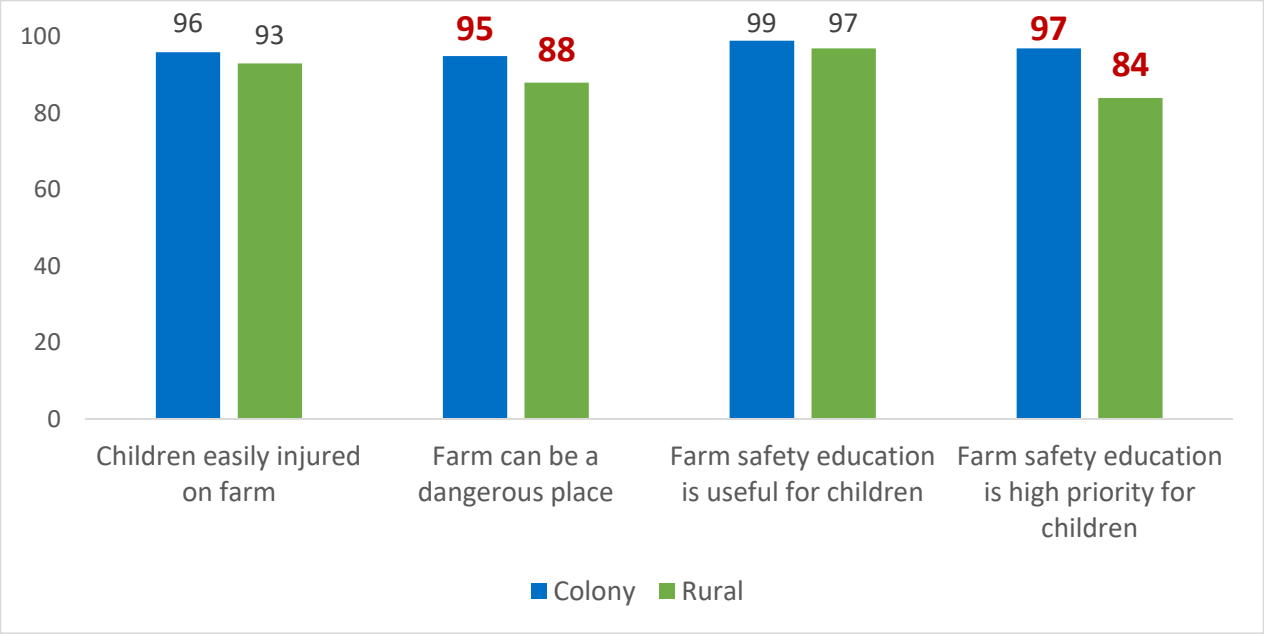
In most classrooms in 2016-2017, the regular classroom teacher was present for the Safety Smarts presentation: 87% of Rural schools and 93% of Colony schools.

Across all of the grade/age levels, the majority of Colony and Rural teachers believe that farm safety is an important topic to discuss with their students (Figure 4). Teachers in both settings recognize that growing up on a farm may pose a higher risk of injury for children. Although more Colony than Rural teachers perceived the farm environment to be potentially dangerous to children (95% versus 88%), teachers in both contexts strongly believe farm safety education is useful (99% and 97% respectively).

Given the differences in perceptions of danger, it is not surprising that more Colony teachers rated farm safety education as a high priority topic than did Rural teachers. While anecdotal evidence suggests Colony children may experience more farm injuries than their mainstream rural counterparts, population data about differences in farm-related morbidity and mortality between Colony children and mainstream children do not seem to be available (This is Public Health presentation by D. Voaklander[1]).

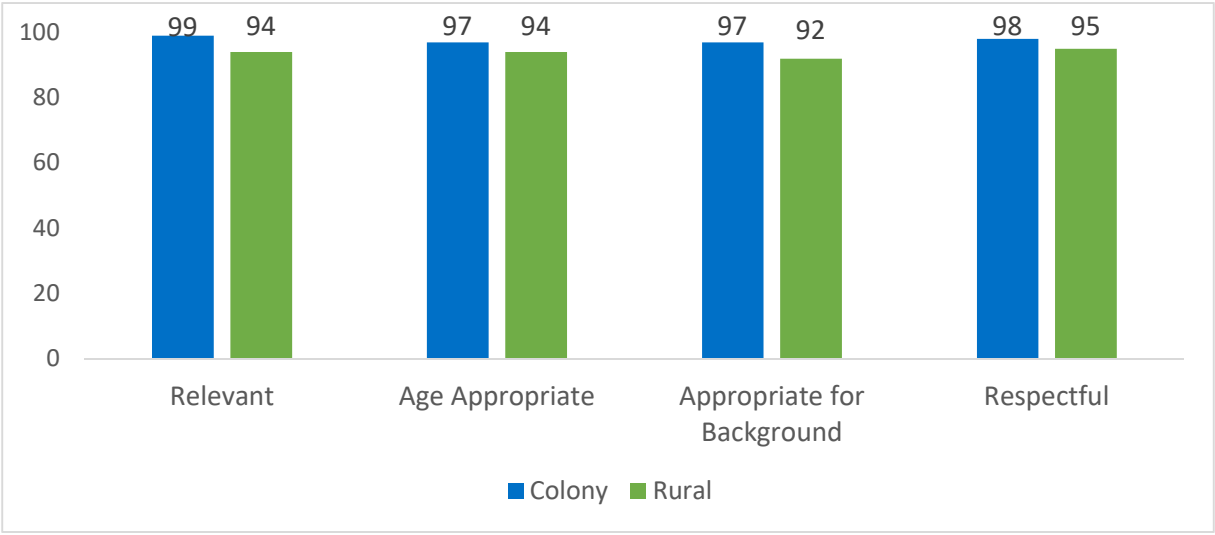
[1] See: https://www.ualberta.ca/public-health/about/this-is-public-health/lecture-series/old-macdonald-had-a-farm-injury (Accessed 22 September 2017)

Figure 4: Colony teachers perceive more risk on the farm than do Rural teachers (%, n=2,199).



Across all grade levels, in both Colony and Rural schools, teachers believe the Safety Smarts curriculum is strong (see Figure 5). In their view, the material is relevant to their students and age-appropriate. Not only is the curriculum appropriate for students' diverse backgrounds, teachers also believe the delivery is respectful of diversity. Respect for their cultural uniqueness is particularly important to Hutterites (Personal Communication, Hutterite Education Committee, 2015). With that in mind, it should be noted that Colony teachers nearly unanimously supported the relevance, respectfulness and appropriateness of the presentations.

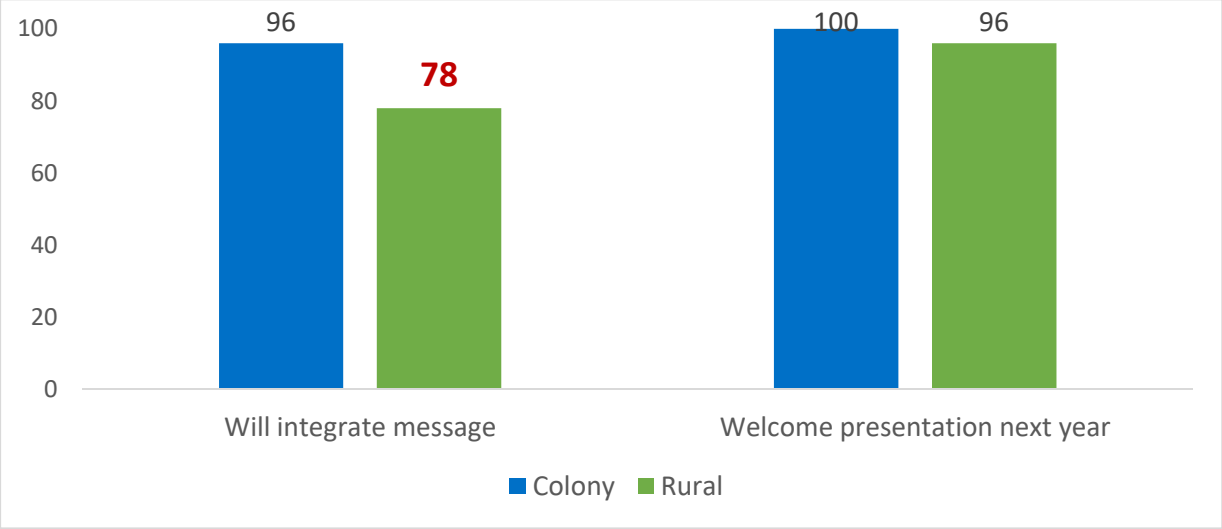
Figure 5: Teachers believe the curriculum is strong (in %, n=2, 199)



Psychological and educational research suggests that spacing instruction over time enhances students' learning.[2] Survey results reveal that nearly all Colony teachers (96%) intend to integrate key farm safety messages in other classroom activities throughout the year (Figure 6). Anecdotal evidence from Instructors supports this intention. There is also evidence from other FSC programming that the Safety Smarts' key messages have reached Colony adults, as adults use the safety slogans to support their safety strategies. It is not clear whether this is because the adults received Safety Smarts programming when they attended school, or whether they heard the information from their children.

In contrast, just over three-quarters of Rural teachers (78%) report they will integrate the key messages at other times. This lower rate may be linked with the teachers' lower perceptions of risk to children on the farm. Given Rural teachers' strong support for the curriculum, the lower rate of intention to integrate also could be related to other pressures on instructional time that mainstream school teachers face.

Figure 6: Colony and Rural teachers embrace the presentations, but Rural teachers are less likely to integrate the messages (in %, n = 2,199)



4.5 Strong Support for Continuing the Presentations

The vast majority of classroom teachers and parents of Rural students who responded to the surveys support continued Safety Smarts presentations. All of the Colony teachers (100%) and 96% of the Rural teachers would welcome a presentation in the next school year (Figure 6). Of the 780 parents who responded to the survey, 91% (n=707) believe Safety Smarts is a good use

[2] For example, see Vlach, H.A. & Sandhofer, C.M. (2012). Distributed learning over time: The spacing effect in children's acquisition and generalization of science concepts. Child Development, 83(4), 1137-1144.

of their child's class time. In fact, the most common comments parents made were that it is a *"great program"* and *"farm safety is important / safety training is good."*

5.0 What Difference does Safety Smarts Make?

Individual behaviour change theories suggest a relationship between beliefs, attitudes, behavioural intentions and ultimately, behaviour. Simply put, beliefs and attitudes influence an individual's behavioural intentions. Although mediated by other factors, such as perceived control over the expected outcome, behavioural intentions are believed to positively affect behaviour.[3] In this evaluation, student knowledge (beliefs), attitudes and behavioural intentions were measured both directly and with proxy measures.

5.1 Student Engagement and Comprehension

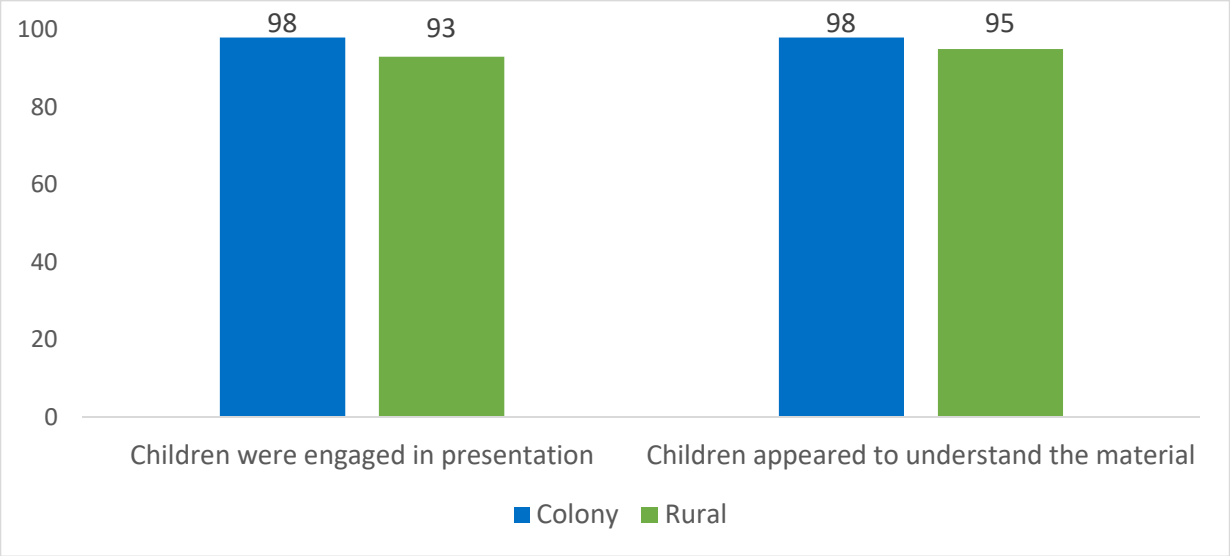
An educational assumption is that for students to learn, they must understand and be actively engaged in the material.[4] Colony and Rural teachers strongly believe that across all seven modules of farm safety presentations, their students consistently understood the content and were engaged during the presentations (Figure 7). Instructors assess student engagement by the number and type of questions students pose, recall from previous years, and students' comments as they listen to the messages, such as "*I will never do that*."

Observational data support classroom teachers' and Instructors' perceptions. Across the grade levels and types of schools, the majority of students were attentive to the Instructor, participated in the activities and responded appropriately to questions.

[3] See *The Theory of Reasoned Action and The Theory of Planned Behaviour* (Montano, D.E., Kasprzyk, D., Taplin, S.H. in Glanz, K. Lewis, F.M., Rimer, B.K. (1997). Health Behaviour and Health Education. 2nd Ed. San Francisco, CA: Jossey-Bass Publishers.

[4] Student Engagement, in the Glossary of Education Reform. Available at: http://edglossary.org/student-engagement/ ; Accessed 11 Oct 2016

Figure 7: Classroom teachers believe students are engaged and understand (%, n=2,144)



"The kids tell you stories…" (Instructor)

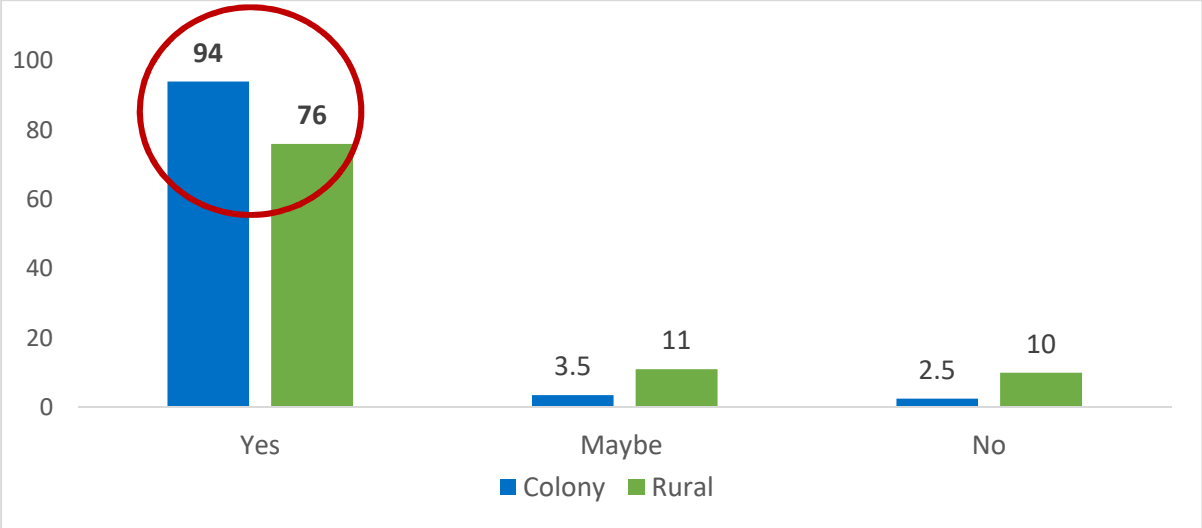
Many students also shared personal experiences, or stories, during the sessions or after class. Sometimes the stories were not clearly on-topic, but Instructors showed great ability to adapt and relate the students' experiences to farm safety themes. Other times, Instructors overhead students telling stories in the hallway or on the playground about their own or others farm safety experiences. Artwork received from students in the past further illustrated to Instructors that students understood and remembered the safety messages.

5.2 Learning Over Time

"One seat, one rider…Play safe, stay safe" (Current Students & Safety Smarts Alumni)

Nearly all of the current Colony students who were 12 years and older (94%) recalled key messages and slogans from Safety Smarts presentations in previous years (Figure 8). About three-quarters of Rural students in Grade Six (76%) remembered the information from previous years.

Figure 8: Many students remember messages from previous years, especially on Colonies.
(in %, Colony n =596, Rural n= 3,288)



The Safety Smarts safety messages and slogans seem to endure over time. Fifteen years after they attended the program, young adults from both Colony and Rural schools still recalled the slogans, workbooks, stickers, colouring sheets, toys and other key messages. Some shared: *"It was always so much fun when the Farm Safety Lady came … She always brought new toys … Things we could play with after".* Others remembered particularly impactful demonstrations that were part of the presentation, such as *"The grain cart and the person sinking."* The former students believed the interactive explanations of safety risks were an important part of the program.

"Grandpa stressed don't touch the PTO… the Farm Safety Lady explained why."
(Safety Smarts Alumni)

Young adults from Colony schools also described the Farm Safety Lady as a *"new face"* who would come to their school. Not only was a visitor exciting, they also believe that they took the safety messages more seriously since they were delivered by a person who did not reside on the colony. Overall, the face-to-face, interactive delivery mechanism of the Safety Smarts program seems to be a key component of its lasting impact.

5.3 Students' Attitudes about Farm Safety

Students' attitudes towards farm safety were measured with a single, post-only survey item. They were asked to agree or disagree to the statement: Safety is important to me.

The grade 6 Rural students and 12 years and older Hutterite (Colony) students had different responses to the question. About two-thirds of Grade 6 Rural students (64%) agreed that 'safety

is important to me', whereas 81% of Colony children perceived farm safety as important. These response rates may suggest a difference between Rural and Colony students' attitudes towards farm safety, but should be interpreted with caution.

To begin with, the survey statement, 'Farm safety is important to me', may have been too abstract for the children to consistently interpret. Its interpretation may have required more abstract thought processing than is developmentally appropriate for 12 year olds. Further to this point, since the item specifically referred to *farm* safety, Rural school children who do not live on farms may have interpreted it as irrelevant, or not important, to them. Interestingly, Instructors and former Safety Smarts students believe the key messages in the curriculum are relevant to children who may not live on a farm, but are involved in outdoor pursuits, such as camping, quad operation, horseback riding, or visiting their friends on farms.

The apparent difference in attitude towards safety between Rural and Colony students may also mirror the difference in teacher perceptions of the priority of farm safety education (97% Colony teachers believe farm safety education is a high priority; 84% of Rural teachers agree). Perhaps the students' responses are a reflection of the teacher's approach or ability to integrate safety themes in the classroom.

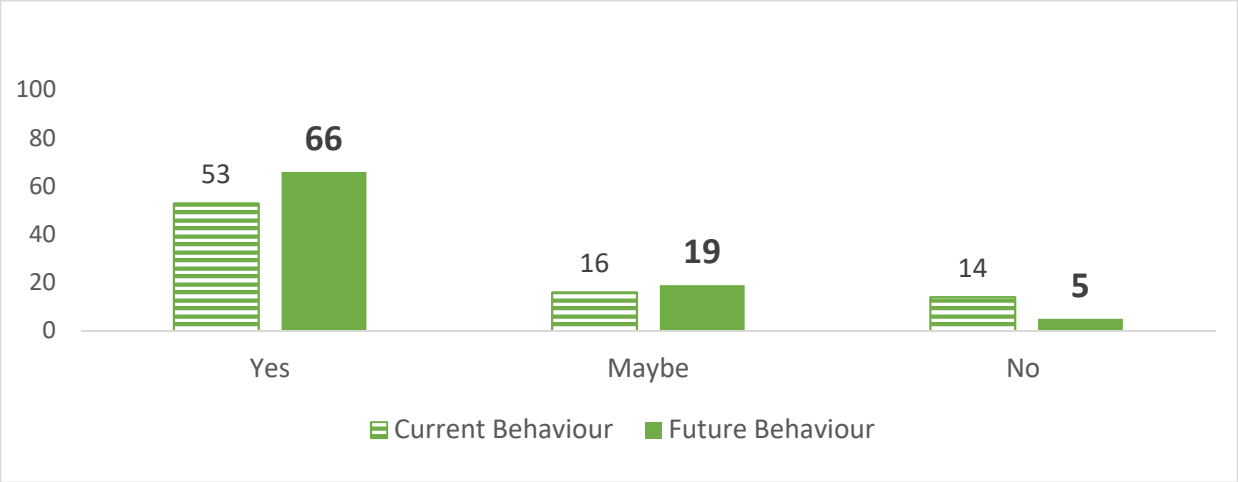
5.4 Students' Behavioural Intentions

Parent: *You were at [daughter's] school, weren't you?*
Instructor: *Yes.*
Parent: *She won't get in the tractor now.*
(Instructor, following One Seat, One Rider presentation)

5.4.1 Rural Students

Prior to the Safety Smarts presentation, more than half of the Rural students in grade 6 (53%) reported that they already practice the safe behaviour that was the session theme (Figure 9). Following the session, an additional 13% of students indicated they will practice the correct safety behaviour, to a total of two-thirds of the student population (66%). The percent of students who reported they would 'maybe' practice the safe behaviour after the session increased by 3%. Some of this increase was likely a shift from the 'No' category, as 9% fewer students indicated that they would not practice the safe behaviour (decrease from 14% to 5%). Overall, this suggests that after the presentation, more Rural students in grade 6 intended to practice the safe behaviour and fewer will be unsafe.

Figure 9: Rural students intend to be safer. (%, n=3,288)

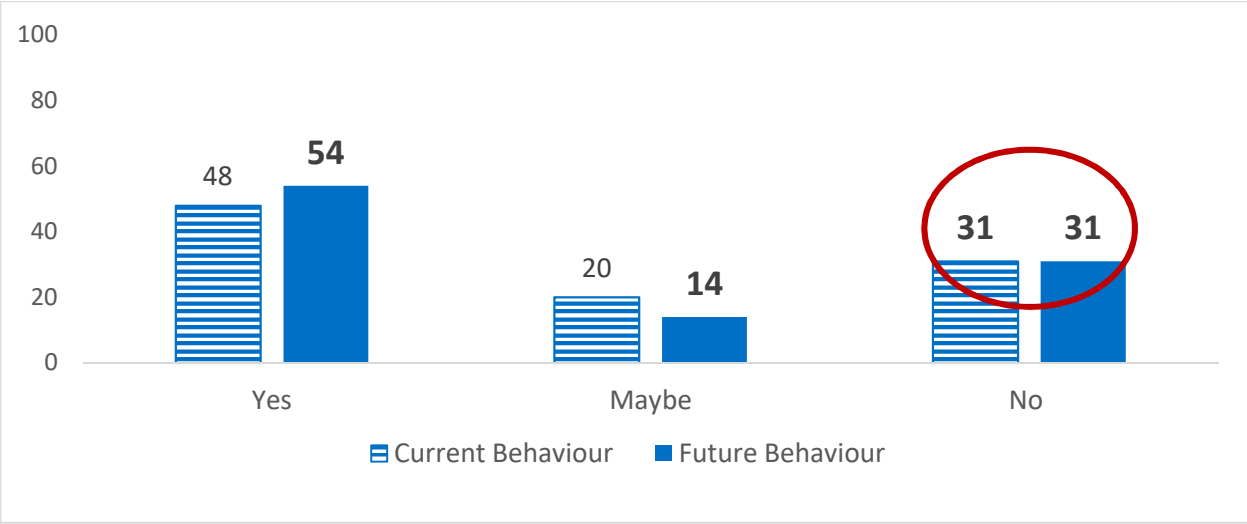


5.4.2 Colony Students

Prior to the Safety Smarts session, just less than half of the 12 year old colony students (48%) reported that they practice the proper safety behaviour (Figure 10). After the session, slightly over half (54%) reported they will practice the safe behaviour in the future. This 6% increase is the same amount as the post-session reduction in students who thought 'maybe' they would practice the safe behaviour. It seems the session shifted students from 'maybe' to 'yes, I will practice the safe behaviour.'

There was no change, however, in the proportion of colony students who did not practice the behaviour prior to the safety session (31%) and those who will not practice the behaviour in the future (31%).

Figure 10: Colony students show less change in their safety intentions. (%, n=596)



Observational data revealed that at all ages, some students identify differences between what happens at home and what the 'Farm Safety Lady' (Instructor) says is safe farm behaviour. As students get older, they likely become more aware of life's complexities, and staying safe is less simplistic. There may be peer pressures or family expectations that do not align with the safety messages in the presentations.

"She [Farm Safety Lady] doesn't know what she's talking about."
(Observation, Grade 6 presentation)

Instructors are aware of this dilemma. Most of the students, however, appear to understand the material and intend to take responsibility for staying safe on the farm.

5.5 Engaging Parents

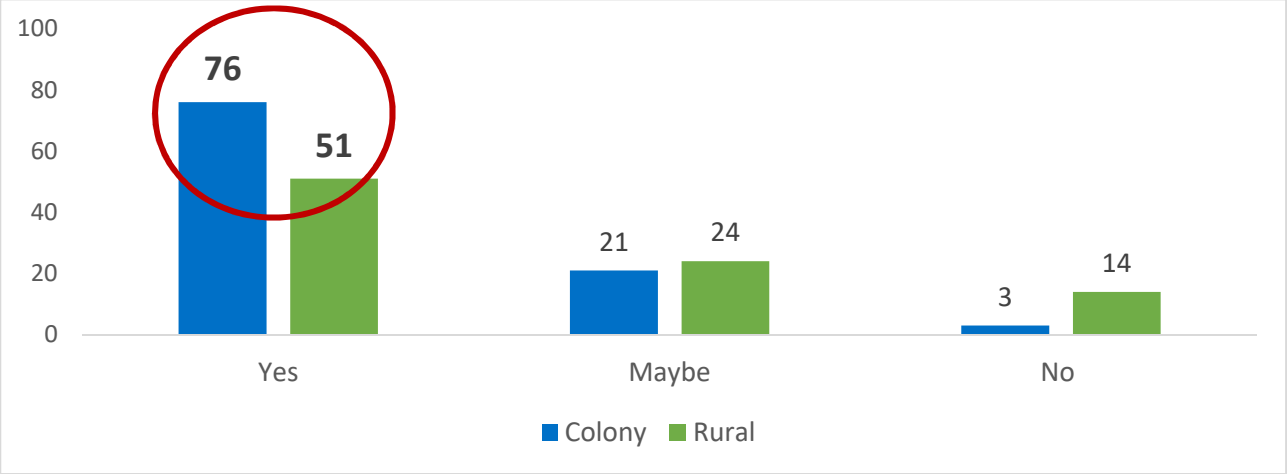
Parents play a critical role in children's farm safety, as they manage the farm environment and assign chores.[5, 6] As such, parents must be engaged in any initiative that intends to improve farm children's safety.

FSC administrative data revealed that very few parents attended the classroom presentations. Only 9% of presentations in Rural schools were attended by parents. Parents were somewhat more common in Colony classes, attending 15% of the presentations. It is noteworthy that 3% of the Colony presentations had more than 10 adults attend. Although the attendance breakdown by grade level is not available, the low rate of parents' classroom participation is not surprising. Typically, parents are less involved in the classroom each year as their children progress through school.

Perhaps more telling is whether the Safety Smarts materials and messages reach home. Over three-quarters of the Colony 12 year olds (76%) intended to talk about the farm safety messages with their parents (Figure 11). Very few did not intend to talk about farm safety at home. It seems likely that these conversations are occurring, as key Safety Smarts messages are evident in FSC's adult programs with Hutterites.

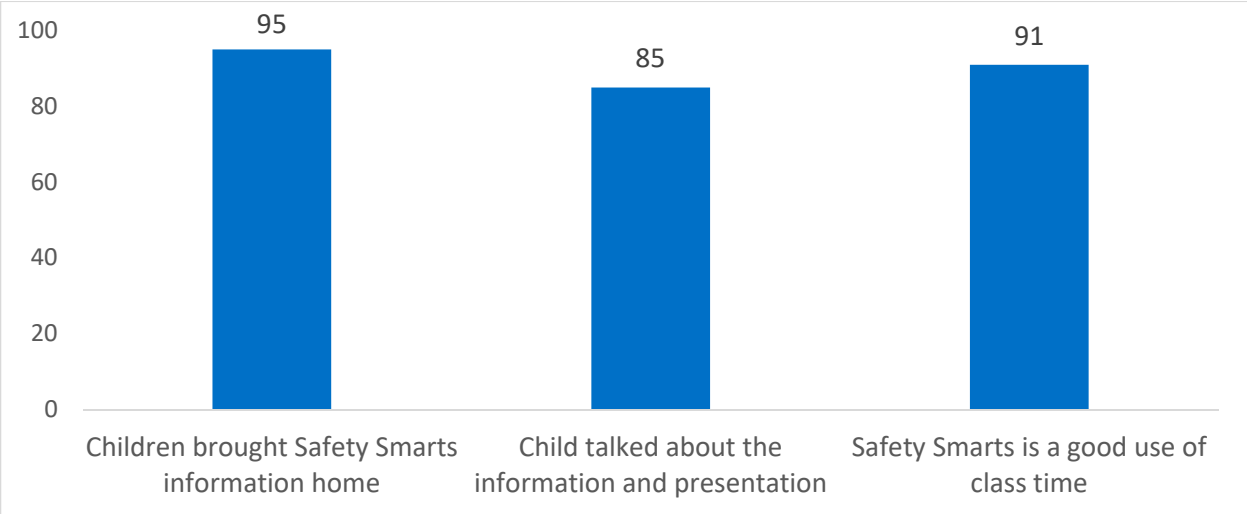
[5] Knight, B. & Pickett, W. (no date). *Profiling and comparing hazardous agricultural exposures in farm and non-farm rural children in Saskatchewan.* Queen's University. Poster presentation.
[6] DeWit, Y., Pickett, W., Lawson, J., Dosman, J. (2015). Farm activities and agricultural injuries in youth and young adult workers. Journal of Agromedicine. 20(3), 318-326.

Figure 11: More Colony students than Rural students intend to talk about farm safety messages (%, Colony n = 596; Rural n = 3,288)



Although only about half of the grade 6 Rural students reported they would talk about the farm safety messages at home, parent survey responses suggested a higher rate of content reaching home (Figures 11 and 12).[7] In fact, 95% of parents reported seeing the Safety Smarts materials and 85% said their child talked about the program. It should be noted that the parent survey respondents were not asked the grade level of their child. As such, it is not entirely clear whether the parents of younger students were more likely to hear about the program or find materials in their child's backpack. Either way, it is clear that the take home resources are the mechanism for the classroom instruction to reach parents and home.

Figure 12: Farm safety messages are reaching Rural parents
(in %, n= 780; Children's grade level unknown)



[7] Rural parents participated in an on-line survey. Colony parents were not surveyed.

5.6 Farm Safety Over Time

Young adults from Colony and Rural schools who participated in Safety Smarts as children seem to value farm safety. They believe safety is critical to Colony and commercial farm operations. Interestingly, young adults from both Colony and mainstream contexts conceptualize safety as a shared responsibility between an individual and the farm boss or owner. They describe the importance of individuals following rules and making safe decisions when operating equipment, but they equally stress the need for policies and procedures that emphasize that a disregard for safety is not acceptable.

> *"Safety is a key issue at [Corporate Farm].*
> *If you don't follow safety rules, you are fired."* (Rural Young Adult)

Having stated the importance of farm safety, Colony young adults also acknowledged that *"Sometimes we don't take it seriously, don't take the time to be safe… We farmers are too careless."* (Hutterite Young Adults)

6.0 Limitations of the Evaluation

As with all evaluations, there were limitations to the methodology. Only grade six students in Rural schools and students 12 years and older in Colony schools were surveyed. This means there was no information collected directly from students in Kindergarten to grade 5 (or 6 to 11 year olds on Colony). This was an effort to ensure the evaluation methods did not compromise program delivery, while also reducing the burden of data collection on Instructors. The students' response rates allowed for confidence in the analysis of their data.

It also is possible that the evaluation engaged parents and young adults who were already safety conscious. They may have self-selected to complete a survey or participate in a focus group because they believe in the value of farm safety programming.

There are many intervening factors that combine to create safe – or unsafe – farm environments. It would not be reasonable to draw a causal relationship between Safety Smarts programming and the safety/dangerousness of farm environments for children. As such, this evaluation has focused on articulating the contribution of the program to creating farm safety-oriented knowledge, attitudes and behavioural intentions in children.

7.0 Conclusions

The ultimate aim of Safety Smarts is: *Local Instructors with farm experience deliver evidence-based, farm safety instruction to rural children to increase their awareness and knowledge of farm hazards and build pro-safety attitudes that endure as they mature.*

The evaluation results indicate that the ultimate aim of the Safety Smarts program was achieved. Program implementation was consistent with the logic model. In fact, the Instructors' depth of expertise and passion for farm safety is one of the program's greatest assets. Following the classroom presentations, students from different school contexts know the main safety risks on the farm and strategies to stay safe. This knowledge endures and deepens as the children progress through the levels of the program, and beyond. Young adults who participated in the program when they were children have pro-safety mind-sets and value farm safety.

8.0 Next Steps

Maintaining Safety Smart's success requires strategic consideration of three areas for continuous quality improvement. It is a 'given' that all strategies must fit within the program's available resources.

8.1 Optimizing Professional Development

"If we're providing education, we need training too." (Instructor)

8.1.1 Specific Training

As farm operations continue to evolve, so do the safety risks and mitigation strategies. While Safety Smarts Instructors are steeped in farm expertise, they need ongoing specific training about emerging farm safety risks in order to continue to present credible, accurate information to students. Specific areas for training identified by Instructors could include ATV use, confined spaces and ventilation. Webinars and on-line courses could provide training in an efficient and effective manner to Instructors across the province.

8.1.2 Ongoing Professional Development

Currently, professional development occurs through a full-day, in-person meeting in the fall and individual phone calls. Instructors could benefit from more opportunities for dialogue and exploration of issues related to both safety content and program delivery.

By intentionally fostering peer learning, the program could capitalize on the expertise within the team. For example, bi-monthly peer-led Learning Circles with rotating leadership could give each team member an opportunity to investigate and present on a topic of interest to them. Discussion could occur via teleconference or web-mediated conferencing tools (e.g., Skype).

8.1.3 More Frequent Team Interactions

Members of geographically dispersed teams often struggle with feelings of isolation and a lack of support. Finding low-cost mechanisms to increase team interactions could help reduce a sense of isolation, particularly for new Instructors.

One option could be to set up a closed Facebook group that serves as a Discussion Forum; a place for Instructors to post comments, new resources, video links (etc.) and problem solve together. As with all on-line forums, Instructors could access and post comments when it is convenient for them, rather than trying to schedule synchronous meeting times. This also could provide a mechanism for sharing new information collected at conferences and through networks.

8.2 Maintaining a Relevant, Up-to-Date Curriculum

Safety Smarts Instructors are well-informed of what are relevant or "hot topics" for Alberta farmers, but currently there is no systematic way for this knowledge to inform curriculum review or revisions in a timely manner. Combining professional development strategies with focused curriculum review could help to maintain an up-to-date, relevant curriculum.

8.2.1 Keep and Strengthen the Power of Stories and Personal Experiences.

"Kids don't relate to stats." (Instructor)

The program's power lies in the stories and personal experiences shared by the Instructors. This brings the content to life for the students.

Instructors continuously hear stories of farm accidents, but currently there is no way to systematically capture the stories so all can benefit from an expanded repertoire of anecdotes. A simple, electronic inventory could be created to store incidents and stories. This could be a living document that Instructors add to over time, thereby strengthening *"The power of personal experience…"* (Instructor) in the program.

8.2.2 Tailor Content to Unique Geographical Contexts.

In farming, geography matters. Different areas have unique solutions to environmental challenges. For example, irrigation is common in Southern Alberta, but not in other parts of the province.

Examples in the curriculum should be tailored to specific geographical contexts. The drowning presentation could cover irrigation canals in southern Alberta, and culverts or drainage ditches in northern Alberta.

8.2.3 Adapt Content to Unique Cultural Contexts.

The program is already perceived as culturally relevant and sensitive. This could be further enhanced by using stories, images or videos that are tailored to specific cultural groups. For example, in Colony schools, presentations could show Hutterites images/pictures and relevant videos (if allowed).

8.2.4 Keep Activities and Technology Current.

As technology and student use of technology evolve, the program activities need to keep pace in order to continue to be perceived as credible and engaging by the students. Feedback suggested, for example, that the Hazard Hunt activity could use more up-to-date technology.

8.3 Addressing Other Logistical Challenges

"Would love to have stable, consistent funding." (FSC Administration)

Being a Safety Smarts Instructor may be rewarding, but it is not an easy job. In 2016-2017, the team of Instructors travelled a total of 134,494 kilometres; reaching rural schools across Alberta requires a lot of driving and long work days. There is a lot of equipment to carry to provide seven distinct, interactive presentations. In many schools, the presentations are longer than the class periods, so it is challenging to complete all of the activities. Some schools do not allocate a separate room for the presentations.

The program's administration is well aware of these challenges. They shared several ideas about how to minimize the burden on Instructors, such as providing program vehicles or scheduling buddy presentations. Unfortunately, current resources do not permit such solutions. In the absence of ample, long-term funding, the strategies to optimize professional development and peer support may enable Instructors to learn new ideas about managing the challenges from each other.

Appendix A: Communication Handout

Evaluation of Safety Smarts

September 2016

What is an Evaluation?
Evaluations provide information for good planning and priority setting.
An evaluation strives to understand **what difference** a program makes to the people it serves by performing:
A **systematic** collection of evidence about **how** a program operates.
Analysis and **interpretation** of the information collected.

Evaluation is **NOT** a:
Staff performance appraisal.
Judgement about anyone's merit or worth.
Satisfaction survey.

Questions & Answers

Q. What is being evaluated?
A. The Farm Safety Centre is evaluating the Safety Smarts program in order to understand what difference the program makes to rural children's knowledge and attitudes about farm safety.

Q. Who is doing the evaluation?
A. Farm Safety Centre contracted SWM Consulting Services to complete the evaluation. Sharlene Wolbeck Minke and Birgitta Larsson will collect information for the evaluation.

Q. Who will be involved?
A. Many individuals across Alberta will have an opportunity to participate in the evaluation, including: regional farm safety instructors, classroom teachers and of course, the rural students receiving Safety Smarts.

Q. What types of information (evidence) will be collected?
A. There will be several types of evidence, such as student and classroom teacher surveys and farm safety instructor focus groups. All information collected will be confidential and any reporting will only use aggregate (group) findings.

Q. How can I be involved?
A. Your involvement is critical to answer the evaluation questions! You may be asked to complete surveys, participate in interviews, and even help us connect with students.

Q. When will it be done?
A. Evaluation information will be collected throughout the 2016-2017 school year. The final results will be shared in October 2017. For further information contact Laura or Chris at the Farm Safety Centre at 403-752-4585 or safetyctr@abfarmsafety.com

Evaluation makes a difference.

Appendix B: Revised Approach to Data Collection

September 14, 2016

Safety Smarts Delivery Team:

Yesterday morning Birgitta, Sharlene, Chris and Laura had a conference call to talk about the evaluation of Safety Smarts during the 2016-2017 school year.

We confirmed that the Instructor focus group will be held in Leduc on December 13, from 12-3 pm. Location to be determined.

Use the Extra Time and Mileage form which is saved on your computer to record time and mileage to attend this focus group. Please submit with December paperwork.

As a result of concerns raised on September 8, it has been decided to revise the evaluation approach as follows:

1. In rural (public) schools, **only Grade 6 students will complete survey questions.** Students will use iClickers to respond to the questions, using the process which was discussed during the SWM led orientation on Thursday. No other grades will complete survey questions. These other grades questions will be removed from your computers remotely. Booking grade 6 classes either first thing in the morning, or after a recess or lunch break is a suggestion to help with time concerns.

2. In colony schools, **only students over the age of 12 will complete the paper survey.** Please provide these students with the pre-post survey questions that correspond with the presentation delivered at the school. Copies of these surveys will be provided by the centre.

3. **Parents of students attending grades K-6 at rural (public schools) will be invited to complete an on-line survey.** There is no survey of Hutterite parents.
   Include parent invitation cards with take home review resources, so they go home with all students. Bagged batches of 25-30 cards will be provided by the centre. It is suggested that you give them to the classroom teacher for distribution, with decals or other take home items.

4. **Questions 13, 14 and 15 in the Classroom Teacher survey have been re-worded, as suggested.**
   We would ask that you invite all regular classroom teachers and substitutes to complete this survey, using the Farm Safety Centre iPad. Hardcopy evaluations will only be accepted from colony teachers during the 2016-2017 school year.

5. **As suggested, questions have been added to the Instructor survey. They have been added directly after question 1, and will read:**
   "If you delivered Grade 6 presentations at this rural school, were you able to complete all of the activities?"
   "If you delivered an on-colony presentation, were you able to complete all of the activities?"

6. **Question 1 on Student survey has been re-worded, as suggested and will read:**
   "When you were in younger grades, did anyone from the Farm Safety Centre come to your class?"

7. **Please follow this protocol for iClicker/survey explanation to grade 6 students in rural (public) schools:**
   "This year we are trusting grade 6 students to help us out by honestly answering a few questions."
   "These questions are not a test and there are no right or wrong answers"
   "You don't have to answer if you don't want to"
   "Using these clickers no one can see what you have answered"
   "Please don't peak at anyone's clicker when they are answering"
   "Click only 1 button to answer each question"

   Once each week you will be asked to power up your computer and connect it to the internet, so student responses can be accessed and saved to a lead computer at the FSC office.

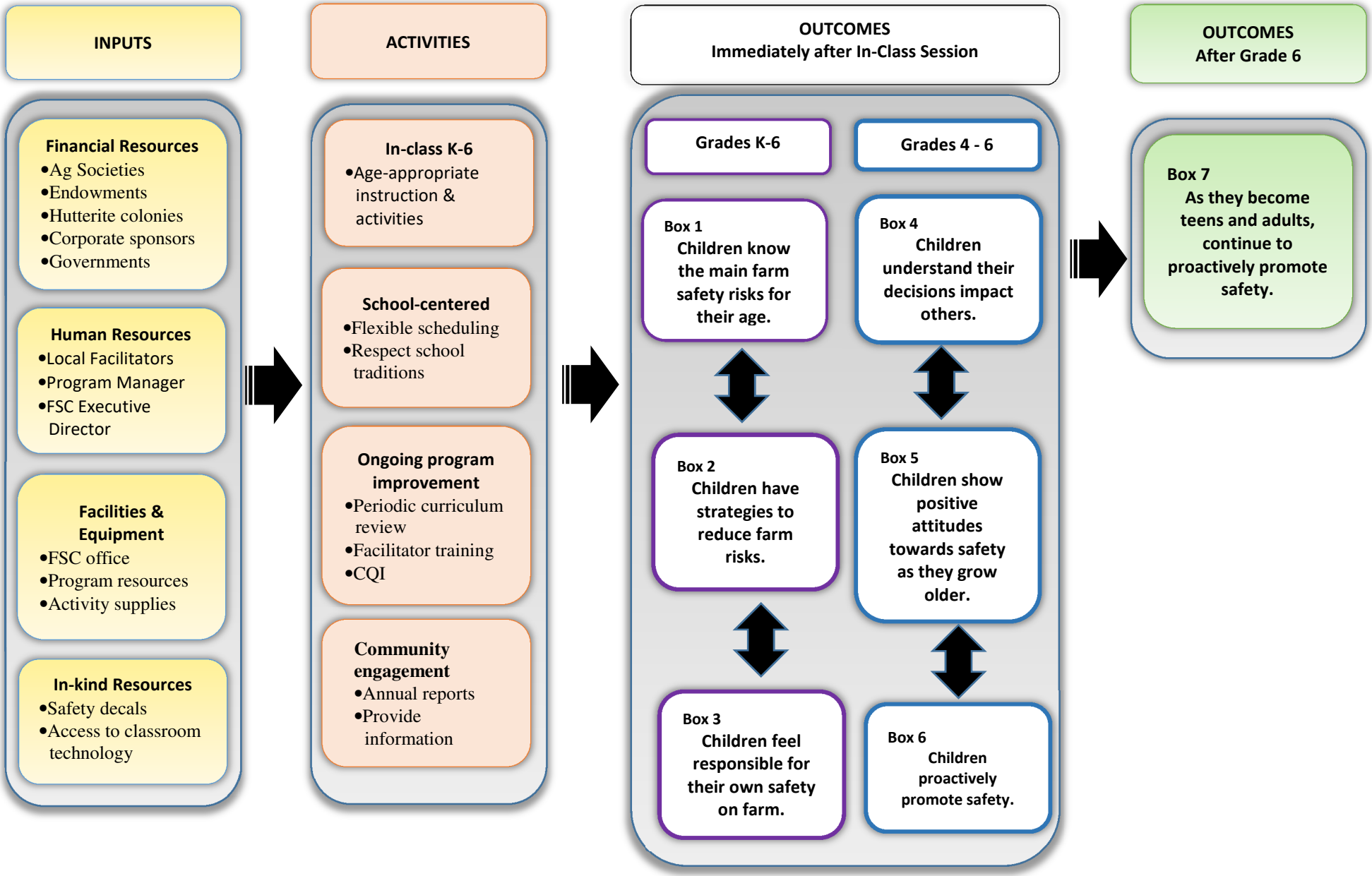
8. **Please follow this protocol for paper copy survey explanation to 12, 13 and 14 year old colony students:**
   "This year we are asking you older students to help us out by honestly answering a few questions."
   "These questions are not a test and there are no right or wrong answers"
   "You don't have to answer if you don't want to"
   "Please do not write your name on this paper"
   "I will collect your paper when you have finished"

   Please return completed student surveys via Canada Post, at each month end, with colony teacher surveys.

Contact us if you have questions or concerns, as your continued input is essential to the evaluation process.

Appendix C: Safety Smarts Logic Model

Ultimate Aim: Local instructors with farm experience deliver evidence-based, farm safety instruction to rural children to increase their awareness and knowledge of farm hazards and build pro-safety attitudes that endure as they mature.



Appendix D: Links between the Logic Model and Evaluation Questions

Evaluation Questions	Logic Model Link
Process – How was Safety Smarts implemented in different Alberta school contexts?	
Where was SS implemented? (Consider differences in geography, culture and language) How was the SS program implemented in the classroom? How was the SS program adapted for specific school contexts? What was the rationale for adaptations across different contexts?	In-class - Age-appropriate instruction & activities Facilitator support & training School –centered – respect for traditions Ongoing program improvement
Why did a) teachers and b) schools participate in the SS program? Motivating factors – i.e., relevance to students, teacher and administrator beliefs and attitudes about farm safety Expectations of student participation Extent of participation (e.g., how many grade levels participate? How many years has program operated in the class/school?)	School-centered – flexible scheduling School –centered – respect for traditions
Outcomes – What difference did participation make to children and youth? What was the immediate impact of the presentation? How, if at all, did participants change over time?	
To what extent did child and youth participants: Know about the unique safety hazards on a farm Understand farm safety strategies Believe they can stay safe on their farm? To what extent did child and youth participants have positive attitudes and perceptions towards farm safety?	Immediate outcomes – K-6 Immediate outcomes 4-6 and after grade 6

Appendix E: Evaluation Methods

E.1 Understanding the Program Context and Relevant Literature

The evaluation began with a review of Safety Smarts program documents to ensure the evaluators understood the context of the program. A brief scan of relevant peer-reviewed literature and technical documents on farm safety informed broader understanding of key issues and strategies, particularly with farm safety education with children. The evaluators also reviewed literature about classroom interventions with elementary school children

E.2 Mixed Methods Approach

The mixed methods approach was designed to gather information from multiple program stakeholders, engaging each in a culturally appropriate manner. For example, the evaluators have learned from experience that individual interviews are inappropriate with Hutterite participants, as meeting with one person at a time is contrary to their communal culture. Primary data were further triangulated with Program Administrative data. Table 1 outlines the methods used to capture different stakeholders' perspectives.

Table 1: Mixed methods were used for data collection.

Stakeholder	Method
Rural Public and Separate Schools	Systematic classroom observation
Hutterite Colony School	Systematic classroom observation
Students	Surveyed participating students in grade 6
Classroom Teachers	On-line survey in rural schools Hard copy survey in colony schools
Parents of participating students (K-6, rural schools)	On-line survey
Safety Smarts "alumni" – Rural and Colony	Focus group
Instructors	Focus group
Coordinator and FSC Executive Director	Co-interview

E.2.1 Program Administrative Data

For the 2016-2017 school year, the following data were available from Safety Smarts program records:

- Number of presentations, total and by grade level
- Number of students, total and at each grade level
- Number of teachers at each grade level
- Total number of schools
- Number and type of take home activities provided by Instructors
- Number of instructors
- Distance travelled - by region and total distance for program

- Number and type of program communications, such as annual reports, media releases

E.2.2 Primary Data Collection

All of the primary data collection tools were drafted by the evaluators and reviewed with FSC and Safety Smarts program leaders to ensure relevance and appropriateness with rural and Hutterite cultures. Safety Smarts Instructors also reviewed the observation checklist and student survey questions. Stakeholders' feedback regarding question clarity and method of administration were incorporated into the final versions.

E.3 Data Collection Tools

E.3.1 Systematic Classroom Observation

The primary purpose of observing the Safety Smarts presentations was to understand how the program was delivered with different ages of children and in different school settings (e.g., Hutterite, public).

The immediate outcomes at all grade levels were 1) knowledge of safety risks, 2) strategies to reduce risks, and 3) sense of personal responsibility. The educational assumption underlying these outcomes is that when students are actively engaged in the material, it enhances the learning experience and outcomes.[8] Thus, a secondary purpose was to get reasonable assessment of student engagement in the content.

Method

A checklist was used to ensure both evaluators watched the same classroom and student dynamics. The checklist standardized the recording of observations. The unit of observation was the class dynamic – the group's interactions with the material and each other. No observation or record of individual students' behaviour was made; the focus was on the extent students engaged with the presentation content and activities.

No student names or classroom identifiers were recorded on the observation sheet. Contact was made with either the teacher or Safety Smarts Instructor prior to the presentation to learn if there were special needs students in the class (so we appropriately understand reason some students may not seem particularly engaged, as per our definition).

[8] Student Engagement, in the Glossary of Education Reform. Available at: http://edglossary.org/student-engagement/ ; Accessed 11 Oct 2016

Prior to the presentations, a conversation was held between the Safety Smarts Instructor and evaluator about ways reduce intrusiveness and limit disruption to the flow of the presentation. We also assumed the Safety Smarts Instructors have received approval from each school for the class observations.

Definition of Student Engagement

For this purpose, student engagement consisted of attentiveness to the presentation, participation in activities and responsiveness to the material.

Term	Definition
Attentive	Students watch/look at the speaker Students actively listen to the speaker, videos, etc.
Participating	Students work on individual activities. Student work with each other in small group activities.
Responsive	Students put up their hand or call out answers to questions. Students ask questions about the content.

Measurement of Student Engagement

Quantitative measurement of student engagement estimated the extent of class engagement. This was captured using a Likert scale.

Scale #	Description	Definition
1	Few	Less than one-third of the class is attentive, participating or responsive.
2	Some	Between one-third and two-thirds of the class is attentive, participating or responsive.
3	Many	More than two-thirds of the class is attentive, participating or responsive.
4	All	Every student in the class is attentive, participating or responsive.

Students' questions, were recorded to capture qualitative data to provide greater depth of understanding about student engagement.

Observation Checklist

Presentation Name:

Type of School (circle): Hutterite Public Catholic Private

Section	Attentive	Participating	Responsive	Types of Questions
Introduction	Few Some Many All	Few Some Many All	Few Some Many All	
Discussion	Few Some Many All	Few Some Many All	Few Some Many All	
Activities	Few Some Many All	Few Some Many All	Few Some Many All	
Wrap-up	Few Some Many All	Few Some Many All	Few Some Many All	

Other Comments:

E.3.2 Student Surveys

Although the evaluation design originally planned for primary data collection from all students, Instructor feedback strongly indicated this was not realistic or feasible. They were concerned about the impact of data collection on their ability to deliver the presentation in the short time allotted. They also identified potential threats to the validity of information collected from very young children (e.g., kindergarten students). Therefore, primary survey data were only collected from Rural students in grade 6 or on Colonies, students aged 12 years and older.

The five questions were brief, pre-post items designed to capture previous experiences with the program, behavioural intentions and attitudes towards farm safety. For Rural schools, the questions were programmed into the electronic iClicker program. Hard copy surveys were used in Colony schools and completed were entered into Survey Monkey by a contracted third party. The separate data files (Rural and Colony) were exported from Survey Monkey to Excel for analysis.

Preamble for students:

At the start of the presentation, the Safety Smarts Instructor explains the evaluation to the students:

Some of the questions I will ask today are for an evaluation of the program. An evaluation helps us learn what works and what doesn't work, so we can make the program better. We won't tell anyone what you answered. We will combine all the answers to learn about what is working well and what could be improved in the program.

Note – Colony questions will be completed on paper by all students twelve years and older

Grade Six Questions

At the start of the presentation

1. Have you had Safety Smarts before?

    Response options: Yes – No – Not sure

2. Do you wear a helmet when you ride a quad or horse?

    Response options: Yes- Maybe – No – I don't ride

At the end of the presentation

3. Will you wear a helmet when you ride a quad or horse?

    Response options: Yes- Maybe – No – I don't ride

4. Will you talk with your family about wearing a helmet when you ride a quad or horse?

    Response options: Yes – Maybe – No – I don't ride

5. Farm safety is important to me.

    Response options: Yes – Most of the time – No

E.3.3 Teacher Surveys

The survey questions focused on program implementation and teachers' perceptions of student engagement, program relevance, and farm safety. Questions measuring teacher beliefs about children's risk and safety on the farm were informed by measurement approaches in K. Baksh,

W. Ganpat and L. Narine (2015).[9] Educational literature supported the item on intentions to integrate messages in the future.[10]

Data collection with classroom teachers mirrored the approach with students. In Rural schools, the questions were programmed into Survey Monkey and all data collected electronically. Colony teachers, on the other hand, completed the surveys on paper. Again, the responses on hard copy surveys were entered into Survey Monkey by a contracted third party. Then the separate data files (Rural and Colony) were exported from Survey Monkey to Excel for analysis.

Survey Introduction

As you know, the Farm Safety Centre contracted an evaluation firm, SWM Consulting Services, to evaluate the Safety Smarts program. The purpose of the evaluation is to learn about what worked well and what could be improved in the program. The evaluators are gathering information about Safety Smarts through surveys with students, teachers and instructors; focus groups with instructors; interviews with program management; and interviews with young adults who completed Safety Smarts as children.

The evaluation results will not be about individuals or specific schools/classrooms. The findings will be a summary of what was learned about the program. When the evaluation is complete, you can learn about the evaluation results on the Farm Safety Centre website: www.abfarmsafety.com

If you have questions about this survey or would like more information about the evaluation, please contact Laura or Chris at the Farm Safety Centre at 403-752-4585 or safetyctr@abfarmsafety.com

Please choose the best answer to the following questions.

1. What grades are in your school?

Response options: Check all that apply:

- Kindergarten
- Grade One
- Grade Two
- Grade Three
- Grade Four
- Grade Five
- Grade Six
- Grade Seven
- Grade Eight
- Grade Nine

[9] Baksh, K., Ganpat, W., Narine, L. (2015). Farmers' knowledge, attitudes and perception of occupational health and safety hazards in Trinidad, West Indies and implications for the Agriculture sector. Journal of Agricultural Extension and Rural Development, 7(7), 221-228.

[10] Vlach, H.A., Sandhofer, C.M. (2012). Distributing learning over time: The spacing effect in children's acquisition and generalization of science concepts. Child Development, 83(4), 1137-1144.

2. In which region is your school located? [Note: Add a sticker with the Region's name on each iPad. Instructors will also let teacher's know the name of their region.]
Response options: Choose one only

- Southern
- South-Western
- South-Eastern
- West-Central
- East-Central
- North-Western
- North-Eastern
- Peace

3. Are you the regular classroom teacher for this class?
Response options: Yes – No

4. Which presentation did your class receive?
Response options: Choose one only

- Once Seat, One Rider
- To Stay Safe, Play Safe
- Boats Float, I Don't
- Hear, Hear – Listen Up
- It Can Happen to Me
- Get a Grip, Safety's in My Hands
- Bigger, Faster… But I'm Smarter

5 a) Did parents and/or Colony leaders attend the presentation?
Response options: Yes – No, if Yes, go to 5b

5 b) How many parents and/or colony leaders were at the presentation?
Response options: 1-2, less than 5, 6-10, more than 10

To what extent do you agree or disagree with the following statements:	Agree				Disagree
About farm safety in general:					
6. It is easy for children to be injured on a farm.	1	2	3	4	5
7. A farm can be a dangerous place for children.	1	2	3	4	5
8. Farm safety education is useful for children.					
9. I think farm safety education is a high priority for my students.	1	2	3	4	5
About the Safety Smarts program:					
10. The Safety Smarts messages seemed relevant to students.	1	2	3	4	5
11. In general, the Safety Smarts presentation, including games and hands-on activities, was appropriate for the age of the students.	1	2	3	4	5
12. The Safety Smarts presentation was appropriate for the students' diverse backgrounds.	1	2	3	4	5
13. The Safety Smarts instructor was respectful of our students' diverse backgrounds	1	2	3	4	5
14. The Safety Smarts instructor engaged the students throughout the presentation.	1	2	3	4	5
15. Children appeared to understand the information presented by the Safety Smarts instructor.	1	2	3	4	5
After participating in the Safety Smarts program:					
16. I will integrate the farm safety messages from the program at other times in my classroom.	1	2	3	4	5

17. I would welcome a Safety Smarts presentation in the coming 2017-2018 school year.

[ ] Yes [ ] No [ ] Maybe

Thank you for completing this evaluation of Safety Smarts

Your input is valuable to our program!

E.3.4 Parent Survey

Parents control the farm environment and set the expectations regarding chores and tasks for their children. Children hold their parents in high regard and trust them. As such, it is critical for parents to be engaged in farm safety programming for children. [11, 12]

Parents of children in grades Kindergarten through Grade Six in public and separate (Rural) schools were invited to participate in an on-line survey. Colony parents were not surveyed, as the methodology was not culturally appropriate.

The links between classroom messages and child-initiated conversations about farm safety with their parents were assessed through three closed-ended survey items. A fourth, open-ended question was included to capture other, emerging comments from parents.

At the end of each presentation, Safety Smarts Instructors sent home the Evaluation Overview and an invitation to participate in the evaluation with students. The invitation to participate included the survey link and deadline for participation. Parents were invited to enter a draw for one of two $500 gifts. A separate site was programmed to collect entry information for the prize draw.

Survey Introduction

The Farm Safety Centre has contracted an evaluation firm, SWM Consulting Services, to evaluate the Safety Smarts program. The purpose of the evaluation is to learn about what worked well and what could be improved in the program. The evaluators are gathering information about Safety Smarts through surveys with students, parents, teachers and instructors; focus groups with instructors; interviews with program management; and interviews with young adults who completed Safety Smarts as children.

Answers to the survey questions will be kept confidential. No personal information, like names or addresses, will be collected. Only the evaluators will have access to the survey results. The evaluation will not share findings about individuals or specific schools/classrooms. The findings will be a summary of what was learned about the program. When the evaluation is complete, you can learn about the findings on the Farm Safety Centre website: www.abfarmsafety.com

If you have questions about this survey or would like more information about the evaluation, please contact Laura or Chris at the Farm Safety Centre at 403-752-4585 or safetyctr@abfarmsafety.com

[11] Knight, B. & Pickett, W. (n.d.). Profiling and comparing hazardous agricultural exposures in farm and non-farm rural children in Saskatchewan. Poster presentation. Accessed 21 July 2016. Available at: http://www.queensu.ca/phs/sites/webpublish.queensu.ca.phswww/files/files/Knight_EPID499_11.pdf

[12] DeWit, Y., Pickett, W., Lawson, J., & Dosman, J. (2015). Farm activities and agricultural injuries in youth and young adult workers. Journal of Agromedicine, 20. 318-326.

Please choose the best answer to the following questions.

1. Did your child bring Safety Smarts information home following the presentation?
   Response options: Yes – No – Don't Know

2. Did your child talk about the information shared in the Safety Smarts presentation?
   Response options: Yes – No

3. Do you think the Safety Smarts program is a good use of your child's class time?
   Response options: Yes – No – Maybe

4. Any other comments?
   Response options: Text box

E.3.5 Safety Smarts Alumni

The perspectives of young adults who participated in the Safety Smarts program when they were school children were gathered through focus groups. The questions explored both their content recall and attitudes towards farm safety as young adults.

The in-person focus groups were held in private rooms on two different Hutterite colonies and a quiet, but public meeting space for the former Rural students. All arrangements were made by the Farm Safety Centre. Questions were shared with the participants about one week prior to the group, so they could prepare for the conversation. Please see Table 1 for a description of the focus group participants.

Table 1: Safety Smarts Alumni

Focus Group	Gender Breakdown	Age Range (years old)
Colony #1	4 males, 2 females	14 – 18
Colony #2	1 male, 2 females	26 – 27
Rural	2 males, 3 females	18 – 24

Both evaluators co-facilitated all three focus groups (two with Hutterites, one with former Rural students). Informed consent was gathered at the start of each focus group. The evaluators took detailed notes during the focus groups, but no identifying information was recorded.

Introduction & Informed Consent

The Farm Safety Centre contracted us to evaluate the Farm Safety program. The purpose of the evaluation is to learn about what worked well and what could be improved in the program. We are gathering information about Farm Safety in many different ways, such as surveys with

students, teachers and instructors; focus groups with instructors; interviews with program management; and interviews with young adults who completed Farm Safety as children.

The evaluation results will not be about specific people, schools or colonies. We will not share your name or any other colony information with anyone. The findings will be a summary of what was learned about the program. When the evaluation is complete, you can learn about the evaluation results from Chris or Laura at FSC.

We would like to talk with you in one (focus) group. There are no right or wrong answers to our questions and if you don't want to answer a specific question you don't have to. We will take notes while you are talking and we will summarize (share with you) what we have heard to make sure we understand what you are saying.

Do you have any questions?
Are you comfortable to participate in the focus group? YES NO

Questions

1. What do you remember about the Farm Safety presentations when you were in school?
   Prompts: activities and games, key safety messages, offered a new way of thinking about farm work/chores…

2. a) As best you can remember, did any of you talk with your parents or other adults [on the colony] about the safety information?
   b) What, if anything, came of these conversation(s)?

3. a) What, if anything, do you remember about the 'slogans' or messages that were shared in the Farm Safety presentations?
   [Prompts: I will wear a helmet every time I ride' or 'I will remember safety begins with me.']

Now that you are an adult [on the colony], we're wondering what you think about farm safety.

4. Do you think farm safety is very important? [Why?]
5. What would you do if you saw someone doing something unsafe on the colony/farm?
6. Once you have experience with the equipment, do you think it's OK to skip some safety steps?
7. Who is responsible for your safety when you're working around the colony/farm?
8. Is there anything else you want to share about the Farm Safety presentations or farm safety?

E.3.6 Safety Smarts Instructors

Two in-person focus groups were held with Safety Smarts Instructors. At the first group, in September 2016, eight Instructors provided detailed feedback on the proposed evaluation methods. The same eight provided perspectives on program implementation, student

engagement, student safety experiences and parent engagement were gathered at the second focus group in December, 2016.

Both focus groups were co-facilitated by both evaluators. As with other groups, detailed notes were taken during the groups, but no identifying information was recorded. Questions were shared with the Instructors about one week prior to the group, so they could prepare for the conversation. Informed consent was reviewed prior to the focus group.

Questions

1) Group intro – name, area of province, start date with SS OR # schools/year, favorite level of SS to teach, why did you become a facilitator?

First, we'll focus on how you deliver the program.

2) How does SS/FSC training prepare you to a) understand the content and b) facilitate the presentations with school children?
   Probes: orientation of new instructors, continuing education, integrating new content or priorities, suggesting strategies or troubleshooting classroom challenges, opportunities to tailor/influence training based on experiences

3 a) In what ways do you change the program for different school settings?
Probes: large vs. small schools, Hutterite vs. public schools, grade levels in school – K-9, K-6, season or time of year

3b) What is it that influences you to make changes?

4) Do you see any difference in the attitude towards safety messages across the schools that you work with? If so, what are the differences and why do think they exist?

Then we'll talk about your experiences with the children.

5a) What types of stories or experience do students share with you about what they do on the farm?
Probes: How do students talk about farm hazards/safety? Are there any difference over time, or with consecutive years of programming, in their viewpoints expressed? Or with the behaviours described, age of the child, the size or type of farm?

5b) In a typical class, how many students describe close calls on the farm?

5c) What is the reaction of their peers to the story? How do you as facilitator react to stories?
Probes: How do you support the students?

6) How can you tell if students understand the safety messages?
Probe: What type of questions do you get that suggest that the students understand the Safety Smarts messages?

We'll also explore the influence of adults.

7) Have you seen, heard or noticed any evidence that the teacher/school has made an effort to reinforce the message throughout the year?

8) Have you ever had any feedback from parents? If so, what kind?

Finally, we'll close with a discussion of highlights and lowlights.

9) What is the greatest struggle in being a facilitator? (Hardest thing)

10) What is your greatest success? (Best thing)

E.3.7 Safety Smarts Coordinator and FSC Executive Director

Questions for the Safety Smarts Coordinator and FSC Executive Director focused on program implementation. They were co-interviewed in-person by both evaluators. Again, detailed notes were taken during the interview. Since each role was held by only one person, extra caution was taken during reporting to maintain confidentiality and avoid inadvertently identifying the participants.

Questions

1) a) How do you get schools involved Farm Safety?
   b) What has stayed the same over time?
   c) What has changed more recently (past year)?
   d) How challenging is it to engage and retain schools?

2) a) How do you recruit and retain Instructors?
   b) How do you prepare new Instructors for the classroom presentations?
   Prompts: new instructors, continuing education, integrating new content or priorities, suggesting strategies or troubleshooting classroom challenges

3) Over time, what have you learned about schools' interests and priorities with respect to farm safety?

4) a) What types of changes, if any, have you made to the program in the past year? [Content? length? locations? number of students?]
   b) Why did you make these changes? OR How did you know these changes were needed?

5) Other comments?

E.3 Data Analysis

To begin with, data from the various surveys were all exported to Excel by the Coordinator. Then, all of the quantitative data sets were sent to the evaluators for analysis.

Descriptive analyses were initially completed on all quantitative data sets to capture frequencies, ranges and percentages in each category by population. Inferential statistics (i.e., cross-tabulations) were applied on student and teacher data sets to test for categorical relationships with specific internal variables such as age of students and teacher perception of material relevance and appropriateness, as well as attitude towards farm safety

Qualitative survey data (i.e., open ended questions), as well as the interview and focus group data, were analysed using inductive, constant comparison techniques. One evaluator led the initial coding process, whereby emerging themes in the data were compared with earlier themes in order to identify patterns in the data. Then the second evaluator reviewed the themes. Areas of discrepancy were discussed and resolved through consensus.

Then the preliminary analyses were entered into the analytic template (Table X), to ensure the analysis answered the evaluation questions.

E.4 Collaborative Interpretation - Making Meaning of the Results

An in-person validation meeting was held in September 2017 with the Safety Smarts Coordinator, Instructors, and the FSC Executive Director. The purpose of the meeting was to review the evaluation results, validate the findings and gain insight on areas that needed to be better understood. This process ensured the uniqueness of the Safety Smarts context was fully considered and appreciated (i.e., what the results meant with respect to Rural schools and Hutterite culture).

Table 2: Analytic Template

Evaluation Questions	Logic Model Link	Data Source
Demographics		
Students	**Outputs** • # students at each grade level	**Program records**
Schools	• # teachers at each grade level • total # schools • Proportion of program up-take by rural schools in Alberta • # & type of take home activities provided by Instructors • # and type follow-up resources requested by teachers	**Program records** **Teacher Survey** 1. What grades are in your school? 2. In which region is your school located?

Evaluation Questions	Logic Model Link	Data Source
Instructors	• # instructors • Distance travelled • # and type of program communications, such as annual reports, media releases	**Program Records** **ED & PM Interview** 6) a) How do you recruit and retain Instructors? b) How do you prepare new Instructors for the classroom presentations?
Process – How was Safety Smarts implemented in different Alberta school contexts?		
Where was SS implemented?	Differences in geography, culture and language	**Annual reports** **Program records** **ED & PM Interview** 7) a) How do you get schools involved Farm Safety? b) What has stayed the same over time? c) What has changed more recently (past year)? d) How challenging is it to engage and retain schools?
How was the SS program implemented in the classroom?	In-class - Age-appropriate instruction & activities	**Classroom observation** **Teacher Survey** 3. Are you the regular classroom teacher for this class? 4. Which presentation did your class receive? About the Safety Smarts program: 6. The Safety Smarts messages seemed relevant to students. 7. In general, the Safety Smarts presentation, including games and hands-on activities, was appropriate for the age of the students. 8. The Safety Smarts presentation was appropriate for the students' diverse backgrounds. 9. The Safety Smarts instructor was respectful of our students' diverse backgrounds
	Instructor support & training	**Instructors FG**

Evaluation Questions	Logic Model Link	Data Source
		2. How does SS/FSC training prepare you to a) understand the content and b) facilitate the presentations with school children?
How was the SS program adapted for specific school contexts? What was the rationale for adaptations across different contexts?	School –centered – respect for traditions Ongoing program improvement	**ED & PM interview** 3. Over time, what have you learned about schools' interests and priorities with respect to farm safety? 4. a) What types of changes, if any, have you made to the program in the past year? 4. b) Why did you make these changes? OR How did you know these changes were needed? **Instructors FG** 3 a) In what ways do you change the program for different school settings? 3. b) What is it that influences you to make changes?
Why did a) teachers and b) schools participate in the SS program? • Motivating factors – i.e., relevance to students, teacher and administrator beliefs and attitudes about farm safety (?) • Expectations of student participation • Extent of participation (e.g., how many grade levels participate? How many years has program operated in the class/school?)	School-centered – flexible scheduling School –centered – respect for traditions	**Instructors FG** 7. Have you seen, heard or noticed any evidence that the teacher/school has made an effort to reinforce the message throughout the year? 8. Have you ever had any feedback from parents? If so, what kind? **Teacher survey** – beliefs and attitudes towards farm safety. About farm safety in general: 6. It is easy for children to be injured on a farm. 7. A farm can be a dangerous place for children. 8. Farm safety education is useful for children. 9. I think farm safety education is a high priority for my students. 17. I would welcome a Safety Smarts presentation in the coming 2017-2018 school year.

Evaluation Questions	Logic Model Link	Data Source
Impact – What difference did participation make to children and youth? What was the immediate impact of the presentation? How, if at all, did participants change over time?		
To what extent did child and youth participants: • Know about the unique safety hazards on a farm • Understand farm safety strategies • Believe they can stay safe on their farm?	Immediate outcomes – K-6 Immediate outcomes 4-6 and after grade 6	**Teacher survey** 14. The Safety Smarts instructor engaged the students throughout the presentation. 15. Children appeared to understand the information presented by the Safety Smarts instructor. **Instructor FG** 6. How can you tell if students understand the safety messages? **Young Adults FG** 9. What do you remember about the Farm Safety presentations when you were in school? 3. a) What, if anything, do you remember about the 'slogans' or messages that were shared in the Farm Safety presentations? **Classroom Observations**
To what extent did child and youth participants have positive attitudes and perceptions towards farm safety?	Immediate outcomes 4-6 and after grade 6	**Instructor FG** 5. a) What types of stories or experience do students share with you about what they do on the farm? 5. b) In a typical class, how many students describe close calls on the farm? 5. c) What is the reaction of their peers to the story? How do you as facilitator react to stories? **Young Adults FG** 4. Do you think farm safety is very important? [Why?] 5. What would you do if you saw someone doing something unsafe on the colony? 6. Once you have experience with the equipment, do you think it's OK to skip some safety steps?

Evaluation Questions	Logic Model Link	Data Source
		7. Who is responsible for your safety when you're working around the colony? **Classroom Observations**
	[reach beyond single classroom session]	**Young Adults FG** **2.** a) As best you can remember, did any of you talk with your parents or other adults [on the colony] about the safety information? **2.** b) What, if anything, came of these conversation(s)? **Teacher Surveys** 5. a) Did parents and/or Colony leaders attend the presentation? 5. b) How many parents and/or colony leaders were at the presentation? 16. I will integrate the farm safety messages from the program at other times in my classroom. **Parent Surveys** 5. Did your child bring Safety Smarts information home following the presentation? 6. Did your child talk about the information shared in the Safety Smarts presentation? 7. Do you think the Safety Smarts program is a good use of your child's class time?
Other		**Instructor Surveys** 2. What, if anything, stood out as positive from your time at this school? 3. What, if anything, stood out as negative from your time at this school? **Instructor FG** 9. What is the greatest struggle in being a facilitator? (Hardest thing)

Evaluation Questions	Logic Model Link	Data Source
		10. What is your greatest success? (Best thing) **Parent Surveys** 8. Any other comments? **Young Adults FG** 8. Is there anything else you want to share about the Farm Safety presentations or farm safety?

Appendix F: Ethical Considerations and Mitigation Strategies

The ARECCI[13] Screening tools were developed 15 years ago and are maintained and supported by the Health Research Ethics Board of Alberta (HREBA). The tools are used to ensure ethical oversight of knowledge generating projects.

The ARECCI risk screening tool consists of three elements: 1) determining project type (research or QI/evaluation), 2) assessing the risk level inherent in the project, and 3) defining the appropriate level of ethics review required based on the level of risk.

The result of the ARECCI screening of the Safety Smarts[14] evaluation identified 'somewhat more than minimal risk' related to two risk areas. These are presented below with mitigation strategies used to address the risks.

Risk area identified by ARECCI Screening tool	Mitigation Strategy
The use of tests, surveys, interviews, oral history, focus groups, or observation of public behaviour where the participants can be directly or indirectly identified through the information recorded.	• No collection of direct identifiable information (such as name). • All analysis will be done at the aggregate level. • Respondents can withdraw at any time.
Risks or burdens for participants which are beyond what would be experienced in routine care or beyond what a reasonable person might expect in day-to-day interactions?	• All focus group attendees will self-select and the process for data collection and management will be clearly outlined at the beginning of the session. • Only the evaluators will have access to the raw data. • All focus group attendees are asked to respect the information shared at the session. • The burden is mostly tied to family and their time to complete the 4 survey questions. Teachers have been providing more detailed information in the past.

[13] A pRoject Ethics Community Consensus Initiative (ARECCI)
[14] Screening results:
http://www.aihealthsolutions.ca/arecci/screening/255061/1071cf448f186ffabc94a39fa1318556