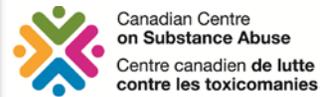
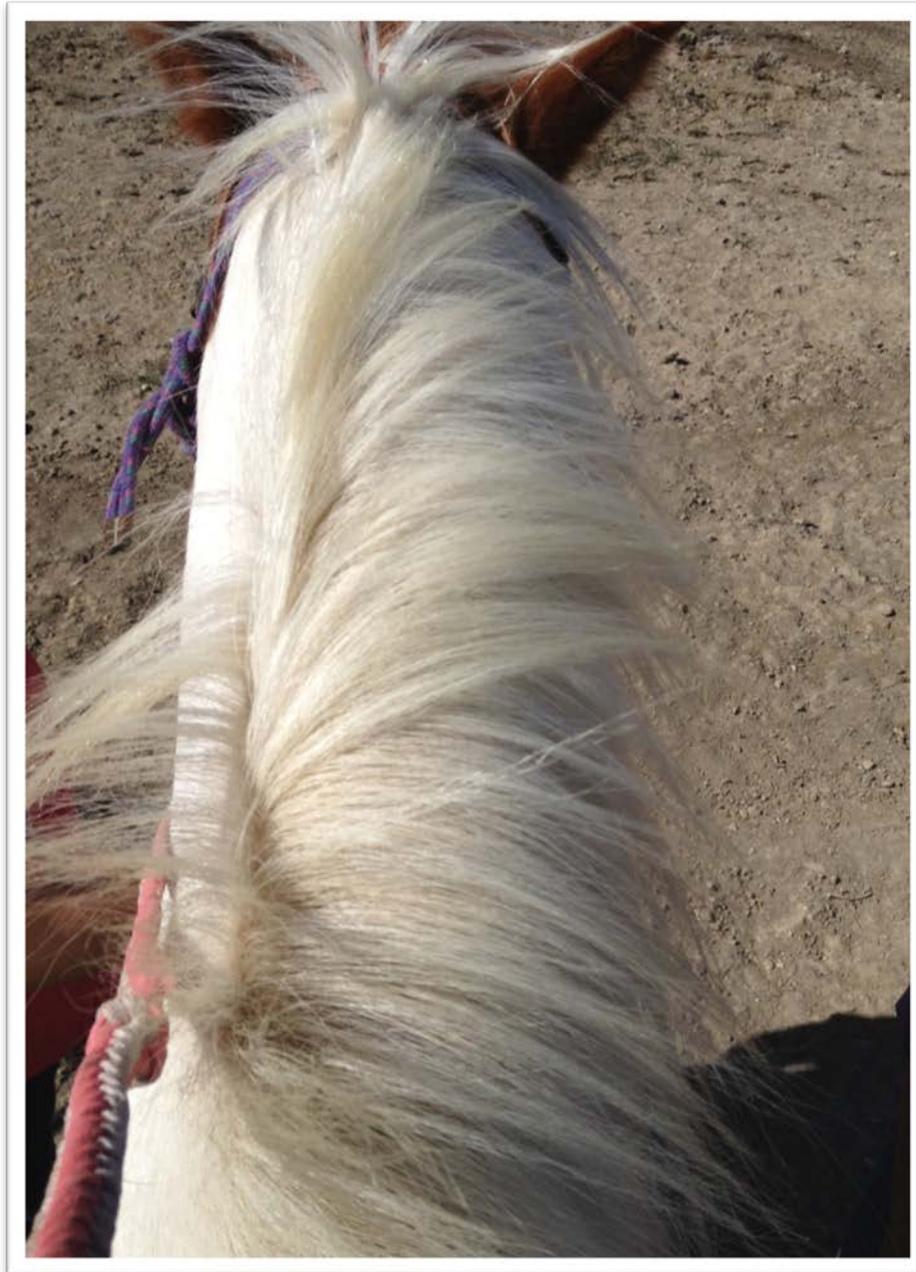
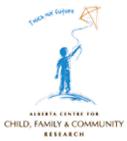
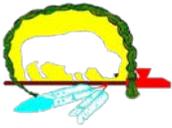


# The Helping Horse: How Equine Assisted Learning Contributes to the Wellbeing of First Nations Youth in Treatment for Volatile Substance Misuse



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Cover photo: Jesse the horse

### **Acknowledgements**

This community-based research project has been a journey that, fortunately, is one without a foreseeable conclusion. The partnerships developed throughout it will carry on to positively influence the personal and professional lives of our research and advisory teams involved and the Equine Assisted Learning (EAL) field.

There is so much to be learned from the horses, and possibly that is the greatest finding or perhaps a gentle reminder from this study.

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# The Helping Horse: How Equine Assisted Learning Contributes to the Wellbeing of First Nations Youth in Treatment for Volatile Substance Misuse

There is growing interest in Canada about what is commonly referred to as horse therapy and treating individuals who problematically misuse volatile substances. Bringing the two topics together, our study examines if and how the Saskatchewan-based Cartier Farms Equine Assisted Learning (EAL) program contributes to the wellbeing of First Nations youth in treatment for volatile substance misuse (VSM) at the White Buffalo Youth Inhalant Treatment Program at Sturgeon Lake First Nation.

Our study is framed within the holistic bio-psycho-social-spiritual framework of healing applied by the White Buffalo Youth Inhalant Treatment Centre. Its complementarity with Cartier Farm's EAL program addresses whether EAL contributes to the wellbeing of First Nations youth who misuse volatile substances; in theory it does. A case-study design was applied in our exploratory, community-based research project to specifically examine how EAL contributes to youths' wellbeing.

Through the use of stories, which reflect a First Nations cultural approach to knowing, this study shares how the EAL horses, facilitators and program content contributed to youths' wellbeing in multiple ways and to various extents. The youths' experiences of the EAL program positively impacted the physical, mental/emotional, social, spiritual and cultural aspects of the youth, and the horse was a key helper to all of this:

- ❧ The youth experienced physical wellbeing largely through physical touch and interacting with the horse;
- ❧ The youth experienced social wellbeing primarily through developing relationships; bettering their communication; having an important new experience; and positive change in their behavior;
- ❧ The youth experienced mental/emotional wellbeing mostly through increased self-identity; increased self-worth; improved ability to problem solve; and more positive attitude;

- ❧ The youth experienced spiritual wellbeing mainly through just being with the horse and developing a bond;
- ❧ The horse has a cultural significance for some First Nations youth in the EAL program. The horse offered the White Buffalo staff a tangible connection for teaching the youth about who they are.

Since the widely-played media clip in 1993 of Innu youth in Davis Inlet, Labrador getting high by sniffing gasoline, there has been on-going interest in effective ways to treat this health issue. Based on the findings of this study, key policy and practice implications warranting attention are:

- ❧ Recognizing that the horse and First Nations culture are historically linked, and that there is room for further understanding about this in the context of EAL;
- ❧ Acknowledging the lack of research in the EAL field, and with youth who misuse volatile substances, and that the findings of this study show significant promise;
- ❧ Valuing a multi-disciplinary, community-based team approach to researching the diverse areas of EAL and VSM;
- ❧ Practicing traditional First Nations ceremony to ensure a 'good' and respectful research process;
- ❧ Being familiar with a case study design so that in-depth accounts of the EAL program can be communicated to decision makers for whom this is often an unknown area; and
- ❧ Understanding that there is significant variation in how EAL is applied across programs and therefore a need for exploratory and evaluation studies designed specific to individual programs.



## **1. CONTEXT**

There has been growing interest in Canada about the association between what is commonly referred to as 'horse therapy' or equine assisted interventions and treating individuals who problematically misuse volatile substances. There has been limited scientific documentation, however, of the benefit of the horse in contributing to individuals' wellbeing. Similarly, the treatment of volatile substance misuse (VSM) among First Nations youth suffers from an absence of research attention. Our team's multi-disciplinary, community-based, exploratory study brought these two areas together in an attempt to better understand through the richness of a case study design **if and how equine assisted learning contributes to the wellbeing of First Nations youth who misuse solvents**. This was specifically examined through the question of – **how do youth experience wellbeing based on their participation in the EAL program?** From this understanding, implications for both policy and practice are made.

Volatile substances, frequently referred to as solvents, are often the first mood-altering substance used by children and youth because they are readily available, inexpensive and easily concealed<sup>1</sup>. Solvents are a large and diverse group of chemical compounds located in hundreds of household and industrial products, including paint thinner, glue, gasoline, and correctional fluid. Canadian research indicates that the majority of misusers of volatile substances are between the ages of 10 and 17, with peak use between 12 and 15<sup>2</sup>. There are higher rates of misuse among youth experiencing disenfranchised life conditions. This has been documented among street youth, inner city youth, and some First Nations and Inuit youth living in select rural and remote areas of Canada. Volatile substance misuse among First Nations youth has been linked to high rates of poverty, boredom, loss of self-respect, unemployment, family breakdown and poor social and economic structures<sup>3</sup>. These issues are connected to the historic impact of residential schooling, systemic racism and discrimination, and multi-generational losses of land, language and culture. In 1996, a major response to VSM was undertaken on the part of First Nations people and Health Canada's First Nations and Inuit Health Branch; eight residential youth solvent treatment centres were established. Canada is now considered an international leader in providing residential treatment to First Nations youth who misuse volatile substances<sup>4</sup>.

The scholarship on the role of horses in contributing to human wellbeing is nearly non-existent and

has received limited attention in the literature on the area of Animal Assisted Interventions (AAI)<sup>5</sup>. AAI has mainly focussed on understanding small companion animals within the context of therapy and therapeutic relationships between animals and humans. The horse, however, has unique characteristics which can contribute to a distinct human-animal interaction. Equine Assisted Learning (EAL) is a relatively new field within the area of equine guided programs and draws primarily on the tenets of experiential or ‘hands-on’ learning. While resonating with some of the “core values”<sup>6</sup> found within other equine guided interventions (e.g. Equine Assisted Psychotherapy, Therapeutic Riding), in general EAL is an educational program that is facilitated within a group format and focuses on ground activities rather than horseback riding. In EAL, program participants engage in structured, facilitator-led sessions with constant feedback related to participants’ experiences<sup>7</sup>. The sessions provide opportunities for participants to become involved in situations that require interaction with the horse and the group, and to reflect on these experiences. The overall intent is to create opportunities for participant self development and to internalize this awareness within the sessions and generalize it to other life situations<sup>8</sup>. Although there is growing attention to EAL, and animal assisted interventions generally, there remains little empirical literature that has documented and evaluated EAL program processes and outcomes.

In 2008, members of our team published a peer-reviewed article titled *Horse as Healer: An Examination of Equine Assisted Learning in the Healing of First Nations Youth from Solvent Abuse*. This article assessed the theoretical intersections between the White Buffalo Youth Inhalant Treatment Centre program (WBYITC) and the Cartier Equine Learning Centre (CELC) Equine Assisted Learning (EAL) program. We were able to illustrate that the culture-based model of resiliency underlying White Buffalo’s program – which accounts for an individual’s inner spirit and relations with their collective community – is complementary to Carter’s EAL program. Both support a holistic bio-psycho-social-spiritual framework of healing.

With this understanding, in 2011 members of our team published a second peer-reviewed article titled *Creating Healing Spaces: The Experiences of First Nations and Inuit Youth with Equine-Assisted Learning* and in it explored the benefit of EAL to First Nations youths’ healing from volatile substance misuse at the Nimkee NupiGawagan Healing Centre in Ontario. We concluded

that the youths' healing was aided through the availability of a culturally-relevant *space*, comprised of spiritual exchange (i.e., between the youth, horses and sometimes EAL facilitators), complementary communication (i.e., relaying upon intuition with the horses and sometimes transferring this to humans) and authentic occurrence (i.e., overcoming barriers to understanding imposed by Western ways of knowing).

Our team also undertook a scoping review in 2011 of 13 EAL studies and we found that Western epistemologies or ways of knowing guided the limited existing research through post-positivism (which suggests that a shifting truth can be located outwardly) and constructivism (which claims that knowledge is co-created by those experiencing it) and to the exclusion of Aboriginal epistemology (which asserts that knowledge is ever-present and internal to the self and external in relation to others). Knowledge in this sense is understood to be a way of life and is grounded in a history of cultural practices and traditional understanding<sup>9</sup>. Recognizing this, we identified the Western-derived participatory paradigm as a potential bridging guide for future EAL research. As a method for constructing knowledge, the participatory paradigm is emancipatory in its focus on bringing about change through action, initiated by community identification, direction, and owning of the research process<sup>10</sup>.

Developing upon these three key pieces of work, our current Alberta Centre for Child, Family and Community Research (ACCFRC) funded study implemented a large-scale community-based, exploratory, case study design with the WBYITC program and the Cartier EAL program. Our study is framed within the culture-based model of resiliency applied by the WBYITC and which is complementary with Cartier's EAL program. Key to this understanding is that the health of an individual is comprised of their subjective and relational interactions within four inter-related quadrants: biological, psychological, social and spiritual. This coincides with Indigenous knowledge and understandings of health that focuses on a balance of mental, physical, social and spiritual wellbeing<sup>11</sup>. We also account in our current study design for an understanding of space, as described above, being significant to individual and communal wellbeing.

## 2. IMPLICATIONS

Today's global economy is placing unparalleled value on knowledge. The creation of new knowledge and its transference into practice is especially required in the substance abuse field<sup>12</sup>. This is likewise true in the Equine Assisted Learning area<sup>13</sup>. In the context of Aboriginal health, unique consideration must be given to the development of understanding through multiple perspectives and its transference within specific social and political contexts<sup>14</sup>.

By designing our study with these key points in mind, rapid uptake of our findings is already taking place amongst our knowledge using practice-oriented team members, including the White Buffalo Youth Inhalant Treatment Centre, Cartier Equine Learning Centre's EAL program, the Youth Solvent Addiction Committee, the Canadian Centre on Substance Abuse and the National Native Addictions Partnership Foundation. The collaborative partnership underlying our research team provided the expertise required to navigate interests in the various fields when relaying our findings generally, and with key audiences. The following decision makers will be interested in the findings of our study because they help to address needs within the field:

- *Volatile substance misuse treatment providers*: ...there is a gap in documented research on VSM treatment approaches and effectiveness. What exists is largely dated, deficit based and erroneously shares that treatment is ineffective because of VSM-induces permanent brain damage.
- *General substance abuse treatment providers*: ...non-conventional and 'complementary' approaches to treatment are receiving increased attention in the addictions field, ranging from yoga to gardening to naturopathic medicine.
- *EAL program facilitators*: ...the impact of the EAL program facilitator, up to this point in the literature, has not received due credit for their unique and essential role in assisting clients in EAL programs.
- *Equine professional community*: ...EAL has not received research attention to the same extent as other equine guided programs.
- *Researchers*: ... multi-disciplinary, community-based, case-study designs have not been conducted and so there is limited contextual understanding of EAL.
- *Health policy makers*: ... there is significant variation in how EAL is applied across programs and therefore there is a need for studies that explore individual programs.
- *First Nations communities*: ...recognition of the growing importance of practicing traditional First Nations ceremony to ensure a 'good' and respectful research process.
- *Health Canada & First Nations and Inuit Health Branch officials*: ...there is also an increasing recognition of the importance of traditional culture as an intervention in addiction treatment.

### 3. APPROACH

Our team's collective experience and expertise with VSM treatment for First Nations youth and EAL guided our research approach. Our necessary beginning point was an agreed upon understanding of wellbeing, the horse in First Nations culture, and working in collaboration.

#### **Understanding wellbeing**

With this study situated in a holistic bio-psycho-social-spiritual framework of healing, as applied by the WBYITC and in congruence with Cartier's EAL program, the beginning point for our consequent understanding of wellbeing, as explored in this study, is based on this framework alongside our team's peer-reviewed work, the existing literature and experiential expertise.

**Biological healing** refers generally to physical health and the physiological requirements to have a healthy body. This can include, for example, food, water, fresh air, exercise, and connection to and respect for the land. In this study we focus on three exploratory measures of biological healing, defined as *physcial wellbeing* and is identified through (a) physical status, (b) importance of physical touch with the horse, and (c) acknowledging the role of the land in healthy being. (see Appendix C for supporting literature). **Psychological healing** refers generally to mental status. This can include mood/feelings, cognition, perception, thoughts, self, intellect, emotion, judgement and identity. In this study we apply the most common measure of psychological healing used within the equine literature, and so it is defined as *mental wellbeing* and is identified through (a) perceptions of self. **Social healing** generally refers to an individual's relationships or associations with friends, family, community and the universe. We focus on social healing for First Nations in this study, with it defined as *community involvement and relations with others* and is identified through (a) quantity and quality of interactions with fellow clients and staff in the residential treatment program and family members. And last, **spiritual healing** refers to an individual's inner system of beliefs (e.g., purpose, meaning, value, higher power) and their essence, being or inner spirit. We focus on two exploratory measures of spiritual healing, defined as *development of an equine-human relationship (trust) and spiritual bond* and is identified through (a) development of respect and trust with horses, (b) spiritual bond to horses, and (c) increased spiritual functioning. It important to have this understanding as our approach to the study is detailed.

### **Understanding the cultural significance of the horse**

Within an Aboriginal worldview and the treatment centre's culture-based model of resiliency the inter-connectedness of all living things, as a community of beings, is viewed essential to an individual's sense of wellbeing. Within some First Nations communities, the role of other beings, including horses, holds significance as a part of identity, culture and spirit. Since the introduction of the horse to some First Nations peoples and communities, it has had significant working (e.g., hunting and gathering) and ceremonial (e.g., Horse Dance) roles in the culture and lives of First Nations. The horse has historically been viewed by some with a profound sacredness, just as there is sacredness believed to be in all living things<sup>15</sup>. The horse is identified as having a strong spiritual power, and is seen to be a 'teller of truth' who desires to 'do the right thing'. It is believed that a horse's spirit will lead individuals in the 'right direction' and will assist them in understanding their place in the circle of life.<sup>16</sup>

### **Working in collaboration with decision makers**

The make-up of our research and advisory teams (See Appendix D), facilitated our approach to the research as "by, for and in balance with" the research population and not "on" it<sup>17</sup>. Our study is a collaborative effort of front line workers, community leaders and Elders, researchers and decision makers, including the White Buffalo Youth Inhalant Treatment Centre (provides residential treatment to First Nations youth who abuse solvents), the Cartier Equine Learning Centre (offers EAL to the youth in White Buffalo's residential treatment program), the Youth Solvent Addiction Committee (YSAC) (provides theoretical direction to Canada's solvent abuse treatment centres, based upon a culture-based model of resiliency), the National Native Addictions Partnership Foundation (guides the First Nations and Inuit Addictions System in Canada towards holistic, culturally-relevant and seamless community-driven addiction services), the Canadian Centre on Substance Abuse (Canada's non-governmental addictions agency), and researchers at the University of Calgary (Faculty of Veterinary Medicine), the University of Saskatchewan (Research Chair in Substance Abuse) and the University of Regina (Faculty of Social Work). This highly skilled, multi-disciplinary group used a team approach for directing both our: (a) chosen method and (b) plans for dissemination.

## **A. Chosen Method**

To answer our research question it was collectively decided that the most appropriate research method was a case study design guided by community-based research (CBR) principles<sup>18</sup>. CBR focuses on relationship building and process, is inclusive of all stakeholders, and is in harmony with prioritizing Indigenous knowledge<sup>19</sup>. CBR also supports decision-making power being shared by all partners in all stages of the study<sup>20</sup>, that the research study be relevant and of use to everyone involved<sup>21</sup>, and Aboriginal self-determination in research, such as Aboriginal jurisdiction over the data and research at all times and directing the research to serve Aboriginal interests<sup>22</sup>. This is key given that the history of research with Aboriginal communities is fraught with disrespect and the appropriation of power, reflective of the history of colonization of Aboriginal peoples in Canada<sup>23</sup>. As a method for constructing knowledge, this approach also parallels principles found within the aforementioned participatory paradigm.

### **Case study design**

Case study research is used to explore topics in their context using detailed and in-depth data gathered through multiple sources<sup>24</sup>. This design is particularly useful when questions pertaining to “how” and “why” are explored; when a detailed account of the context is needed to fully comprehend the topic; when the stories of the research participants are crucial to understanding; and when a collaborative approach to the research process and knowledge building is essential<sup>25</sup>. As shared by Hodkinson and Hodkinson (2001), key strengths of a case study design are that they are useful for understanding complex inter-relationships (e.g., between WBYITC and CELC), are grounded in lived reality (e.g., youths’ experiences with EAL), facilitate exploration of the unusual and unexpected (e.g., we are undertaking an exploratory study with a limited empirical base), use multiple cases that allows for focussing on the ideosyncratic (that is, accounting for different experiences as well as similar), and can facilitate rich conceptual and theoretical development<sup>26</sup>. And possibly most important, the openness of a case study allowed our team to adapt the design to account for our research approach – applying community-based research principles that facilitate the prioritizing of Indigenous knowledge.

Specific to our study’s focus, we chose a case study design for several additional reasons.

Central to all of them is that a case study focuses on description by building upon multiple and

unique voices, perspectives, contexts, and nuances. First, there is a lack of literature that explores EAL programs generally and specifically with First Nations youth as an adjunct to their treatment for VSM. Second, although horses are included in a number of youth VSM programs in Canada, a major gap exists for understanding First Nations culturally relevant treatment practices that incorporate animals. Third, there is generally limited research detailing insight into First Nations youth wellbeing. Understanding the contextual nature of the EAL program including the activities, facilitators and horses offered insight into how they contributed to wellbeing and were experienced and perceived by the youth and others (i.e., the treatment centre staff, the EAL program facilitators and the horses). Of particular importance was gaining a sense of the human-horse interactive environment. And finally, we applied a case study design because case studies are premised on narrative storytelling that draws on the perceptions of the study area as described by the stakeholders (i.e., participants, researchers and others). Richness of understanding is obtained through the methods of data collection, analysis and write-up. Thus, “the case story is itself the result. It is a “virtual reality” so to speak”<sup>27</sup>. And last, storytelling naturally reflects a First Nations cultural approach to knowing.

### **Type of case study and sampling**

Considering the purpose of our study, our case study design is both intrinsic and instrumental. An instrumental case study is undertaken when an understanding of a particular issue is of interest<sup>28</sup>. Intrinsic case studies explore cases where description and detail is required for a full understanding of the topic area and how the case is unique<sup>29</sup>. Our study is instrumental in that it focuses on understanding how participation in an EAL program contributes to the wellbeing of First Nations youth in treatment for misusing volatile substances, and it is intrinsic because gaining this insight requires an in-depth understanding of the EAL program itself; the context within which the phenomenon of youth wellbeing occurs.

A single case, the Cartier EAL program, was identified based on several factors. First, the Cartier EAL program (i.e., the case) has an established curriculum and is nationally recognized for offering EAL training certification and is distinct from other EAL programs. Second, the program has provided EAL to youth in treatment for VSM over the past 6 years, and as such has a long standing established relationship with WBYITC. As a result, purposeful sampling was

used to access a group of ‘information rich’ participants based on the commonality of their experiences with EAL and VSM. Third, with the instrumental focus of our case study, we looked exclusively at Cartier’s EAL program within a specified time period (each cohort of youth attends the EAL program for 20 weeks) and within a specified population (First Nations, female youth, 12-18 years of age). Lastly, the EAL and VSM programs are in close geographic proximity to each other and the majority of the researchers’ institutions. It was important for our team to be clear from the study outset about the case sample and design. Establishing boundaries around the individual unit of study was necessary as this delineated the case (Cartier EAL program) and the case context (the horse, the facilitators, the program activities and First Nations’ youth in treatment for volatile solvent misuse), even though ‘phenomenon and context are not always distinguishable’<sup>30</sup>. In keeping with the case study design, this step provided clarity and direction for our data collection strategies and analyses.

### **Data sources and collection**

In our study we explored contextual units of analysis within the case that included the horse, the facilitators, the program content and wellbeing. We gathered data from multiple sources, including *interviews with the youth* to gain a detailed account of their general perceptions and experiences and understanding of the four identified components of healing; *client journalling* about their experiences each week on the day following the EAL program and during classroom time for approximately 20 minutes; *interviews with the Cartier EAL program facilitators* to gain a detailed account of their understandings; *Cartier EAL program facilitator field notes* on clients in the Cartier program areas of curriculum, objectives, and intended outcomes and responses; *interviews with White Buffalo staff* to gain a detailed account of their insights and observations on the youths’ encounters with the EAL program; *White Buffalo staff recordings in client files* to document observations of youths’ attitudes and behaviours; *physiological measures*; *psychological measures*; and *spiritual measures*. (See Appendix E for complete listing of data measures).

Four residential solvent abuse program intakes of a maximum of 12 female youth at any given time, each in treatment for a 6 month period, had the potential to participate in the study. It is important to note that over the 6 month program period, at times youth would leave for varying

reasons and new youth will attend part-way through. All youth attending the WBYITC participated in the Cartier EAL program a maximum of two times a week for two hours and for 20 weeks total. Data was collected from four cohorts, from June 2010 through to June 2012. A number of differences were experienced within and between the youth cohorts that posed challenges in the collection of data. For example, the treatment intake and drop-out rate for each cohort fluctuated and occurred at various points during the EAL program. A number of additional factors contributed to a range of intrapersonal and interpersonal dynamics. These factors included the youths having to leave their families and home communities for treatment and their adaptation to the treatment centre environment, staff, other youth, routines, and their own detoxification upon entering treatment. (see Appendix F for more complete client descriptions). These factors often unravelled in the EAL program, especially during the initial few weeks. The following quote by a treatment centre staff captures how these challenges were experienced:

*“The first couple times were a little bit, you know, they were still testy because they’re new to the centre and to people and they don’t see a lot of outside people. So I think the first couple weeks might have been a little bit, you know, iffy at first, to start. And then they got into it and got used to people, because for our girls that’s a lot, that’s a big thing is meeting people away from the centre. And you know they’d show their boundaries. And um, I know of an example where one of our girls one morning was having a really rough day and she was throwing her stuff around and [said] I’m not going to the horse program and I just said to her, you know that’s part of our program and it’s, you know, really good for us to try and go all the time. And she was just grouchy all the way there” (WB01).*

(see Appendix G for an anonymous listing of the EAL youth program participants and the data sources collected for each).

The four cohorts consisted of:

Cohort 32 (July – December 2012) included 16 girls initially with 9 completing the program. The majority were from Saskatchewan (8), with 5 from Manitoba, 2 from Labrador and 1 from Ontario. For those that did not stay in the program, the duration was 2 girls for 2 weeks, 4 girls for 5 weeks, and 2 girls for 3 months. The average age of the girls was 14.68 years. Eight of the girls could speak Cree and two Innu.

Cohort 33 (January – June 2011) included 15 girls with 5 completing the program. The majority were from Saskatchewan (11), with 2 from Manitoba and 2 from Labrador. For those that did not stay in the program, the duration was 1 girl for 1 week, 2 girls for 2 weeks, 1 girl for 3 weeks, 2 for 1 month, 1 for 2 months, and 3 for 4 months. The average age of the girls was 15.26 years. Six of the girls could speak Cree, 1 Dene and 1 Sauteaux.

Cohort 34 (July – December 2011) included 16 girls with 7 completing the program. The majority were from Saskatchewan (8), with 6 from Manitoba and 2 from Alberta. For those that did not stay in the program, the duration was less than a month for 5 girls, 1 girl for 6 weeks, 2 girls for 2 months, and 1 girl for 4 months. The average age of the girls was 15.06 years. Six of the girls could speak Cree and 2 Dene.

Cohort 35 (January – June 2012) included 19 girls with 5 completing the program. The majority were from Saskatchewan (13), with 4 from Manitoba and 2 from Ontario. For those that did not stay in the program, the duration was less than a month for 10 girls, 3 girls for 3 months, 1 girl for 4 months. The average age of the girls was 15.38 years. Four of the girls could speak Cree and 1 Sauteaux.

Collecting data over time allowed us to gain an in-depth and isolated picture of the EAL program during the first cohort and apply what was learned to the remainder of the data collection. It allowed us to collect ample information on contextual factors and research process issues that were unknown to our team prior to the start of the study. For example, it was quickly learned that having both community-based researchers (from WBYITC and CELC) involved in the pre-interviews with the girls was helpful in establishing rapport with them. We revised and honed our data collection techniques based on such experiences. Consistent with a case study approach, while we were collecting data we were also revising our data collection process. It is also important to note that we recognized that the multi-month span of time between the measures (e.g., pre-post interviews) helped us to avoid a testing effect.

### **Data analysis**

In case study research “the analysis is rich in the context of the case or setting in which the case presents itself”<sup>31</sup>. Through the data analysis process we detailed aspects of the history of the case, the chronology of events, and day-by-day rendering of the activities of the case<sup>32</sup>. Following this description, we focused on key issues for understanding the complexity of the case<sup>33</sup>. We used categorical aggregation as proposed by Stake (1995). We examined a collection of instances from the data that revealed issue-relevant meanings. We used a process of data reduction, that is, the identification of themes, and we cross-compared between cohorts<sup>34</sup>. We arrived at a meaning for the case in terms of learning about the EAL program in its totality and its contributions to the wellbeing of First Nations youth in treatment for VSM. Practically, this resulted in the identification of key themes in answer to our research question and the development of narratives of and about each youth’s experience of the EAL program for sharing our case’s information-rich context.

To arrive at these results, our team followed an integrated data analysis process. We developed our initial coding tree based on the theorizing of others and our own prior conceptualizations, including the holistic bio-psycho-social-spiritual framework of healing applied by the White Buffalo Youth Inhalant Treatment Centre. The participatory paradigm continued to frame our approach to the study – and was especially paramount with our data analysis. Basically, we began with our Indigenous understanding of wellbeing (deductive) and added detail to it (inductive), verifying themes and generating themes and explanations for each of the four components of wellbeing. As Stake (1995) articulates, analysis tends to translate to “a search for patterns, for consistency, for consistency with certain conditions, which we call correspondence”<sup>35</sup>. Our community-based researchers from WBYITC and the Cartier EAL program were the leads on this work. What emerged from the analysis of the first cohort data was the development of a coding/theme tree or a correspondence table<sup>36</sup>. These pre-established codes served as a guide to return to while subsequent data collection and analyses occurred. Interview transcripts, observer recordings, WBYITC staff reflections and CELC facilitator reflections and EAL session debriefing notes were analyzed and searched for patterns and possible new codes. Data analysis was an iterative process. The WBYITC and CELC researchers and the larger research group continually revisited the coding/theme tree. As such, all perspectives and insights were shared, discussed and agreements arrived upon. This process

helped to not only trim and refine our themes but also served three other important functions. First, by returning to the team members vis-à-vis research participants (WBYITC staff, EAL facilitators, and the youth) member-checking occurred. Second, the process ensured attention to inter-rater reliability as several of the team members were involved in both the data collection and analyses. And finally, these steps contributed to the overall validity of our findings.

Cohort one served as a pilot test for the themes. Consistent with a case study approach, and as stated above, as we were collecting and revising our data collection process, we were also analyzing the first cohort for greater insight. We applied a simultaneous deductive (based on prior work) and inductive (emerge from the data) approach to theme identification. Table 1 identifies the resulting 28 themes in the four areas of wellbeing, plus the addition of a category termed culture. Thirteen of the themes originated from our pre-existing work and the remaining 15 were newly identified within this study. The addition of the culture category was in response to the youth speaking specifically to culture in their wellbeing.

**Table 1: Coding Tree of Youth Wellbeing** \* Originally defined

Culture	Biological/Physical	Social	Psychological Mental/Emotional	Spiritual
-Knowledge	-Physical health*	-Get along*	-Identity*	-Just being*
-Moontime	-Touch*	-Develop relationships*	-Self-esteem*	-Bond*
	-Nature*	-Importance of	-Nurturing	-Cultural
	-Anatomy	community*	-Feelings/Mood	activities
		-Importance of family*	-Problem solving	-Spiritual
		-Importance of friends*	-Attitude	functioning*
		-Behavior change	-Participation	
		-Team player		
		-Communication		
		-Leader		
		-Experience		

Although all themes were identified to a notable extent in the multiple data sources collected, and are therefore considered findings, our team also undertook a process in which each theme was identified for saturation, and demarcated as low, medium or high. The two community-based researchers undertook this categorizing based on their in-depth experiences of coding the data sources and as a validation check, an independent researcher on our team did the same with a careful review of the coded data. Whenever there was disagreement, a discussion was held

between all three and a decision arrived at (this took place for three themes – touch (decided upon high), nurturing (decided upon low) and spiritual functioning (decided upon low)).

Drawing on all of our data sources, including what was learned from the coding tree, a comprehensive case file was created for each youth and a narrative written. Although the cohorts are documented separately above to introduce them, the youth file narratives are combined for presentation. We specifically answered the question of how the youth experience wellbeing based on their participation in the EAL program, and specific to the EAL (a) horses, (b) facilitators, and (c) learning activities in Cartier's EAL program (see Appendix A). We also looked at the added category of culture (noting it is only relevant to the horse) and challenges the youth identified with the program and if they were consistent throughout.

This detailed and time intensive process resulted in the creation of 21 individual youth; a file was not developed if only limited data was available on a youth (e.g, youth left program early). The file included a scoring and interpretation of the standardized measurements. It is important to note that the Western-based equine measures applied in this study were not tested for cultural relevance, however, they are of a very general nature and were therefore determined applicable as only one piece of information adding to the girls' file.

## **B. Plans for Dissemination**

Time has been identified as one of the foremost challenges to effective partnerships between Aboriginal communities and health researchers<sup>37</sup>. Based on the need for time to develop trust between our study partners, before our team received funding from the Alberta Centre for Child, Family and Community Research our partners over a period of 18 months to determine the study focus and develop the proposal. Next, to kickoff the project when funding was granted, we began with a full-day EAL team building workshop with all our partners who were available and a partnership signing ceremony, drawing on the World Health Organization (2008) *Indigenous Peoples and Participatory Health Research* template. Traditional ceremony ensured the incorporation of the horse in the project. It was imperative that all partners, including the WBYITC staff and the CELC facilitators, be knowledgeable and comfortable with the study given that they would have data collection roles. This workshop was also used to address staff concerns

and discuss feedback related to the study. Throughout our project we returned to our partnership agreement for guidance.

Dissemination of our project process and findings to date include the following. We will also continue to work to disseminate our work in these and additional ways as we capitalize on presenting opportunities.

- Academic and treatment community oral and poster presentations, provincially, nationally and internationally, including at the New Directions in Population Health Research conference, First Nations and Inuit Health Branch research conference, World Psychiatric Association conference, Alternative Medicine Grand Round at the University of Saskatchewan, Youth Solvent Addiction Committee conference, the University of Saskatchewan Engaged Scholar Day, and the National Institute on Drug Abuse International Program.
- Annual First Nations traditional ceremonial horse dance (final of four annual dances held in June, 2013 to disseminate and celebrate the project findings);
- WBYITC graduation attendance
- Linkages in Saskatchewan with One Arrow First Nation I.D.E.A.L. (Inspire Direction Equine Assisted Learning) program and Leading Thunderbird Lodge Youth Inhalant Treatment Centre's cultural equine program offered through Twisted Wire Ranch at Fort Qu'Appelle
- Media distribution
- Website placement
- Report and summary distribution

#### **4. RESULTS**

##### **A. How the youth experience wellbeing based on their participation in the EAL program**

###### **Thematic analysis**

As relayed, our application of a simultaneous deductive (based on prior work) and inductive (emergent from the data) approach to theme identification resulted in 28 themes in five categories. Thirteen of the themes originated from our pre-existing work and the remaining themes were identified through analysis of the data collected. To identify their demarcation a saturation color code is applied as either low (yellow), medium (green) or high (pink). This was included because it is important for policy makers and researchers to have this information when contemplating decisions in this exploratory area of research. This was not without its challenges though. Our White Buffalo community researcher reflected, for example, that “[w]hen I was first asked the question, what do you think is the most important, the horse, the facilitators, or the

program, I would look up towards the sky, and say that's so hard to answer, they are all so equally important, you can't have one without the other. You still can't have one without the other but there were themes that stuck out." To gain a deeper understanding of the meaning of each theme, quotations from the girls' pre and post EAL program interviews are shared in the tables below. We chose to focus on the girls' interviews as a way to highlight their voices. It is worth pointing out that our initial definition of wellbeing was verified through our data analysis process and corresponding results presented herein (i.e., findings 'fit' within the categories presented, with the addition of culture that crosses the bio-psycho-social-spiritual dimensions).

Overall, the horse is a helper in the girls' journeys toward better wellbeing – the horse helps through its very nature as a highly instinctive animal, it helps the facilitators do their jobs, and it also helps put the program activities into practice. The horse is also a spiritual being for many First Nations, and thus has a cultural helping role.

<b>Biological wellbeing focuses on the body and is comprised of:</b>	*Originally defined
<ul style="list-style-type: none"> <li>experiencing healthy or safe touch (while grooming i.e., brushing their body, braiding the mane, petting the horse, hugging the horse, standing close allowing for body contact)*  <i>"touching him [horse] made me feel like I owned him" (C1, Y11)</i>  <i>"proud that I could brush the horses. Not brushing her as hard respect" (C1, Y12)</i>  <i>"scared sometimes, but I am used to it now" (C1, Y13)</i>  <i>"whenever he would do something that is right he would put his head on my chest and wait for me to hug him" (C2, Y3)</i>  <i>"they are soft and they don't get grouchy when you are combing them" (C2, Y10)</i>  <i>"the horses know they feel appreciated when you do that [brushing] and tell them they did a good job and petting them they will know" (C3, Y4)</i>  <i>"certain horse I liked brushing [because] I felt calm" (C3, Y11)</i> </li> </ul>	
<ul style="list-style-type: none"> <li>improved physical health (taking part in other physical activities because of EAL participation, the youth feeling better about themselves physically)*  <i>"it made me feel better about myself, I can do stuff without people judging me" (C1, Y5)</i>  <i>"it made me feel more active" (C1, Y13)</i>  <i>"I can actually run around now" (C2, Y10)</i>  <i>"I thought that if I could do that [horse program] I could do anything" (C2, Y3)</i>  <i>"I never used to like volleyball and I never used to play it" (C4, Y11)</i> </li> </ul>	
<ul style="list-style-type: none"> <li>learning about anatomy/how the body works (for horses, humans and the youth)*  <i>"I know horses don't puke and [I know] their reaction to people" (C1, Y3)</i>  <i>"they lift up their tail to poop [and] their body language, when you are getting close their ears go back, when they go straight up they are looking around wondering" (C1, Y5)</i>  <i>"yeah, when a horse is mad their ears pin back, their eyes go big, their muscles tighten up and their tails start swishing. It's pretty interesting. I never knew that" (C3, Y2)</i>  <i>"I learned that a horse's heart beats way faster than a human and they can like run really fast and that they are really strong and they can carry babies and all that" (C3, Y4)</i> </li> </ul>	

<ul style="list-style-type: none"> <li>connecting with the EAL setting (being at the farm)*  <i>"sometimes I ask myself what would I be doing if I wasn't here" (C1, Y3)</i>  <i>"when you go in the door and you are in there [the arena] it smells like a million bucks" (C1, Y5)</i>  <i>"I just like it over there because there are horses over there" C1, Y11)</i>  <i>"it's interesting, it's fun, it's cool to be around the horses and I am proud of myself" (C1, Y12)</i>  <i>"it [being at the farm]turned my day around and I loved to go to the horse program to see the horses" (C2, Y9)</i>  <i>"peaceful" (C3, Y11)</i></li> </ul>
<p><b>Social wellbeing focuses on interpersonal relationships and is comprised of:</b></p>
<ul style="list-style-type: none"> <li>developing relationships (connection with the horse facilitators)*  <i>"good helpers" (C1, Y3)</i>  <i>"they pronounce everything right that I can understand" (C1, Y11)</i>  <i>"I like their personalities" (C2, Y3)</i>  <i>"I like them talking to me" (C2, Y6)</i>  <i>"I feel awesome around them" (C2, Y7)</i>  <i>"they are like my parents" (C2, Y9)</i>  <i>"they are energetic, happy and funny. They are nice to all the peers that are there with us"(C2, Y10)</i></li> </ul>
<ul style="list-style-type: none"> <li>better communiator (understanding of space, body language, and dialogue)  <i>"um, I don't know, it is like talking Cree, but they [horses] have body language" (C1, Y11)</i>  <i>"peer pressure and stuff like that [works the same for humans] because horses have their own space (C2, Y6)</i>  <i>"when I first met (another youth) I didn't really like her and then we went to the horse program and then we started talking more often because we were teammates" (C2, Y10)</i>  <i>"yeah, they are like humans, they know when you are feeling scared and they know when you are feeling open with them" (C3, Y10)</i></li> </ul>
<ul style="list-style-type: none"> <li>getting along better with others (girls, White Buffalo staff, horse facilitators)*  <i>"at Cartier's we worked together and I got to know some of my peers" (C1, Y3)</i>  <i>"when I first got here I didn't know those girls and then I got paired up with other girls and got to know them and the horses" (C1,Y12)</i>  <i>"when I first met [name of youth] we were partnered up and I taught her some things and we were relationship building and from there we started talking" (C3, Y2)</i></li> </ul>
<ul style="list-style-type: none"> <li>important new experience (new activities, roles, meeting others)  <i>"something [work with the horses] I wouldn't do at home [it] was something new" (C1, Y3)</i>  <i>"it was scary at first when I got there, the horses didn't know me and they were pushing me around cause I was new" (C1, Y11)</i>  <i>"I felt like it was a waste of time but I enjoyed it and I am able to actually stand near them [the horses] now" (C2, Y3)</i>  <i>"because I have never gone up to a horse before and it was exciting. I felt kind of scared and happy at the same time" (C2, Y10)</i>  <i>"someone once told me to step out of your comfort zone and so I did and I tried something [horse program]"(C3, Y2)</i>  <i>"I felt, I really didn't want to go to it at first. I just felt, I don't know. Now there is this horse Maverick, and when you take the halter off him and the lead rope he just follows me everywhere" (C3, Y11)</i></li> </ul>
<ul style="list-style-type: none"> <li>positive change in behaviour (increased awareness of self, others and own learning)  <i>"like a horse has boundaries, where they want a person to be. The distance and their reaction when you cross those boundaries, so I look for those things in people too. Where their boundaries are" (C1, Y3)</i>  <i>"well I used to hug a lot now I have to respect peoples own privacy and boundaries, so I stopped doing that. I don't go too close to them, they are probably not comfortable with that, so I sit a bit farther away" (C1, Y5)</i>  <i>I learned to use boundaries with my peers not to enter, not going near there" (C1, Y13)</i>  <i>I learned about trust and creativity and those kinds of things" (C2, Y6)</i>  <i>I learned about boundaries and other lessons, leadership, teamwork, active listening" (C2, Y10)</i>  <i>"how to get along with horses and how to do stuff with them" (C3, Y10)</i></li> </ul>
<ul style="list-style-type: none"> <li>increased acknowledgement of the importance of friends (what having a friend means)*  <i>"someone who is just there for you" (C1, Y3)</i>  <i>"I used to think a friend doesn't care what you do, but now when I am with the horses they want us to be thinking positive about ourselves and not doing anything bad" (C1, Y12)</i></li> </ul>

<p><i>"that you just don't get a friend by talking to them, you have to respect them" (C2, Y6)</i>  <i>"I trust, I listen to them, it helps me more by going to the horse program" (C2, Y9)</i></p>
<ul style="list-style-type: none"> <li>increased acknowledgement of the importance of family (what family means)*  <i>"I will respect my mom more after participating in this treatment" (C1, Y12)</i>  <i>"I need to show them more respect" (C2, Y3)</i>  <i>"when I disrespected my family, I hope when I go back [home] I don't do that again" (C2, Y10)</i>  <i>"well, my little sister works with, she has foster parents who have horses and when she has to visit she works with them. And my uncle was thinking when we move back to our reserve he was going to get us horses and my little sister was like I can't wait to teach you and I told her the things I learned" (C3, Y2)</i></li> </ul>
<ul style="list-style-type: none"> <li>increased acknowledgement of the importance of community (think differently about what their home community means to them)*  <i>"there is no horses where I live, and in school in field trips we go horseback riding once in awhile but I never learned anything about them" (C1, Y3)</i>  <i>"hmm, it got me to think about like all the, when I took a look at the horses and my friends here, everybody was like stressed out when they came and then now they are just bonding and just all stressed out again and I am scared to go back too [to home community]" (C1, Y5)</i>  <i>"my home community isn't really good for people, that is what I realized" (C2, Y3)</i>  <i>"I don't think about my home community" (C2, Y6)</i></li> </ul>
<ul style="list-style-type: none"> <li>better team player (working out team dynamics)  <i>"when I first got here [another youth] started talking to me, then she stopped talking to me and I stopped talking to her, and then she was my teammate at the Cartier farm, and then we had to talk" (C1, Y11)</i>  <i>"when we were working together, when we were in teams, we had to work together" (C2, Y7)</i>  <i>"yeah, when you support each other, for example, say if one of us got on each other's bad side then we had to be partnered up, we had to put our differences aside and work together" (C3, Y2)</i>  <i>"we learned stuff about the horses like pressure and release and we learned how to work as a team and get along" (C3, Y11)</i></li> </ul>
<ul style="list-style-type: none"> <li>better leader (showing initiative and being a positive influence)  <i>"me and [another participant] weren't getting along that one time but they put us together so we got to know each other on our good sides, so then we brought it back to the [treatment] centre and the next thing we were playing catch outside and talking" C1, Y5)</i>  <i>"like when someone needs help with something I can help them, like finishing a project or something. I can help my grandma out and stuff when she needs help" (C2, Y10)</i>  <i>I learned a lot about the horse, and you know how you say to be a role model here? An then we did an exercise how to be a leader, well I gained confidence there" (C3, Y2)</i></li> </ul>
<p><b>Psychological wellbeing focuses on the mind/thinking and feeling and is comprised of:</b></p>
<ul style="list-style-type: none"> <li>increased self-identity (horse helps them to see themselves differently, learn about who they are)*  <i>"[the horse program] makes me feel better about myself and it turns my day around" (C2, Y9)</i>  <i>"I can actually show my real me when I am at the horse program. It [horse program] made me think smartly, helped with courage and stuff like that" (C2, Y10)</i>  <i>"I think I am getting more matrue than I was before. I don't know if my parents see it but I can see it and gained a lot of confidence and I am starting to be a better role model"(C3, Y2)</i></li> </ul>
<ul style="list-style-type: none"> <li>increased self-esteem/self-worth*  <i>" yeah, the teacher once said the horses know how you feel. This one girl they had a few intakes ago was feeling angry and not good, and she was at Cartier and the horse wouldn't listen to her because he knew how she felt, and she started crying and that horse hugged her. So when I go to Cartier's I feel good about myself so the horses can feel good" (C1, Y3)</i>  <i>"I found out that I am not, I don't know how to put it, mean sometimes, I am actually really nice" (C2, Y3)</i>  <i>"before I went I had low self esteem and I wasn't too sure about the horse program. I can pick their hoof now because I have more, I have more self-esteem and confidence and I learned more about the horses" (C3, Y2)</i></li> </ul>

<ul style="list-style-type: none"> <li>increased self awareness, positive moods/feelings  <i>"at the horse program I learned that I was actually happy inside and I didn't know that before" (C2, Y10)</i>  <i>"they are almost like human beings, they feed off our energy and like today when were put under peer pressure and all of the team's energy was put into this, the horse could feel it all and he was put under pressure, and he AWAL'ed on us"(C3, Y2)</i></li> </ul>
<ul style="list-style-type: none"> <li>improved ability to problem solve  <i>"I found that I didn't really have good boundaries with some people. I will use this at home with my friends and my family" (C2, Y3)</i>  <i>"[when return to home community I will] shake their hand and say hi, hug them and say I missed you guys and if they ask me anything like to drink, I will say no I am busy now" (C2, Y9)</i>  <i>"if I see someone doing a bad thing I know they will get mad at me for doing the right thing but that is the way I was taught, to do the right thing and tell the truth, not living in lies" (C3, Y2)</i></li> </ul>
<ul style="list-style-type: none"> <li>more positive attitude (what they are thinking)  <i>"the horse program helped me feel good cause it made me, when I am depressed it makes me happy" (C2, Y7);</i>  <i>"when I first came here I felt kind of sad but when I seen the horses it just made me happy" (C2, Y10) "then we did that exercise how to be a leader, well I gained confidence there" (C3, Y2)</i>  <i>"I feel happy that I worked with horses for the whole 4 months and that I was kind of pushy then I learned not to be pushy" (C3, Y4)</i></li> </ul>
<ul style="list-style-type: none"> <li>increased participation and effort  <i>"I didn't really respect anyone, then I got with the horses and I needed to respect them or they would kick me, and then I came back here [treatment centre] and started to respect the others" (C1, Y12)</i>  <i>"I get along with Smokey [horse] real good but other girls got to pick him so I give him that respect of meeting new people" (C1, Y5)</i>  <i>"well, we were practicing walking and he would walk in front of me and I would say whoa and I would have to back him up and put boundaries in place for him. It was a long process" (C3, Y2)</i></li> </ul>
<ul style="list-style-type: none"> <li>experiencing nurturing (with a pregnant mare or foal interaction)  <i>"exciting, we saw a pregnant horse and then later on saw the baby horse" (C1, Y3)</i>  <i>"we didn't get to work with her [mare] but we got to see her baby afterwards. It was pretty cute. Their legs were long like a deer and it looked like a little deer almost" (C3, Y2)</i>  <i>"I saw them in their pen and the horse was pregnant and a couple days later there was babies" (C3, Y10)</i></li> </ul>
<p><b>Spiritual wellbeing focuses on the spirit and is comprised of:</b></p>
<ul style="list-style-type: none"> <li>enjoying spending time with the horse/just being with the horse*  <i>"the best part of the program was getting to know the horses better and just spending time with them" (C1, Y3)</i>  <i>"I liked doing activities like the obstacle course" (C1, Y12)</i>  <i>"every time the other girls pick a horse I always stuck with Rebel and he is always pushing me around but I find that funny. It is funny getting pushed around but not in a mean way" (C1, Y13)</i>  <i>"being able to work with the horses because I like animals" (C2, Y3)</i>  <i>"the best part of the program was the horses and leading the horse" (C2, Y6)</i>  <i>"the best part of the program was looking at the horses [because] it turned my day around" (C2, Y9)</i>  <i>"the best part of the program was seeing the horses and getting to know them" (C2, Y10)</i></li> </ul>
<ul style="list-style-type: none"> <li>developing a relationship or special bond with the horse*  <i>"I respect [horse] and encourage him" (C1, Y13)</i>  <i>"he listens well and pays attention and he turns my day around and when I am having a sad day he puts his nose on my shoulder and then he smells my hand" (C2, Y9)</i>  <i>"cause he [horse] respects me, he doesn't really do anything to me and he helps me out at the time that I need help" (C2, Y10)</i>  <i>"I started gaining confidence and like when you have to want to clean their hooves you really have to trust them" (C3, Y2)</i></li> </ul>
<ul style="list-style-type: none"> <li>increased participation in cultural activities (or other ways)</li> </ul>

<p><i>"I went to a Horse Dance" (C1, Y5)</i>  <i>"[cultural activities] are important because it's me, part of my identity and beliefs (C1, Y10)</i>  <i>[cultural activities] keep you busy to not go back to the way you were before" (C1, Y11)</i>  <i>"like smudging, sweat, praying, and talking to Elders" (C2, Y10)</i>  <i>"you know praying and you know talking to the rock in the smudge room and knowing spirits are around but they aren't bad spirits"(C3, Y2)</i></p>
<ul style="list-style-type: none"> <li>increased spiritual functioning at a personal level (feel more connected to their spirit / spark inside themselves)*  <i>"to be healthy is to eat right, not using and living a better life" (C2, Y7)</i>  <i>"I want to be healthy al my life and not do drugs no more. I feel good when I exercise, eat lots"(C2, Y9)</i>  <i>"I didn't really think lots about God at the time but when I started going to the horse program it got me thinking ltos and now I just pray every night and like I just pray that everything goes alright with my family when they come here" (C2, Y10)</i>  <i>"it means to be clean, to have a balanced lifesytle, clean and calm" (C3, Y4)</i>  <i>"to be healthy, stay away from drugs and alcohol, exercise and eat right" (C3, Y10)</i></li> </ul>
<p><b>Cultural wellbeing focuses on:</b></p>
<ul style="list-style-type: none"> <li>increased cultural knowledge (such as EAL participation helping to understand what Elders and teachers share about horses; and spiritual role of the horse)  <i>"they were essential to our survival. They were out friend and family" (C1, Y10)</i>  <i>"don't they give medicine off or something when you are near them. I learned about that. Knowing that those horses are part of my culture made me realize that I can believe in a creator" (C2, Y3)</i>  <i>"it taught me to like stay with my family and learning about the culture that I will take back home" (C2, Y10)</i>  <i>"way back they [horses] were really useful" (C3, Y2)</i></li> </ul>
<ul style="list-style-type: none"> <li>moontime (recognizing the power of the female spirit)  <i>" when I couldn't go in [with the horses] and participate when I was on my time and all I got to do was observe, that was boring" (C1, Y3)</i>  <i>"they say you aren't supposed to go on your time so respect yourself" (C2, Y7)</i></li> </ul>

See Appendix C for the narrative story that accompanies these findings.

## **B. If the EAL Program Contributes to Youths' Wellbeing**

The study is framed within the holistic bio-psycho-social-spiritual framework of healing applied by the White Buffalo Youth Inhalant Treatment Centre. As established, its complementarity with Cartier Equine Learning Centre's EAL program addresses whether EAL contributes to the wellbeing of First Nations youth who misuse volatile substances; in theory it does. Nonetheless, the various data sources were reviewed to validate this.

Comments from the youth capture the their perception of wellbeing: "it helped me get along with other people cause when I worked with the horse they put a different person with and me and I got along with them pretty good" (C3, Y4); "the last intake I only went in the sweat four times, this intake I go whenever I can, and the horses, I don't know [it's] the spirit or something, at the

Horse Dance and the Ghost Dance, they are important to me” (C1, Y3); “I want to be healthy all my life and not do drugs no more” (C2, Y9).

The EAL facilitators and the horses are integral to the youths’ experiences of wellbeing as reflected in the following passages: “anytime you involve a horse in any kind of activity it’s a new learning experience, he’s going to be leveling that playing field and he is going to teach you things about self-reflection” (C1, Y1); “like the horse, we [EAL facilitators] are very important too, being able to read those girls’ and figure out what they need and how to present it or provide it. So when you’ve built that relationship it’s there forever” (C1, Y2).

Lastly, the statements by the White Buffalo staff provide both cultural and spiritual dimensions for understanding wellbeing as experienced by the youth as evidenced in these statements: “they learn more about their own feelings, um, have more awareness about themselves and it just reinforces what we’re teaching about [at the treatment centre] and the skills and they get it because there [at Cartier], they’re with the horse. They have, they’re with another spirit. And it just makes, you know the teachings that stronger” (WB01); “it’s because that horse, those horses are standing there. They’re standing in there. For our culture, animals are, well we have our names, and they are, they’re our guides, they are our helpers, they keep us safe, we pray to them to help us. They’re our angels” (WB02).

The combined experiences, observations and reflections of the youth, EAL facilitators and treatment centre staff offer a holistic understanding unambiguously relaying that EAL contributes to the wellbeing of First Nations youth who misuse volatile substances.

### **C. Challenges**

Our team also examined the challenges youth identified with the program and if they were consistent throughout. For the most part, the challenges dissipated through the course of the program. The key challenges identified were associated with the youths attending the White Buffalo Youth Inhalant Treatment program, including most prominently: coming into a new environment, sorting out dynamics with peers, meeting new people, residing in a new community, and meeting new White Buffalo and Cartier program staff. There were also complaints associated with the equine facility, including it being cold and ‘stinky like a farm’.

The elements proved to be troublesome for some of the girls, and most specifically the cold; the White Buffalo staff notes shared “One girl didn’t want to participate because it was too cold (Oct 27). Other notes shared: “One of the girls complained about the smell as soon as she arrived to the farm but continued on with her activity” (Sept 22). When the girls were not getting along at the centre they did not want to work with one another, but in commonly ended with the girls getting along during the Cartier exercise. And finally, girls being on their moom time seemed to disengage some of the girls because of required non-participation near the horses (e.g., because of the power of the female when menstruating).

The following excerpt from White Buffalo staff notes, related to psychological wellbeing, provides a snapshot of challenges oftentimes faced: “One of the girls said she was not feeling well and refused to take notes (Aug 16). One of the girls says “this horse is dumb” but doesn’t state why. The staff and facilitators noted that the girls were scattered, different that day, didn’t know what was causing the behavior (Sept 13). One girl wasn’t listening to the staff, left her partner to pick up caterpillars. She kicked gravel at the staff and walked away (Sept 22). One girl seemed to do all the work for work for her team while the other girl stood, watched and complained. She wouldn’t help her teammate groom the horse either even though her partner urged her to help because they were a team. One of the girls threw a cat at the staff before leaving the farm, which clung onto her pant leg. The girls somehow snuck a cat back to the centre without the staff knowing. This is when a girl was accused of bringing the cat back, and she started swearing and yelling at the staff member in Cree (Sept 22). Another of the girls refused to participate, just sat and watched her team (Oct 27). Another girl was being rude to the staff and not listening (Nov 3). This same girl had no patience, started throwing flower pots around. Another didn’t want to do the activity. Another girl was in a bad mood. And another was not happy, because she told staff that her Mom was not coming to the graduation. Both said their days didn’t start out good (Nov 15). One refused to choose a word from the Achievement board because Ticket (the horse) was not there that day (Nov 15).

## **5. ADDITIONAL RESOURCES**

Cartier Equine Learning Centre: <http://www.cartierequinelearningcenter.com/>  
Research Chair in Substance Abuse: <http://www.addictionresearchchair.ca>  
Youth Solvent Addiction Committee: <http://www.members.shaw.ca/ysac/>

## **6. FURTHER RESEARCH**

Answering our team's exploratory research question – **if and how EAL contributes to the wellbeing of First Nations youth who misuse volatile solvents** – is guiding our team's future plan to develop a longitudinal, controlled outcome evaluation study. This necessarily includes the development of culturally competent scales and measures, of which the collected information in this study can begin to inform their development.

Having a Saskatchewan Health Research Foundation-funded post-doctoral student working alongside our team during this study enabled the first steps in this process to take place. This would be of great interest to policy and management decision makers because it will serve as a definitive marker of impact and effectiveness. The **Horses Guiding Adolescent Learning Through Experiential Relationships (HALTER)** Scale is a 37-item self-report survey instrument intended to measure the benefits of participating in EAL programs. The initial target population of interest was at-risk First Nations youth who have misused volatile substances and were in residential treatment programs provided through facilities like the Youth Solvent Addiction Committee (YSAC) centres. The aim of developing the HALTER Scale was to have a standardized tool for measuring detectable improvement in at-risk First Nations youth (aged 12- to 17-years) attributable to the learning goals and objectives typical in EAL curriculums. The EAL programs utilized as nonconventional and complimentary treatment therapy for youth in residential treatment have curriculums targeted at assisting youth to acquire strength-based life skills (i.e., developmental assets) such as effective communication, enhanced problem-solving, better understanding of body language, respecting personal boundaries, among others. The EAL programs use horses because their hyper-vigilant nature makes them highly attuned to their surroundings, including others in their environment, that their body language is extremely effective in leveraging participants' self-awareness about their own behaviour<sup>1</sup>. Overall, the benefits to at-risk youth from participating in EAL programs are suggested to stem from an opportunity to experience empowerment leading to basic wellness and behaviour change<sup>1</sup>.

The HALTER Scale is still in the early stages of pilot testing and validating it as a tool designed to be administered at the end of EAL programs (i.e., typically ranging from 12 to 20 weeks) toward predicting participant risk for maladaptive behaviour following treatment. The validation

process includes the establishment of a cut score to delineate participants being ‘still-at-risk’ from ‘not-at-risk’ based on their acquisition (or lack thereof) of knowledge and life skills from EAL programs. The examination of good performance on the HALTER needs to be conducted relative to a more standardized distribution of youth, which means the collection of data based on both at-risk populations and normally functioning (i.e., not in treatment) populations. To date the 16 at-risk participants who have completed the HALTER Scale (i.e., eight from the White Buffalo Treatment Centre) are part of a total of 55 cases available to start examining the psychometric properties essential for a valid instrument. However, the current total of 55 cases falls well short of an adequate sample to conduct the item and scale analyses required to complete the validation process and make the HALTER available for use in the public domain.

In short, our primarily qualitative approach to examining a horse-assisted intervention is a contribution to the literature as qualitative studies are rare in the field, and we suggest this gap needs to be filled in the literature<sup>1</sup>. Further, our blending of traditional Aboriginal knowledge and an academic approach has allowed us to premise our work on Indigenous ways of knowing. We believe this model can also help fill the gap in the literature.

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