

Pine River Institute

Annual Evaluation Report
January 1, 2015 – December 31, 2015



Prepared by:
Laura Mills, Ph.D. (Q.M. Psych)
Director, Research & Evaluation

Michael Dubois
Research Assistant

Jennifer Bingley, M.A. (Psych)
Research Assistant

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A NOTE FROM PRI'S CLINICAL TEAM

With anxious anticipation, the Clinical Team each year awaits the Annual Evaluation Report. While we know we are doing our best and believe in our work, it is reassuring to see in the hard data how we are doing. The Annual Evaluation Report holds us accountable, gives us insight, and challenges us to do better.

We would like to thank the parents and the youths for their research contribution, for without their efforts none of this would be possible. We also want to thank the research team for their painstaking diligence in collecting, entering, and analyzing the numbers. Their efforts to partner with the clinical team are greatly appreciated and valued.

Every day we see the results of our hard work—we see youths grow into mature young adults who can better relate with their families, manage daily challenges, face academic hurdles, and confidently point their compasses toward a healthy future. What we know from our experience at PRI is validated in the Annual Evaluation Report; we see that, in general, youths who come to PRI improve their physical, mental, relational, and behavioural health. We also see that our dedication to fostering treatment completion is worth our efforts—those who complete the PRI program do better than those who do not. We are also excited to learn that family functioning continues to improve among our clients, a testament to the parallel process embedded in our family program.

The Evaluation Report challenges us to continuously improve. We can see, for example, that for a few youths the health improvements experienced within the first year after treatment are not sustained over the subsequent years. Although this phenomenon is expected, given what we know about adolescent treatment in North America, it is also an opportunity for us to learn how to optimize treatment so that the treatment gains are maintained for all youths.

With deep appreciation for the hard work and dedication to excellence represented here, the Clinical Team embraces the findings of the Annual Evaluation Report.

The Clinical Team

PINE RIVER INSTITUTE: AN INTRODUCTION

PINE RIVER INSTITUTE (PRI) is a residential treatment program for youth 13-19 struggling with addictive behaviours and, more often than not, other mental, behavioural, and relationship issues. These are complex teens, many with recent hospital visits, police contact, running away, stalled or abandoned school careers and high levels of strife in their families. When teens come to PRI they are angry, sad, and quite lost.

Parents are desperate. They walk on eggshells trying to keep the peace. They are frantic when their child leaves home for days. Many have experienced their teen's suicidal thoughts or attempts. They wonder how their bright, social child found such a dark path and why, despite all attempts, they have been unable to help.

At PRI families find a safe, nurturing, and professional environment where they can begin to heal. Wilderness, residential, therapeutic, and academic programs unite in an integrated treatment model. PRI's approach enhances adolescent maturation. With a 4:1 student to staff ratio, we take the time to build genuine relationships with students and families. This capacity for relationships is a foundation for stronger and lasting family bonds.

Students and their families move seamlessly through a comprehensive program that entails four distinct **PHASES**. In Phase 1, the Outdoor Leadership Experience (**OLE**), youths spend a few months in the wilderness, skill building and living in a small community where they come to recognize that change is necessary. They then move to the second phase, **RESIDENCE**, an academic and therapeutic community. As they demonstrate greater levels of maturity and leadership, they move to the third phase, **TRANSITION**, a time to start taking the lessons home. During this time, families develop an aftercare plan. During the fourth phase, **AFTERCARE**, the student no longer resides at the campus but continues to receive support to sustain their treatment gains, integrate into their community, find local social support, and connect with school and/or work.

Parents have a very important role in the therapeutic process and engage in what we call the **Parallel Process**, where they experience growth and development alongside their child. We walk with parents as they courageously learn about themselves, look at relationships within their own families, and begin a new relationship with their child.



This Report

PRI'S *Annual Evaluation Report* is an in-house tool for performance quality improvement, and it provides information for our stakeholders. The findings are relevant for risk management, administration, program & financial planning, staffing, communications/marketing, organizational presentations, funders, government decision-makers, practitioners, researchers, and our referral network.

This report provides *demographics*, *process findings*, and *outcome* evaluation.

Demographics include student characteristics such as gender. **Process** findings include inquiry, admissions, and program engagement. For the sake of brevity we show process information for the most recent three years. **Outcome** findings include the mental, physical, behavioural, and relationship health of PRI clients.

We show outcome results for **Completers** (Cs) and **Non-Completers** (NCs). Full program completion at PRI is recognized by graduation from Aftercare, however, aftercare engagement varies across families, so for evaluation purposes, Cs are students who successfully completed the **TRANSITION** phase of the program.

Where you see a red star *, it indicates that the **differences between Cs and NCs is statistically significant**. Notation for all analyses are in footnotes.

Please note that the data regarding such personal experience as abuse, suicidality, self-harm, etc. may be underrepresented as they are gathered during the admissions process, before youth and parents have developed a relationship with the clinical team at PRI. Therefore, respondents may not feel comfortable disclosing such information.

Due to the voluntary nature of research contribution, some data are missing. Thus, the findings in this report should be considered to represent a sample of the Pine River population (i.e., other youths may not experience the same outcomes). Our sample comprised 65% of parents whose youth attended PRI, 40% of the youths who attended PRI, and reports from clinicians who have been in touch with 40% of their clients (typically unplanned when a youth calls to touch base).

This Report: Past, Present, & Future

In the past, we provided reports based on parent, youth, and clinician responses, usually in the form of charts. Very often, the information was similar among these three respondents. This year, we provide detailed charts with quantitative **parent** information, narrative reports based on **youth** data analyses, and we supplement these with open-ended comments provided by **clinicians**.

At the beginning of 2010, PRI underwent profound changes. We secured permanent government funding. Our beds were consistently full. We started a waiting list. We fully adopted our current therapeutic model, our commitment to our family program, our team-based community milieu, and regular professional development. In other words, we increased our *treatment fidelity*. While we believe it most valuable to report outcomes **only** on youths who were in the program after 2010, our small sample sizes in the past could not provide meaningful data. Last year, we showed results based on admissions before and after 2010. **Wherever you see results in blue, they represent PRE-2010 admissions.** Next year, we will report only on outcomes for youths who attended after 2010.

***Hope is a significant component
or ingredient for change...***



SNAPSHOT OF THE FULL REPORT

This snapshot provides a general overview of the characteristics of PRI youths, our program processes, and our client outcomes. The full report offers deeper and broader information about our program.

Typical Characteristics of Youth Entering PRI:

- The average age is 17 years.
- Male to female ratio is typically 2:1, but in 2015 half were male (we added more female beds).
- 54% are from the GTA, 41% from the rest of Ontario, and a few from out-of-province.
- Most identify multiple drugs of choice; the most common are marijuana and alcohol.
- Over 2/3 have a history of suicidal thoughts; about a quarter had attempted suicide.
- Over 2/3 of youth experienced police contact; over half had run away from home.
- 16% do not attend school, and another 50% attend less than half the time.
- 2/3 have a mental health diagnosis, most commonly ADD/ADHD, anxiety, and/or depression.
- 1/3 of parents report that their youth has a learning issue (e.g., non-verbal learning disorder).

Inquiry and Admission Information

Parents, other family members, and professionals contact PRI regarding a struggling youth. In 2015, we received inquiries for 395 youths. PRI serves about 35-40 youths each year, and they stay an average of just over a year. There are always about 200 families on the PRI waitlist; many of those who call indicate that their need is immediate and choose not to be placed on the waiting list. In 2015, clients funded by the Ministry of Health and Long-Term Care waited an average of 411 days. Those paying privately waited 88 days (typically dependent on family readiness).

Program Engagement

In 2015, youths stayed at PRI an average of **428 days**; 43% of youths completed the transition phase of the program. In addition to family therapy sessions, parents are expected to participate in one retreat, bi-annual workshops, and bi-monthly process groups. Our parents are highly engaged.

Treatment Outcomes: Pre and Post-PRI

The data collected from PRI parents and students allow us to understand the health and behaviour of youths and their families pre- and post-PRI (3, 6, 12, 24, and 36+ months).

Substance Use: Pre-PRI, most youths presented with problematic substance use.

Post-PRI, most parents reported that their child was abstinent or using socially. Cs were more likely to be abstinent and less likely to experience problematic substance use than NCs.

Academics: Pre-PRI, parents reported that their youths' academics were sporadic, stalled, or abandoned. **Post-PRI**, youths re-engaged with secondary and post-secondary school with good grades and attendance.

Police Contact: Pre-PRI, 2/3 of youth had been involved with police. **Post-PRI** police contact was less than 14% (for Cs).

Hospital Visits: Pre-PRI, half of youth had recently visited a hospital for substance use or mental health reasons. **Post-PRI**, very few Cs had a hospital visit.

Running Away: Pre-PRI, 2/3 of youth had run away. **Post-PRI**, less than 9% for Cs (less than 17% NCs).

Mental Health: Youths who come to PRI typically have clinically problematic mental health across multiple domains (e.g., depression & anxiety) and this is typically non-problematic after PRI.

Satisfaction with Treatment

Most parents and youth are 'satisfied' or 'very satisfied' with PRI treatment. Parents gave the highest satisfaction ratings to the Outdoor Leadership Experience (OLE) and the parent retreat. Youth indicated highest satisfaction with the front-line staff, academics, and individual therapy.

Research & Evaluation

PRI Research is emerging as a leader among our peers. We are members of the research consortium for the National Association of Therapeutic Schools and Programs (NATSAP), and serve on their Ethics and Research Boards. We are collaborating with the University of New Hampshire to explore health and behaviour outcomes for troubled youth who seek treatment.

PRI is also leading a province-wide project to develop and implement evaluation in youth addiction agencies. On behalf of 12 agencies, we secured over \$570,000 from the Ontario Centre of Excellence in Child and Youth Mental Health, Addictions Ontario, the Ontario Trillium Foundation, and Health Canada's Drug Treatment Funding Program to support this collaborative initiative.

We **share knowledge about treatment outcomes and the value of research** across Canada and with stakeholders including parents, staff, funders, and Board members. In 2015 we presented our research and evaluation at: Outdoor Behavioural Healthcare Industry Council (Park City, Utah), Addictions and Mental Health Ontario Community of Practice (Toronto, ON), and at PRI Staff Meetings, Parent Workshops,

and PRI Board of Directors meetings. Also in 2015, we attended the NATSAP Annual Conference (Nashville, TN) for learning and networking purposes.

We have ongoing relationships with: Dr. Debra Pepler, Distinguished Research Professor of Psychology at York University and Scientific Co-Director of PREVNet (Promoting Relationships and Eliminating Violence Network); Dr. Anita Tucker at the University of New Hampshire, and with Dr. Ellen Behrens at Westminster College (Utah). We will continue to work with our research partners in an effort to publish our findings.

The following are research articles that are planned for 2016:

- What happens to families who wait for adolescent substance abuse treatment?
- What do parents expect from treatment for their addicted teen?
(Being revised and resubmitted)

Publications

Mills, L., Pepler, D., & Cribbie, R. (2013). Effectiveness of Residential Treatment for Substance-Abusing Youth: Benefits of the Pine River Institute Program. *Residential Treatment for Children and Youth, 30, 202-226*

Mills, L. & Lewis, S. (2016). For All You Do, This Article is for You: Thoughts on Optimizing and Evolving Treatment Evaluation. *Journal of Therapeutic Schools & Programs, 8, 10-15.*

Creighton, V. & Mills, L. (2016). Family Matters: Engaging Parents in Youth Treatment. *Journal of Therapeutic Schools & Programs, 8, 51-58.*

PRI's Board of Directors has established a Standing Committee on Research under the leadership of Dr. Mark Greenberg. The Committee has a mandate to advise and monitor on research matters.

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ADMISSIONS

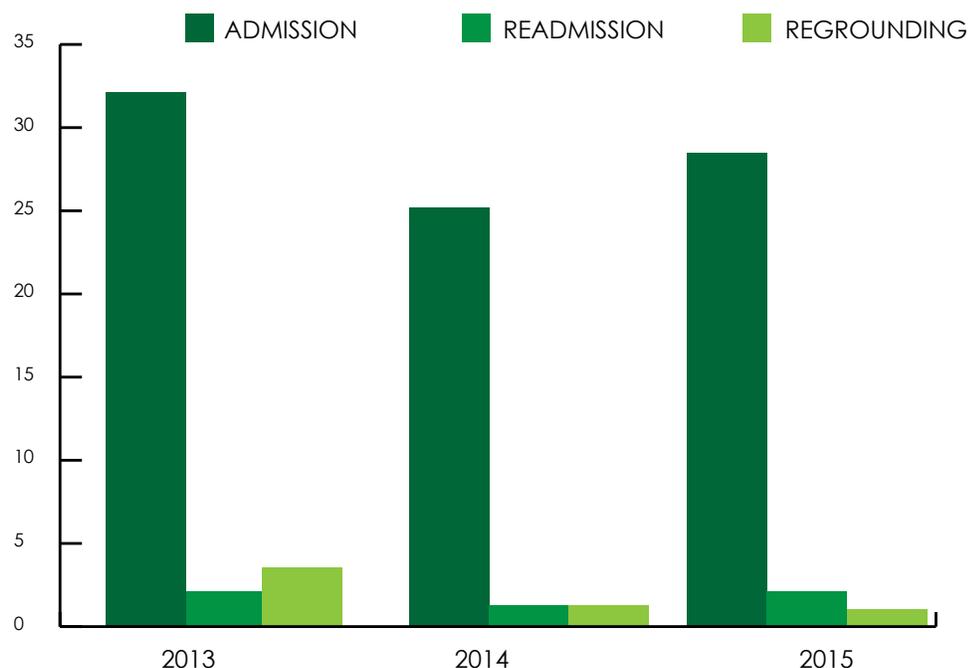


Each year family members, friends, and medical professionals contact PRI regarding a struggling youth. The number of inquiries for identified youths (those whose name was provided) in 2015 was 395, in 2014 379, and for 2013 365, about 1.5 per weekday¹. The number of calls Admissions receives each month is relatively consistent month by month, showing slightly more inquiries in June.

The Admissions team typically responds to inquiries within one working day. If there is a match between the youth and PRI, inquirers complete the online application and submit medical, psychological, and academic documents. Families are then placed on an admission wait list.

Families are scheduled for an on-site assessment a few weeks prior to admission. After the assessment, if the youth is suitable for the program, he/she is admitted when a bed becomes available. In 2015 there were 31 admissions, two of whom were former clients (Figure 1). In addition, one youth took the opportunity, after PRI, to return to the wilderness for re-grounding.

Figure 1. Admission, Readmission, & Re-grounding Frequencies 2013-2015.





Wait time from inquiry to admission in 2015 was 411 days for Ministry of Health and Long-Term Care (MOH) clients², who, in 2014, waited 484 days; the decreased waiting time in the past year was likely due to our addition of a new treatment team. Clients funded by MOH wait longer than those who pay privately³. Average wait times are shown below, by year of admission and type of pay (Table 1).

Table 1. Average days from Contact to Admission by Year and Type of Pay

Year of Admission	Private Pay	MOHLTC Funded
2013 (N=32)	138 days (N = 7)	408 days (N = 25)
2014 (N=26)	206 days (N=5)	484 days (N=21)
2015 (N=28)	88 days (N=8)	411 days (N=21)

Over 80% of inquiries are made by a parent, while other family members, professionals (e.g., physicians, therapists), or the youths themselves make up the remainder. Those who inquire hear about PRI from various sources. Over the last three years, about a third of our applicants find us online, about a quarter from a professional or medical doctor while others hear about us from PRI alumni, newspaper articles, fundraising, education consultants, and through friends and family.

Characteristics of Admitted Youths

Information on the characteristics of youths admitted to PRI is taken from parental admission applications, and from surveys administered to youth on their first day in the program.

The average **age** of youth at admission is 17.1 **(17.0)**⁴. About half (54%) of PRI youth are from the GTA, 41% are from outside the GTA in Ontario; a few PRI families are from outside Ontario⁵. The ratio of male to female youth is typically 2:1⁶. In 2015, 50% were male, as we added additional female beds to the program*⁷.

The proportion of PRI parents living together since 2010 is 44% **(54%)**. This varies based on year of admission and was 38% in 2015. Three percent **(4%)** of PRI youths have experienced the death of a parent⁸ and 8% **(11%)** were adopted⁹.

Remember, anything in blue represents PRE-2010 ADMISSIONS.

This red star means there is a statistically significant difference between completers and non-completers

Addictive Behaviour

The profiles of youths who enter PRI are complex. Concurrent with addictive behaviour, they typically have experience with one or more of the following challenges: mental health issues; suicidal and self-harm ideation and behaviour; loss or other history of trauma; and experience of abuse. This complexity is detailed below by way of grouped proportions or averages.

Parents indicate that PRI youths started using substances at an average age of 13.5 (13.3). Regular use of substances began at 14.6 (14.3) years¹⁰. The frequency of use at the time of application to PRI is reported as 'daily' by 91% (92%) of parents¹¹. Before coming to PRI, most youths have tried several types of drugs and are poly-substance users. The most common primary drug of choice reported by parents was marijuana (74% / 65%), then alcohol (10% / 19%), and as reported by parents of youths admitted after 2010, the third most common drug of choice was Oxycontin (3%); parents of those admitted before 2010 reported the third most common drug of choice as powder cocaine (5%).

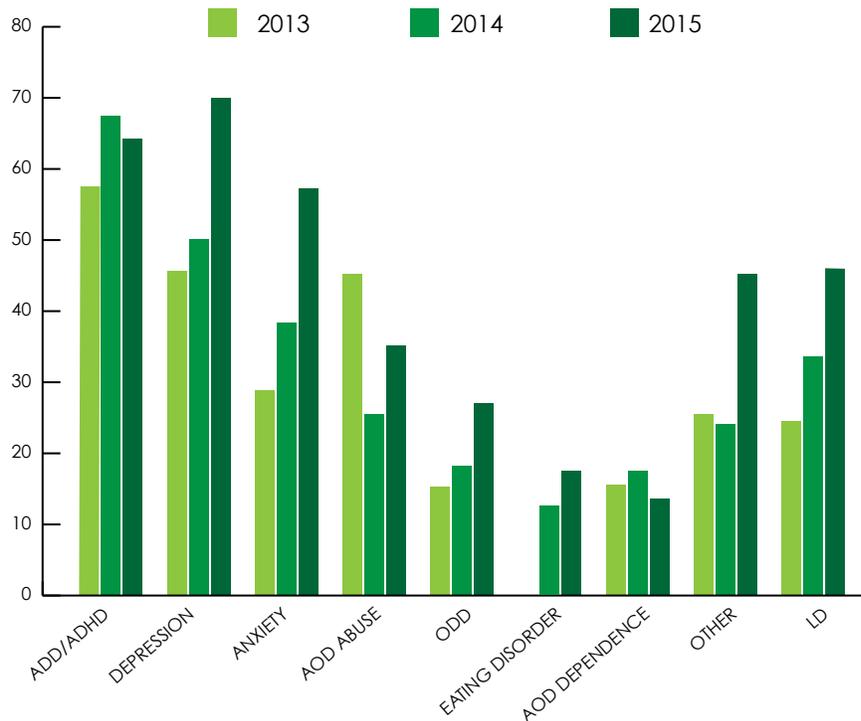
Youths report having started to use substances at an average age of 12.5 (12.6)¹² just over a year earlier than parents reported¹³. The frequency of use at the time of application to PRI was reported as daily by 66% (72%)¹⁴ of youth. Youth also most often report marijuana as their primary drug of choice followed by alcohol but many have also tried or prefer cocaine, ecstasy, or prescription drugs that were not prescribed to them.

PRI parents report that their child texts about 8 hours per day (females average 12 hours; males 6), use social networking / surfing 6 hours per day (females 8, males 5), and electronically game about 4 hours per day (females 4, males 4.5)¹⁵. The youths are typically not gamblers. Many PRI youths associate with deviant peers, usually beginning when they transition to high school.

Mental Health and Learning Issues

Parent reports indicate that 66% of admitted youths had at least one formally diagnosed mental health disorder¹⁶. Of these, (since 2010) 32% were diagnosed with one disorder, 20% had been diagnosed with two, and 28% with three or more (maximum 8)¹⁷. Additionally, parents report that 32% of admitted youth have a formally identified learning issue such as, non-verbal learning disability, general LD, and other issues related to processing, memory, and executive functioning. Figure 2 shows the percentages of admitted youths with parent reported mental health diagnoses and learning issues.

Figure 2. Parent Reported Youth Mental Health & Learning Disability Diagnoses at Admission



Note: Alcohol and other Drug (AOD) Abuse or Dependence percentages represent youths who have a formal diagnosis. Most PRI youths would 'qualify' for this diagnosis before PRI but may not have a diagnosis.

Note: 'Other' includes Panic Disorder, Bipolar Disorder, PTSD, Social Phobia, and Schizophrenia.

Since 2010, 64% (38%) of parents reported previous youth treatment when they applied to PRI¹⁸. Most commonly, parents report youth treatment with an individual clinician or as part of regular outpatient community treatment. The next most common are hospital inpatient and residential treatment.

History of Trauma

Abuse: 28% (23%) of parents reported that their child had a history of being abused: 5% (8%) physical abuse, 8% (9%) sexual abuse, 7% (3%) verbal abuse, and 5% (6%) neglect¹⁹. Youths themselves, 39% (18%), also reported a history of trauma: 24% (13%) physical abuse, 10% (6%) sexual abuse, 29% (12%) verbal abuse, and 29% (12%) neglect.

Suicidality: Parents indicated that 78% (74%) of youth have a history of suicidal thoughts or behaviour: 46% (51%) suicidal thoughts, 8% (6%) had planned, and 24% (16%)²⁰ had attempted suicide. 61% (44%) of reported events occurred in the three months prior to application to PRI. Parents indicated that the median age of suicidality for youths is 15. Of the 152 youth who answered the question, 66% (68%) reported suicidal thoughts or behaviour in the three months before coming to PRI:



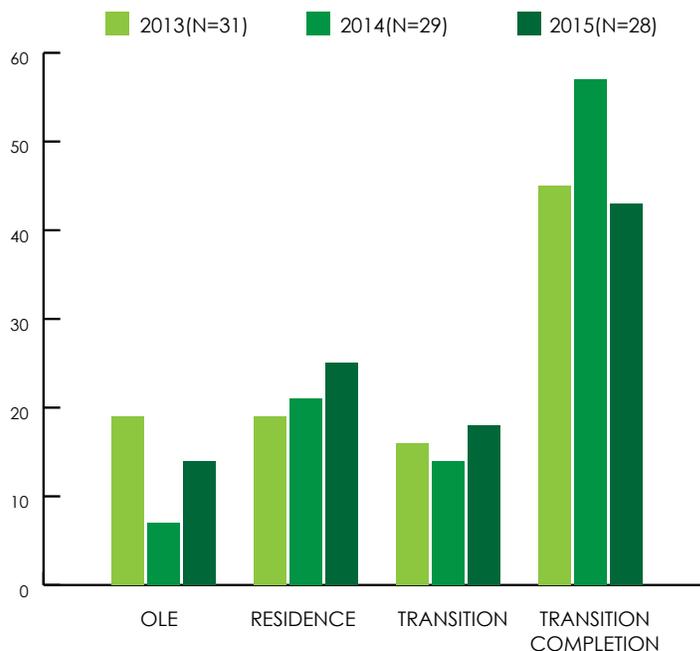
27% (27%) had suicidal thoughts, 6% (6%) had planned, and 23% (24%)²¹ made an attempt to end their lives.

Self-Harm: Self-harm is described as cutting, burning, removing skin, and banging against walls. Youths engage in self-harm often to cope with intense emotional distress or pain²². Self-harm is reported by **parents** for 53% (49%) of youth (49% female 58% males, since 2010)²³. Of the **youths** who responded to this question, 27% (42%) indicated a history of self-harm.

Student Engagement

Treatment completion is known to foster healthy outcomes for youths receiving help for their substance use. As such, we strive to help our youths reach transition completion. During the years before 2010, the average Transition Completion rate was 24%, lower than the years since 2010 (45%)*²⁴. The transition Completion rate for the last three years is shown in Figure 3. In some cases, youths exit the program before completion, based on a mutual client-clinician decision. We started tracking this in 2015, when 3 of the 7 youths who were discharged during Residence and 3 of the 5 youths who were discharged during Transition, exited based on a clinician-endorsed early discharge. Thus, 18% of the early discharges in 2015 were 'planned early discharges'.

Figure 3. Phase at Departure by Year of Departure 2013 – 2015



The average length of stay for youth who departed in 2015 was **428 days**. Table 2 details length of stay Pre- and Post-2010* , and over the most recent three years, and by Transition Completion.

Table 2. Average Length of Stay in Days by Year of Departure and PRI Completion

	All Years Pre-2010	All Years Post-2010	2013	2014	2015
Transition Completers	268	480	495	535	524
Non-Completers	137	225	196	302	356
All Clients	169	340	331	435	428

Aftercare

When youths complete transition they are encouraged to participate in Aftercare, a fee-for-service option (Aftercare is not in our funding agreement with MOHLTC).

All youth who completed transition in 2015 participated in Aftercare (88% in 2014 and 86% in 2013). More youths admitted after 2010 participate in Aftercare than those admitted before 2010²⁷.

Parent Engagement

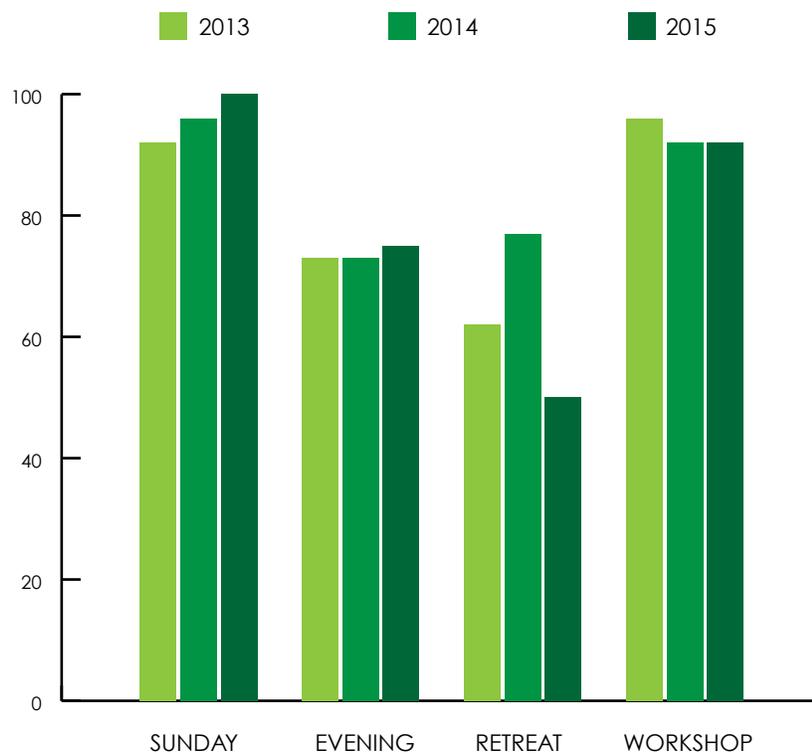
Parent engagement is core to the program. When youths progress past OLE, their parents/guardians are expected to participate in family group every other Sunday, evening bi-weekly parent group (in person or by teleconference), parent retreat, and two-day parent workshops. Table 3 shows the parental attendance Pre- and Post-2010 admissions. Figure 4 indicates engagement by at least one family member in each opportunity, if their child had completed OLE, over the past three years. The family member is most often a parent but in some cases can be a grandparent or other adult guardian. An average of 1.8 (1.7)²⁸ family members is involved at each opportunity.

Table 3. Parent Attendance at Parent Opportunities Pre- and Post-2010 Admissions.

	Sunday Group*	Evening Group*	Retreat*	Workshop
Pre-2010	13%	26%	47%	NA
Post-2010²⁹	95%	67%	67%	64%

Note: Some differences may be influenced by better reporting Post-2010. Workshops were initiated Post-2010

Figure 4. Percent Attendance by Year of Departure for Eligible Parent(s) (2013- 2015)



Incidents at PRI

Incidents include events such as absent without leave, property damage, self-harm, and other behaviours requiring discipline and/or medical treatment. In 2015, there were **134** incidents. This can be compared to 2014 (**129** incidents), and 2013 (**143**). We track all incidents and utilize the information for risk management and performance quality improvement. For example, we discuss how to mitigate risks for particular youths who tend to be involved in a high proportion of incidents and for the types of incidents.

Understanding Outcomes

A strength of Pine River Institute is its program evaluation and research. We are working toward using standardized tests, which will result in increasingly robust results and enhance our treatment and program decisions. At this point, we do not always use standardized measures. Thus, each analysis in the report has a 'robustness rating' based on the strength of measurement, as follows:



Gold Medal: Indicates a **standardized** measure, was **matched** pre-PRI to post-PRI. Standardized measures have been widely tested to make sure they measure what they say they measure, and give reliable results. Matching is when we have responses from the same person pre- and post-PRI, which allows us to measure change over time.



Silver Medal: Indicates a **non-standardized** measure, **matched** pre-PRI to post-PRI. Sometimes standardized measures do not ask what we want to know, they can be cumbersome, and they can be costly. Thus, we have questions that make sense to us. We have our own ways of scoring these, and they have not been normed.



Bronze Medal: Indicates a **standardized** measure but scores were **not matched** pre-PRI to post-PRI. This means that we can take averages or frequencies of a group before treatment and after treatment, but they are not matched. Although this will give a general sense of pre- and post-treatment scores, it does not measure change.



Good Effort: We used a **non-standardized** measure, and scores were **not matched** pre-PRI to post-PRI. This is the least reliable way to understand treatment effectiveness, but these data are included because some questions are of interest to PRI and our stakeholders.

Completers and Non-Completers: You will see results for '**completers**' (**Cs**) – youths who completed Transition, and '**non-completers**' (**NCs**) – youths who departed before completing Transition. **When the differences between Cs and NCs are statistically significant, they are noted with a star *** and statistical notation will be located in a footnote. Any *p-value* more than .05 indicates '*not statistically significant*', denoted by (*n.s.*).

Generalizability is when one can expect the results for participants in a study to be experienced similarly by others. With only 35 clients per year, and without a comparison group, we cannot generalize our outcomes to other youths. We can only look at client and family health before and after the program and understand that in the time in between, the youths attended PRI.

Substance Use



We ask about youth substance use in terms of whether use is 'consistent and problematic', 'periodic slips', 'social or occasional' or 'abstinent'. Pre-PRI, parent-reported substance use is commonly consistent and problematic (pre- and post-2010 are different)^{*31}. After PRI, substance use is less problematic among Cs than NCs. The difference between the two groups is most prominent 3- and 6-months after PRI for youths who entered the program Post-2010 (Table 4a).

Table 4a. Post-2010 Admissions.

Parent Reported Substance Use Pre & Post-PRI by Time and PRI Completion

	PRE-PRI	3M Post-PRI ^{*32}		6M Post-PRI*		1Y Post-PRI		2Y Post-PRI	
	N=139	C (N=30)	NC (N=22)	C (N=20)	NC (N=15)	C (N=21)	NC (N=12)	C (N=12)	NC (N=8)
Abstinent	1%	67%	23%	55%	7%	42%	17%	42%	38%
Social/Occasional	15%	13%	27%	25%	27%	33%	33%	25%	12%
Periodic Slips	6%	20%	23%	15%	13%	12%	0%	8%	12%
Consistent & Problematic	77%	0%	27%	5%	53%	12%	50%	25%	38%

Note: There were very few respondents at 2Y Post-PRI. Results should be interpreted with caution.

Table 4b. Pre-2010 Admissions

Parent Reported Substance Use Pre & Post-PRI by Time and PRI Completion

	PRE-PRI	3M Post-PRI ³³		6M Post-PRI		1Y Post-PRI		2Y Post-PRI		3+Y Post-PRI	
	N=63	C (N=10)	NC (N=26)	C (N=18)	NC (N=33)	C (N=23)	NC (N=41)	C (N=41)	NC (N=19)	C (N=19)	NC (N=41)
Abstinent	5%	40%	19%	28%	12%	39%	17%	37%	27%	37%	27%
Social/Occasional	0%	30%	42%	50%	46%	48%	39%	34%	34%	26%	32%
Periodic Slips	0%	10%	23%	17%	9%	4%	20%	5%	15%	16%	15%
Cons't & Prob'c	95%	20%	15%	6%	33%	9%	24%	10%	24%	21%	27%

We ask youths the same question about substance use before and after PRI. Youth reports regarding substance use are largely consistent with those provided by parents. Before PRI, about 2/3 of youths reported that they used substances daily, and that their use was consistent and problematic. After PRI, the majority of youth, regardless of program entry date or how long the youth has been out of the program, reported either being abstinent or using substances socially/occasionally.

Clinician Comments

He acknowledges struggling with low mood, sadness and loneliness, however he is working at his awareness and using very solid coping strategies to manage.

[She] is safe and free from previous self-harm/self-destructive behaviours. She is living with her boyfriend and just got a puppy.

Academics



Attendance. Most inquiries to PRI are for secondary school-aged youth. Often, however, their academic careers are sporadic, stalled, or have been abandoned. **Before PRI,** parents report a lack of school engagement, with most youth reported as having low attendance (e.g., 50% attended half time or less) (Note: data were only available for 8 youths Pre-2010, no results shown). **After PRI,** parents reported that most youth were attending school, had graduated school, or were in post-secondary institutions (Table 5a and 5b). Sometimes youths were not in school because they were working. For example, of the 12 youths who were not in school 1Y Post-PRI (Post-2010 Admissions), six were working part-time and five were working full-time (one was not working) across a range of job types, including retail, hospitality, sales, factory, and government. Some youths were volunteering, for example, coaching, at soup kitchens, or overseas

Table 5a. Post-2010 Admissions
Parent Reported Academic Status Post-PRI by Time and PRI Completion

	Pre-PRI ³⁴	3M Post-PRI		6M Post-PRI		1Y Post-PRI		2Y Post-PRI	
	(N=111)	Cs (N=34)	NCs (N=26)	Cs (N=25)	NCs (N=17)	Cs (N=27)	NCs (N=13)	Cs (N=20)	NCs (N=10)
Not in School	16%	15%	23%	4%	29%	33%	23%	30%	20%
In High School	82%	53%	50%	52%	35%	37%	54%	20%	50%
Graduated H.S.	1%	15%	19%	32%	35%	18%	15%	35%	10%
In / Grad Post-Sec	1%	18%	8%	12%	0%	11%	8%	15%	20%



Table 5b. Pre-2010 Admissions

Parent Reported Academic Status Post-PRI by Time and PRI Completion

	3M Post-PRI I ³⁵		6M Post-PRI*		1Y Post-PRI*		2Y Post-PRI*		3+Y Post-PRI	
	Cs (N=10)	NCs (N=29)	Cs (N=19)	NCs (N=34)	Cs (N=23)	NCs (N=44)	Cs (N=22)	NCs (N=43)	Cs (N=22)	NCs (N=47)
Not in School	10%	41%	10%	41%	10%	41%	14%	19%	23%	23%
In High School	90%	52%	74%	47%	74%	47%	23%	51%	4%	28%
Graduated H.S.	0%	3%	0%	9%	13%	18%	18%	19%	32%	28%
In / Grad Post-Sec	0%	3%	16%	3%	26%	0%	46%	12%	41%	21%

Parents reported that the average number of missed school days in the three months **pre-PRI** was 25. **After PRI**, in the three months before parents completed the survey, the number of school days missed at all time points was less than 2 days for Cs and between 2 and 4 for NCs. Reasons for poor school attendance included: behavioural issues resulting in suspension or expulsion, mental health issues, or refusal to attend for fatigue, aches and pains, or lack of interest.

Pre-PRI, youth reports align with those of **parents**, indicating little engagement with school. After the program, youth reported that they were generally attending school, consistent with parent reports. **Post-PRI** youths reported employment that ranged from manual labour to retail to office administration. Typically, youth noted that work was enjoyable. For youth who were not working post-PRI, many reported volunteering or actively searching for volunteer or paid positions.

Achievement. Table 6 shows the historical average for applicants to PRI. Consistent with Ontario trends in which 60%-75% of students in grades 3 and 6 earn A's and B's, most PRI youth earned A's and B's in earlier grades. Their marks, deteriorated, however, with 90% of parents reporting that later grades were not reflective of the youths' abilities.

Table 6. Historical Average Achievement for Applicants to PRI, Parent Report

	A	B	C	D	FAIL
Grade 3 (N=93)	27%	56%	15%	2%	0%
Grade 6 (N=93)	24%	55%	18%	2%	1%
Grade 7 (N=93)	17%	48%	32%	3%	1%
Grade 8 (N=94)	16%	37%	35%	11%	1%
Grade 9 (N=99)	12%	20%	34%	22%	11%
Grade 10 (N=78)	6%	14%	35%	20%	24%
Grade 11 (N=44)	4%	7%	18%	41%	30%
Grade 12 (N=18)	11%	17%	17%	22%	33%



After PRI, youths earn As and Bs more often than other marks (Table 7a and 7b), as reported by parents (we do not require transcripts).

Table 7a. Post-2010 Admissions
Achievement Post-PRI All Time Points, Parent Report

	A		B		C		D		FAIL	
	Cs	NCs	Cs	NCs	Cs	NCs	Cs	NCs	Cs	NCs
3M Post-PRI (N=29)	38%	31%	38%	31%	19%	31%	6%	8%	0%	0%
6M Post-PRI (N=22)	31%	0%	50%	67%	6%	0%	6%	17%	6%	17%
1Y Post-PRI (N=21)	25%	11%	50%	33%	25%	22%	0%	11%	0%	22%

Table 7b. Pre-2010 Admissions
Achievement Post-PRI All Time Points, Parent Report

	A		B		C		D		FAIL	
	Cs	NCs	Cs	NCs	Cs	NCs	Cs	NCs	Cs	NCs
3M Post-PRI (N=15)	0%	0%	75%	73%	0%	18%	25%	9%	0%	0%
6M Post-PRI (N=24)	8%	0%	75%	67%	17%	8%	0%	17%	0%	0%
1Y Post-PRI (N=28)	8%	0%	58%	94%	25%	0%	8%	6%	0%	0%
2Y Post-PRI (N=28)	18%	6%	55%	88%	27%	6%	0%	0%	0%	0%
3+Y Post-PRI (N=26)	33%	29%	44%	41%	22%	18%	0%	6%	0%	0%

Clinician Comments

Student just completed college and was excited to share.

[She is] finishing up high school, dating a steady guy, [and] working two jobs.

[He is] confident, successful, friendly, functioning, holding down a F/T job, dating long term.

Mental Health

We measure mental health with a widely used tool called the Child Behaviour Checklist that reports Clinically Problematic, Borderline Clinically Problematic, or Sub-Clinical (Not Clinically Problematic)³⁷ scores. The tables below show the percentages of PRI students whose **parent-reported** scores fall into the **clinically problematic** range for *internalizing* problems (anxious / depressed, withdrawn / depressed, and somatic complaints), *externalizing* problems (aggression and attention problems), and other (social problems and thought problems) pre- and post-PRI. Many youths were experiencing problems in the clinical range across multiple domains before coming to PRI, which sheds light on the complexity of their lives at intake. Most youths were sub-clinical after PRI, suggesting sustained healthy mental well-being. All CBCL reports are based on Post-2010 Admissions as this is a more recently administered tool.

Table 8. Parent Reported Percent of Youths in the Clinically Problematic Range of Scores on the Child Behaviour Checklist Syndrome Scores by Time and PRI Completion

	Pre-PRI	3M Post-PRI ³⁸		6M Post-PRI		1Y Post-PRI		2Y Post-PRI	
	N=56	C	NC	C	NC	C	NC	C	NC
		(N=32)	(N=23)	(N=21)	(N=15)	(N=23)	(N=14)	(N=17)	(N=9)
Anxious / Depressed	50%	6%	9%	5%	33%	13%	21%	18%	33%
Withdrawn/Depressed	59%	6%	22%	10%	27%	22%	29%	29%	33%
Somatic Complaints	38%	6%	9%	10%	13%	13%	21%	18%	56%
Rule-Breaking	79%	3%	13%	0%	33%	9%	21%	0%	0%
Aggression	54%	0%	0%	0%	13%	0%	14%	6%	0%
Social Problems	25%	0%	9%	0%	0%	0%	7%	6%	22%
Thought Problems	43%	9%	13%	5%	20%	9%	7%	18%	33%
Attention Problems	38%	6%	9%	0%	13%	9%	14%	6%	0%

Crisis & Behavioural Indicators



Hospital Visits

Before PRI, visits to a hospital are common for PRI youths. Parents reported that about half of their children had visited a hospital for reasons of substance use or mental health (e.g., emergency visit, overnight, or extended stays), about half of which happened in the 3 months prior to applying. The average stay for these hospital visits was 7 days (ranging from a few hours to 90 days). After PRI, the proportions of hospital visits were comparatively low - 10% or less (for Cs), as seen in Tables 9a and 9b. At the 1-year Post-PRI time point for Post-2010 admissions, there was a significantly lower proportion of hospital visits for substance use or mental health among Cs as compared to NCs.

Note: Understanding the reason for hospitalization is complicated; 'overdose, physical injury, or accidents' might be indicative of substance use and/or other mental health issues.

Table 9a. Post-2010 Admissions.

Parent Reported Substance & Mental Health Hospitalizations by Time and PRI Completion

	PRE-PRI	3M Post-PRI ⁴¹		6M Post-PRI		1Y Post-PRI		2Y Post-PRI	
	N=174	C	NC	C	NC	C	NC	C	NC
		(N=31)	(N=25)	(N=25)	(N=17)	(N=25)	(N=14)	(N=20)	(N=8)
Substance Use	17%	0%	12%	8%	12%	4%	14%	0%	0%
Mental Health	34%	0%	24%	4%	6%	4%	14%	5%	0%

Table 9b. Pre-2010 Admissions.
Parent Reported Substance & Mental Health Hospitalizations
by Time and PRI Completion

	PRE-PRI	3M Post-PRI ⁴²		6M Post-PRI		1Y Post-PRI		2Y Post-PRI		3+Y Post-PRI	
	N=102	C (N=9)	NC (N=27)	C (N=19)	NC (N=31)	C (N=23)	NC (N=38)	C (N=21)	NC (N=43)	C (N=21)	NC (N=47)
Substance Use	24%	0%	7%	10%	10%	0%	3%	0%	7%	0%	8%
Mental Health	28%	0%	4%	5%	10%	0%	0%	0%	5%	0%	4%

Before coming to PRI, about half of **PRI youths** reported that they had visited a hospital for mental health or substance use concerns. Hospital visits, as reported by youths after PRI, are less common.

Police Contact

Pre-PRI, parents report about 2/3 of youth had contact with police; of these, 76% (92%)⁴³ were within three months before applying. Reasons for police contact include mischief, property damage, theft, public intoxication, and possession. **Post-PRI**, contact with police decreases substantially.



Table 10a. Post-2010 Admissions

Parent-Reported Contact with Police Post-PRI by Time and PRI Completion

	PRE-PRI	3M Post-PRI ⁴⁴		6M Post-PRI*		1Y Post-PRI		2Y Post-PRI	
	N=102	C (N=32)	NC (N=25)	C (N=25)	NC (N=16)	C (N=25)	NC (N=14)	C (N=20)	NC (N=8)
Police Contact	59%	6%	20%	12%	38%	0%	36%	12%	10%

Table 10b. Pre-2010 Admissions

Parent-Reported Contact with Police Post-PRI by Time and PRI Completion

	PRE-PRI	3M Post-PRI ⁴⁵		6M Post-PRI		1Y Post-PRI		2Y Post-PRI		3+Y Post-PRI	
	N=84	C (N=10)	NC (N=29)	C (N=19)	NC (N=33)	C (N=24)	NC (N=43)	C (N=21)	NC (N=43)	C (N=21)	NC (N=47)
Police Contact	64%	0%	14%	5%	12%	8%	19%	10%	19%	14%	11%

Before coming to PRI over two thirds of **youth** report having had contact with police; **after PRI**, less than one in ten youth who complete the program are involved with the law. One quarter or more of youth who do not complete the program have had experience with police after leaving PRI⁴⁶.

Clinician Comments

Apart from one theft from his mother's credit card (that he is paying off) no trouble with the law...

Running Away



Youth on the run are at higher risk for being involved with crime, drugs, unprotected or forced sex, prostitution, and contracting sexually transmitted diseases. In North America, about 1 in 7 teens (14%) runs away. By **parent report pre-PRI**, 62% (54%)⁴⁷ of youths had run away in the three months prior to application. Parents indicate that their child ran away to party, or after confrontations at home. **Post-PRI**, the percentage of parents who reported that youth had run away is lower than the North American average (Table 11).

Table 11.
Running Away Pre- to Post-PRI, Parent Report,
by Time and PRI Completion

	PRE-PRI	3M Post-PRI ⁴⁸		6M Post-PRI		1Y Post-PRI		2Y Post-PRI		3+Y Post-PRI	
	N=84	C (N=31)	NC (N=25)	C (N=25)	NC (N=17)	C (N=25)	NC (N=14)	C (N=19)	NC (N=8)	C	NC
Post-2010 Admits	62%	3%	8%	0%	6%	4%	7%	0%	0%		
	N=84	(N=10)	(N=29)	(N=19)	(N=34)	(N=24)	(N=43)	(N=21)	(N=41)	(N=20)	(N=42)
Pre-2010 Admits	54%	20%	14%	5%	18%	4%	16%	5%	2%	0%	2%

Before PRI, about one quarter of **youth** report that they ran away from home in the three months prior to admission. Almost all youth report that they had not run away from home after leaving the program.

Note: Running away becomes a less meaningful health indicator as youth age and move away from home.

Clinician Comments

Living on his own. Peer changes have been positive.

Well connected to friends, is in University living in residence.

Family



Family functioning is measured with the FAD⁴⁹, scored from 1 to 4 (4 is the highest score; 3+ indicates 'healthy' functioning). **Pre-PRI, parents'** average scores were about one standard deviation below 'healthy'. **Post-PRI**, family functioning is in the 'healthy' range. This tool was only administered Post-2010.

**Table 12. Post-2010 Admissions
Parent Reported Family Functioning by Time and PRI Completion**

	PRE-PRI	3M Post-PRI ⁵⁰		6M Post-PRI		1Y Post-PRI		2Y Post-PRI	
	N=104	C (N=31)	NC (N=24)	C (N=24)	NC (N=16)	C (N=24)	NC (N=12)	C (N=17)	NC (N=9)
FAD Average	2.5	3.0	2.9	3.1	2.8	3.1	2.8	3.0	2.9

Youth FAD scores indicated that their perception of family functioning is similar to that of their parents. Youth viewed the family as below the 'healthy' range pre-PRI, and they perceived an increase in family functioning after the program.



Parents Missing Work. In the three months before applying to PRI, mothers missed on average 8 days of work due to their child's issues, and fathers missed 6 days. **Post-PRI**, fewer days were missed for both parents. This is a question that we only started to ask in 2011.

**Table 13. Number of Days Work Missed for Parents Post-PRI
by Time and PRI Completion**

	PRE-PRI	3M Post-PRI ⁵¹		6M Post-PRI		1Y Post-PRI	
	N=78	C (N=20)	NC (N=10)	C (N=13)	NC (N=10)	C (N=20)	NC (N=11)
Moms	8.3	0.1	0.8*	1.5	0.6	0.4	2.0*
	N=64	(N=12)	(N=10)	(N=10)	(N=7)	(N=15)	(N=9)
Dads	6.5	0.2	0.5	0.0	0.8	0.8	1.8

Clinician Comments

Says he has own apartment and is working. He was homeless for a month but says his relationship with his parents is the best it's ever been.

Mom and Dad report that family relationships are very well and healthy. They are communicating well.

Relations with mother remain strong and improving with dad and sister. That's a big shift.

Quality of Life

We measure Quality of Life (QOL) with the Personal Well-Being Index (PWI)⁵², which is scored from 0 (very dissatisfied) to 10 (very satisfied), with 7–8 regarded as the North American 'normal' range.



The average PWI score for **parental** quality of life **pre-PRI** is in the normal range and stays in the normal range **post-PRI**. This tool has only been administered since 2011.

**Table 14. Post-2010 Admissions
Parental Quality of Life by Time and PRI Completion**

	PRE-PRI	3M Post-PRI ⁵³		6M Post-PRI		1Y Post-PRI		2Y Post-PRI	
	N=102	C (N=24)	NC (N=16)	C (N=23)	NC (N=14)	C (N=24)	NC (N=12)	C (N=18)	NC (N=9)
FAD Average	6.9	7.8	7.8	7.4	8.0	7.4	7.4	7.6	7.4

Before PRI, youth report a quality of life that is comparable to their parents. **After the program**, youth ratings also increase on par with their parents. Cs and NCs experienced a similar rise in personal well-being ratings over time.

Physical Health



Body Mass Index. Most PRI youths were in the healthy BMI range before and after coming to PRI, with some variation by time and program completion (Table 15).

**Table 15. Post-2010 Admissions.
Parent Reported Youth BMI by Time and PRI Completion**

	PRE-PRI* ⁵⁴	3M Post-PRI ⁵⁵		6M Post-PRI		1Y Post-PRI		2Y Post-PRI	
	N=175 (130)	C (N=29)	NC (N=17)	C (N=18)	NC (N=14)	C (N=12)	NC (N=24)	C (N=13)	NC (N=8)
Underweight	21% (9%)	3%	12%	6%	21%	8%	25%	0%	12%
Healthy	66% (77%)	83%	65%	72%	57%	79%	67%	85%	75%
Overweight	20% (11%)	14%	18%	11%	21%	12%	8%	15%	15%
Obese	4% (3%)	0%	6%	11%	0%	0%	0%	0%	0%

Satisfaction with Treatment at Pine River Institute

We are interested in how our families perceived each element of treatment at PRI. This allows us to celebrate our successes, and cues us to review elements of treatment that are lower in satisfaction. Very few pre-2010 admissions have responded to the satisfaction survey as it was added more recently, so we only report Post-2010 Admission results. Scores range from 1 (Very Dissatisfied) to 5 (Very Satisfied). Parents rated most elements of PRI with high satisfaction across all time-points. The lowest scores were seen for Transition and Aftercare, but both were still scored in the *Satisfied* range.

Table 16. Post-2010 Admissions
Parent Reported Satisfaction for Individual Treatment Elements

	3M Post-PRI ⁵⁶		6M Post-PRI ⁵⁷		1Y Post-PRI ⁵⁸	
	C	NC	C	NC	C	NC
Admissions	4.8	4.5	4.6	4.6	5.0	4.9
OLE	4.7	4.6	4.8	4.6	5.0	4.6
Individual Therapy	4.9	4.5*	4.9	4.3*	4.9	4.5
Front Line Staff	4.9	5.0	4.9	4.9	5.0	4.9
Group Therapy	4.9	4.3	4.8	4.7	4.9	4.5
Family Therapy	4.6	4.3	4.7	4.1	4.4	4.5
Mentor	4.4	4.2	4.7	4.1	4.6	4.5
Academics	4.9	4.4	4.8	4.1*	5.0	4.3*
Parent Retreat	4.8	4.9	4.9	4.6	5.0	4.3
Transition	4.4		4.5		4.3	
Aftercare	3.9		3.8		4.0	
Overall Tx Quality	4.0	4.0	4.3	4.0	4.5	4.1

Note*. For Family Therapy, Academics, Mentor, & Parent Retreat, we only report if clients had completed OLE.

Note. For Transition & Aftercare, we only report if clients completed Residence.

Note. There were not enough respondents in the 2Y Post-PRI data to report scores.

Among youths, individual therapy, front line staff, and academics were rated as the most satisfying elements of PRI. The lowest rated among Cs was aftercare and mentors. In almost all cases, Cs rated PRI elements higher than NCs. For these analyses, only Post-2010 admissions were included, as the satisfaction survey was administered more recently.



Notes:

- 1 No difference in number of inquiries between 2014 and 2015 ($\chi^2_{(1)}=0.2, p=.69, n.s.$)
- 2 Year by year, the amount of time clients wait is not significantly different ($F_{(2,80)}=1.2, p=.3, n.s.$) Too few Private clients for analyses.
- 3 Private Pay clients wait fewer days than MOH clients ($F_{(86)}=33.9, p<.001, n2=.30$; large effect).
- 4 No difference on age before and after 2010 ($F_{(353)}=1.6, p=.2, n.s.$)
- 5 No difference on location before 2010 (55% GTA / 37% NON GTA) and after (53% GTA / 43% NON GTA) ($\chi^2_{(5)}=5.1, p=.41, n.s.$)
- 6 No difference on gender before (61% M : 39% F) and after 2010 (67% M : 33% F); ($\chi^2_{(1)}=1.3, p=.25, n.s.$)
- 7 Proportions of male to female students significantly different over the past 3 years ($\chi^2_{(2)}=9.8, p=.007$)
- 8 No difference between pre-2010 and post-2010 ($\chi^2_{(2)}=3.7, p=.16, n.s.$)
- 9 Adopted does not include youths adopted by a step-parent. No difference pre-2010 to post-2010 ($\chi^2_{(1)}=.9, p=.4, n.s.$)
- 10 No difference for age at first use ($F_{(309)}=0.6, p=.4, n.s.$), regular use ($F_{(269)}=3.3, p=.07, n.s.$) or gender ($F_{(269)}=2.0, p=.3, n.s.$)
- 11 No difference Pre-Post 2010 ($\chi^2_{(3)}=1.0, p=.8, n.s.$)
- 12 No difference in age at first use Pre-Post 2010 ($F_{(173)}=0.1, p=.7, n.s.$) or between males and females ($F_{(173)}=0.2, p=.6, n.s.$)
- 13 Youths report younger than parents ($F_{(157)}=51.4, p<.001, n2=.25$).
- 14 No difference Pre-Post 2010 ($\chi^2_{(3)}=2.1, p=.6, n.s.$)
- 15 Females text more than males ($F_{(32)}=6.0, p=.02, n2=.15$; large effect) but social network similarly to males ($F_{(41)}=2.5, p=.12, n.s.$)
- 16 Note that even though we specify 'physician diagnoses', some parents might report a disorder without formal diagnosis.
- 17 Pre-2010 proportions not shown due to low overall reports (N-21)
- 18 Difference pre-2010 to post-2010 reported previous treatment ($\chi^2_{(1)}=24.4, p<.001, \square=.26$), likely due to better reporting post 2010
- 19 N = 177 (139) No difference between Pre-2010 and Post-2010 ($\chi^2_{(1)}=1.1, p=.3, n.s.$)
- 20 N = 139 (110). No differences Pre-2010 and Post-2010 ($\chi^2_{(3)}=3.0, p=.4, n.s.$)
- 21 No differences Pre-2010 and Post-2010 ($\chi^2_{(3)}=.1, p=.9, n.s.$)
- 22 Richardson, C. et al. (2012). The truth about self harm: For young people and their friends and families [Brochure]. London, U.K.: Mental Health Foundation.
- 23 No difference Pre- to Post-2010 ($\chi^2_{(1)}=.5, p=.5, n.s.$)
- 24 Lower proportion of completers pre- than post-2010 ($\chi^2_{(3)}=18.1, p<.001, p=.23$)
- 25 Length of stay longer Post-2010 than Pre-2010 ($F_{(330)}=70.1, p<.001, n2=.18$ [large]); ($F_{(2,114)}=63.8, p<.001, n2=.36$ [large])
- 26 Length of stay no different for last three years for all youths ($F_{(2,81)}=2.0, p=.1, n.s.$); longer for completers versus non-completers ($F_{(2,81)}=31.3, p<.001, n2=.28$ [large]); no different by year for completers ($F_{(2,39)}=.3, p=.7, n.s.$) or non-completers ($F_{(2,42)}=2.0, p=.1, n.s.$)
- 27 N = 115 ($\chi^2_{(1)}=54.0, p<.001, p=.68$)
- 28 No difference in average number of attendees at parent opportunities ($F_{(235)}=3.2, p=.07, n.s.$).
- 29 Higher proportion Post-2010 for Sundays ($\chi^2_{(1)}=177.4, p<.001, p=.82$); Evenings ($\chi^2_{(1)}=43.1, p<.001, p=.41$); Retreats ($\chi^2_{(1)}=10.1, p=.001, p=.20$); and Workshops ($\chi^2_{(1)}=118.3, p<.001, p=.67$)
- 30 None of the year-by-year attendance proportions were significantly different at any parent opportunity (all p -values $< .05$)
- 31 ($\chi^2_{(3)}=17.3, p=.001; p=.29$)
- 32 Post-2010 admissions, proportions are different for Cs and NCs at 3M ($\chi^2_{(3)}=14.6, p=.002; p=.53$), and 6M ($\chi^2_{(3)}=13.6, p=.003; p=.62$), but not 1Y Post-PRI ($\chi^2_{(3)}=7.5, p=.06; n.s.$) and the numbers for 2Y post-PRI are too few to be meaningful. To note, significance here means that overall, the cells are not the same. For cell-by-cell comparison, please contact research department.
- 33 Pre-2010 admissions proportions are not different for Cs and NCs at 3M ($\chi^2_{(3)}=2.2, p=.5; n.s.$), and 6M ($\chi^2_{(3)}=6.1, p=.1; n.s.$), 1Y Post-PRI ($\chi^2_{(3)}=7.5, p=.06; n.s.$), 2Y Post-PRI ($\chi^2_{(3)}=3.2, p=.4; n.s.$), or 3+Y Post-PRI ($\chi^2_{(3)}=.7, p=.9; n.s.$)
- 34 Post-2010 Admissions, no difference between Cs and NCs on status at 3M Post-PRI ($\chi^2_{(3)}=1.8, p=.6, n.s.$), 6M Post-PRI ($\chi^2_{(3)}=7.3, p=.06, n.s.$), 1Y Post-PRI ($\chi^2_{(3)}=1.0, p=.8, n.s.$), and 2Y Post-PRI ($\chi^2_{(4)}=2.9, p=.6, n.s.$)
- 35 Post-2010 Admission proportions are no different for Cs and NCs on status at 3M Post-PRI ($\chi^2_{(3)}=4.6, p=.2, n.s.$), but are different at 6M Post-PRI ($\chi^2_{(3)}=9.7, p=.02, p=.43$), 1Y Post-PRI ($\chi^2_{(3)}=14.7, p=.002, p=.47$), and 2Y Post-PRI ($\chi^2_{(3)}=10.3, p=.02, p=.40$) but no different at 3Y Post-PRI ($\chi^2_{(3)}=6.1, p=.1, n.s.$)
- 36 No difference in number of missed days for Cs and Ncs at 3M Post-PRI ($F_{(2,12)}=1.3, p=.3, n.s.$), 6M Post-PRI ($F_{(2,10)}=2.0, p=.2, n.s.$) and 1Y Post-PRI ($F_{(2,8)}=1.5, p=.3, n.s.$).
- 37 Achenbach, T. M., & Rescorla, L. A. (2001). Manual for the ASEBA School-Age Forms & Profiles. Burlington, VT: University of Vermont, Research Center for Children, Youths, & Families.

- 38 No difference on Anxious Depressed between Cs and NCs at 3M Post-PRI ($x_{2(2)} = .6, p = 0.7, n.s.$), 6M Post-PRI ($x_{2(2)} = 5.3, p = .07, n.s.$), 1Y Post-PRI ($x_{2(2)} = 3.5, p = .17, n.s.$), 2Y Post-PRI ($x_{2(2)} = 1.7, p = .4, n.s.$), but the proportions were different at 3+Y Post-PRI ($x_{2(2)} = 15.2, p < .001, p=.81$)
- 39 No difference in proportion Pre- and Post-2010 Admission ($x_{2(1)} = .6, p = .4, n.s.$) of hospital visits or recency ($x_{2(1)} = .7, p = .4, n.s.$)
- 40 No difference Pre- and post-2010 Admissions ($F_{(79)}=2.6, p=.1, n.s.$)
- 41 Post-2010 admissions, proportions are different for Cs and NCs at 3M for Substance Use ($x_{2(1)} = 3.9, p=.05; \square=.26$) and Mental Health ($x_{2(1)} = 8.1, p=.004; \square=.38$) but no differences at 6M for Substance Use ($x_{2(1)} = .2, p=.7; n.c.$) or Mental Health ($\square_{2(1)} = .1, p=.7; n.c.$); at 1Y for Substance Use ($x_{2(1)} = 1.4, p=.2; n.c.$) or Mental Health ($x_{2(1)} = .2, p=.7; n.c.$); numbers 2Y post-PRI are too few to report
- 42 Pre-2010 admissions, proportions are not different for Cs and NCs at 3M for Substance Use ($x_{2(1)} = .7, p = .4; n.s.$) or Mental Health ($x_{2(1)} = .3, p = .6; n.s.$), at 6M for Substance Use ($x_{2(1)} = .01, p = .9; n.c.$) or Mental Health ($x_{2(1)} = .3, p = .6; n.c.$); at 1Y for Substance Use ($x_{2(1)} = .6, p = .4; n.c.$) or Mental Health ($x_{2(1)} = .01, p = .9; n.c.$); at 2Y for Substance Use ($x_{2(1)} = 1.5, p = .2; n.c.$) or Mental Health ($x_{2(1)} = 1.0, p = .3; n.c.$); or at 3Y for Substance Use ($x_{2(1)} = 1.9, p = .2; n.c.$) or Mental Health ($x_{2(1)} = 1.0, p = .3; n.c.$).
- 43 No difference in police contact Pre- and Post-2010 Admissions ($x_{2(1)} = .4, p = .5, n.s.$). More Pre-2010 'recent' law contact for Pre-2010 admissions ($x_{2(1)} = 7.9, p = .005, \square = .20$)
- 44 Post-2010 admissions, proportions were not different for Cs and NCs at 3M ($x_{2(1)} = 2.4, p = .1; n.s.$). C's had lower proportions at 6M ($x_{2(1)} = 3.7, p = .5; \square = .30$) and at 1Y ($x_{2(1)} = 10.2, p = .001; p = .5$), and the numbers for 2Y post-PRI are too few to be meaningful.
- 45 Pre-2010 admissions, proportions are not different for Cs and NCs at 3M ($x_{2(1)} = 1.5, p = .2; n.s.$), 6M ($x_{2(1)} = .6, p = .4; n.c.$), 1Y ($x_{2(1)} = 1.3, p = .2; n.c.$), 2Y ($x_{2(1)} = .9, p = .3; n.c.$), or 3Y ($x_{2(1)} = .1, p = .7; n.c.$).
- 46 All data regarding youth reported police contact is from post-2010 admissions
- 47 No difference in Pre- Post-2010 Admissions on running away ($x_{2(1)} = 1.5, p = .2, n.s.$)
- 48 Post-2010 admissions, proportions are not different for Cs and NCs at 3M ($x_{2(1)} = .6, p = .4; n.s.$), 6M ($x_{2(1)} = 1.5, p = .2; n.c.$), 1Y ($x_{2(1)} = .2, p = .7; n.c.$), and data were insufficient to analyze at 2Y. Pre-2010 admissions, proportions for Cs and NCs are no different at 3M ($x_{2(1)} = .2, p = .6; n.s.$), 6M ($x_{2(1)} = 1.6, p = .2; n.c.$), 1Y ($x_{2(1)} = 2.1, p = .1; n.c.$), 2Y ($x_{2(1)} = .2, p = .6; n.c.$), or 3+Y ($x_{2(1)} = .5, p = .5; n.c.$).
- 49 Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The McMaster Family Assessment Device: General Function Sub-Scale.
- 50 Means not different for Cs and NCs at 3M ($F_{(53)} = 1.8, p = .2, n.s.$), 6M ($F_{(38)} = 2.7, p = .1, n.s.$) or DADS at 6M ($F_{(15)} = 2.6, p = .3, n.s.$), 1Y ($F_{(36)} = 2.3, p = .1, n.s.$), or 2Y ($F_{(24)} = .4, p = .6, n.s.$).
- 51 Means are lower for Cs than NCs for MOMS at 3M ($F_{(28)} = 4.3, p = .05, n2=.13$), no different for DADS at 3M ($F_{(20)} = 1.2, p = .3, n.s.$), no different for MOMS at 6M ($F_{(21)} = .3, p = .6, n.s.$) or DADS at 6M ($F_{(15)} = 2.6, p = .3, n.s.$), lower for Cs than NCs for MOMS at 1Y ($F_{(29)} = 4.0, p = .05, n2=.12$) but no difference for DADS at 1Y ($F_{(22)} = .4, p = .5, n.s.$)
- 52 Cummins & Lau, 2005.
- 53 Means not different for Cs and NCs at 3M ($F_{(54)} = .1, p = .8, n.s.$), 6M ($F_{(38)} = 2.0, p = .2, n.s.$), 1Y ($F_{(35)} = 0, p = .9, n.s.$) or DADS at 6M ($F_{(15)} = 2.6, p = .3, n.s.$), 1Y ($F_{(36)} = 2.3, p = .1, n.s.$), or 2Y ($F_{(25)} = .1, p = .7, n.s.$).
- 54 The proportions in the cells Pre- and Post-2010 Admissions were not the same ($x_{2(3)} = 7.7, p = .05; \square = .16$)
- 55 Post-2010 admissions, proportions are not different for Cs and NCs at 3M ($x_{2(3)} = 3.4, p = .3; n.s.$) 6M ($x_{2(3)} = 3.9, p = .3; n.c.$) or Mental Health ($x_{2(1)} = .1, p = .7; n.c.$); 1Y ($x_{2(3)} = 1.9, p = .4; n.c.$); and the numbers for 2Y post-PRI are too few to be meaningful.
- 56 3M Post-PRI Admissions N(C)=32, N(NC)=24 ($F_{(54)} = 1.6, p = .2, n.s.$); OLE N(C)=32, N(NC)=24 ($F_{(54)} = .2, p = .36, n.s.$); *IndTher N(C)=32, N(NC)=23 ($F_{(53)} = 5.0, p = .03, n2 = .09$); FrontLine N(C)=32, N(NC)=22 ($F_{(52)} = .7, p = .4, n.s.$); Group N(C)=29, N(NC)=21 ($F_{(48)} = 3.4, p = .07, n.s.$); Family N(C)=31, N(NC)=15 ($F_{(44)} = .6, p = .4, n.s.$); Mentor N(C)=24, N(NC)=12 ($F_{(34)} = .5, p = .5, n.s.$); Academics N(C)=30, N(NC)=21 ($F_{(49)} = 3.8, p = .06, n.s.$); Retreat N(C)=25, N(NC)=14 ($F_{(37)} = .01, p = .9, n.s.$); N Transition = 32; N Aftercare = 32; Overall Quality N(C)=32, N(NC)=24 ($F_{(54)} = .04, p = .8, n.s.$)
- 57 6M Post-PRI Admissions N(C)=25, N(NC)=17 ($F_{(40)} = .03, p = .9, n.s.$); OLE N(C)=25, N(NC)=17 ($F_{(40)} = .5, p = .5, n.s.$); *IndTher N(C)=25, N(NC)=15 ($F_{(38)} = 4.0, p = .05, n2 = .10$); FrontLine N(C)=25, N(NC)=16 ($F_{(39)} = .1, p = .8, n.s.$); Group N(C)=22, N(NC)=13 ($F_{(3)} = .4, p = .6, n.s.$); Family N(C)=24, N(NC)=14 ($F_{(36)} = 3.1, p = .09, n.s.$); Mentor N(C)=18, N(NC)=7 No analyses due to low N; Academics N(C)=24, N(NC)=15 ($F_{(37)} = 4.0, p = .05, n2 = .10$); Retreat N(C)=22, N(NC)=10 ($F_{(30)} = 1.9, p = .2, n.s.$); N Transition = 25; N Aftercare = 24; Overall Quality N(C)=24, N(NC)=17 ($F_{(39)} = .6, p = .4, n.s.$)
- 58 1Y Post-PRI Admissions N(C)=24, N(NC)=14 ($F_{(36)} = 1.7, p = .2, n.s.$); OLE N(C)=24, N(NC)=14 ($F_{(36)} = 3.6, p = .06, n.s.$); *IndTher N(C)=23, N(NC)=14 ($F_{(35)} = 2.0, p = .2, n.s.$); FrontLine N(C)=24, N(NC)=14 ($F_{(36)} = 1.8, p = .2, n.s.$); Group N(C)=23, N(NC)=13 ($F_{(33)} = 2.9, p = .1, n.s.$); Family N(C)=22, N(NC)=10 ($F_{(30)} = .1, p = .7, n.s.$); Mentor N(C)=20, N(NC)=8 No analyses due to low N; Academics N(C)=23, N(NC)=14 ($F_{(35)} = 8.2, p = .007, n2 = .19$); Retreat N(C)=21, N(NC)=9 No analyses due to low N; N Transition = 24; N Aftercare = 23; Overall Quality N(C)=25, N(NC)=14 ($F_{(37)} = .1, p = .3, n.s.$)



If you have any questions or comments regarding this report, please contact Dr. Laura Mills, Director of Research & Evaluation at laura.m@pineriverinstitute.com.

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The use of the wilderness to assist in the healing of our students is essential in the rawest, most desperate time of their journey.

Very pleased with the whole experience—felt that the therapist managed our family dynamic well and guided us in a slow and steady fashion toward success.



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