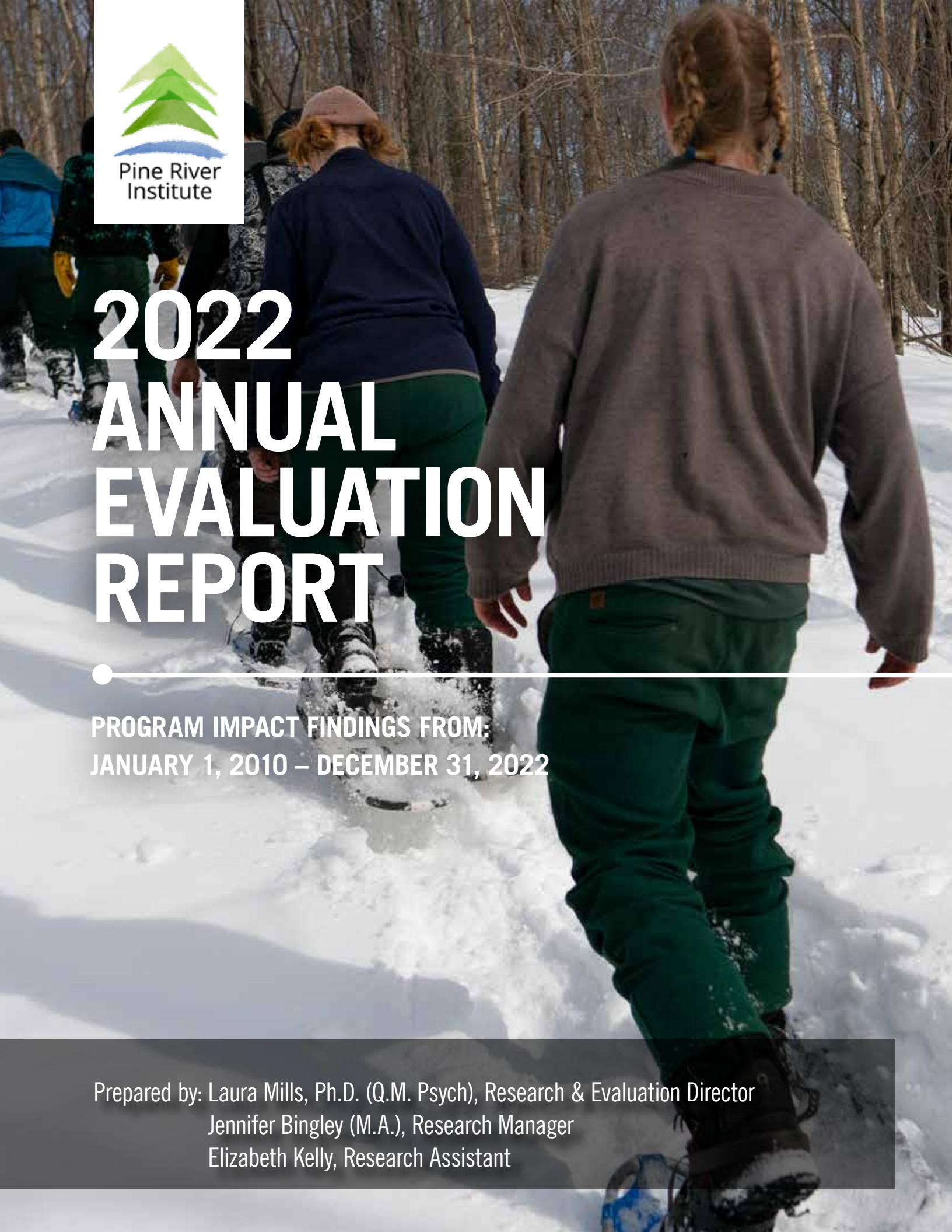

Pine River Institute

2022 ANNUAL EVALUATION REPORT

PROGRAM IMPACT FINDINGS FROM:
JANUARY 1, 2010 – DECEMBER 31, 2022

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ABOUT PINE RIVER INSTITUTE & THE ANNUAL EVALUATION REPORT

Pine River Institute (PRI) is primarily a live-in treatment program for youths 13-19 who struggle with addictive behaviours and often mental, behavioural, and relationship problems. These teens have a complex array of problems spanning criminality, hospitalizations, stalled or abandoned school careers, and unhealthy relationships. When teens come to PRI they are angry, sad, and lost.

In this report, we use "caregivers" to refer to the parents, family members and/or guardians who are responsible for the youth in our program.

Caregivers of youth at PRI are desperate – they walk on eggshells to keep peace in their homes, panic when their child disappears for days, and many experience their teen's suicidality. They wonder how their child found this path and why, despite all efforts, they have been unable to help.

At PRI, youths and caregivers find a safe and nurturing professional environment. Wilderness, campus life, therapy, and academic programs converge to form our comprehensive treatment model. PRI families move through four distinct **PHASES**. In Phase 1, the Outdoor Leadership Experience (**OLE**), youths spend several weeks in the wilderness to develop physical and social skills and to recognize the need for change in their lives. They then move to **CAMPUS** (Phase 2), an academic and therapeutic milieu. The third phase, **TRANSITION**, is designed to increase opportunities to practice new skills away from the campus and the fourth phase, **AFTERCARE**, is when the youths return home but receive support to sustain treatment gains and integrate into the community.

Caregivers have an important role and engage in a **Parallel Process**, through which they grow alongside the youth. We support caregivers as they courageously learn about themselves, their family histories, and new strategies to support their youth and foster a thriving home life.

This comprehensive model enhances adolescents' maturity. PRI's programming supports youths in developing emotional regulation, empathy, respectful relationships, social ethics, and future orientation. We help caregivers find their way to attuned and supportive communication, healthy boundaries, and limit-setting.

For 17 years, PRI has been evaluating the impact of our treatment. Our therapeutic approach has consistently been associated with improved and sustained mental, behavioural, and relationship health. **This Annual Evaluation Report** summarizes these impacts for youths and caregivers who attended PRI between 2010 and 2022.

EXECUTIVE SUMMARY OF EVALUATION REPORT

PRI YOUTH CHARACTERISTICS & TREATMENT OUTCOMES (2010 – 2022):

From January 1, 2010 to Dec 31 2022, 443 families started treatment at PRI (30 were already at PRI Jan 1, 2010). In that time frame, 416 youths have departed (57 were at PRI on Dec 31, 2022). The average age for youths at admission was 17.2; 63% were male, 34% female, and 3% identified as gender diverse.

ADMISSION INFORMATION

In 2022, 53 youths were admitted to PRI. In 2021, clients funded by the Ministry of Health and Long-Term Care waited about a year; year by year comparisons are complex due to capacity changes in the past two years.

PROGRAM ENGAGEMENT

Since 2010, over 40% of PRI youths completed the third **Transition** phase and those youths stayed an average of 592 days. Caregivers are highly engaged, attending family therapy sessions, retreats, and workshops.

CLIENT OUTCOMES

Reduced Behaviour Problems. Before coming to PRI, most youths had problematic behaviours such as substance use, criminality, and running away. After the program, these behaviours were significantly reduced.

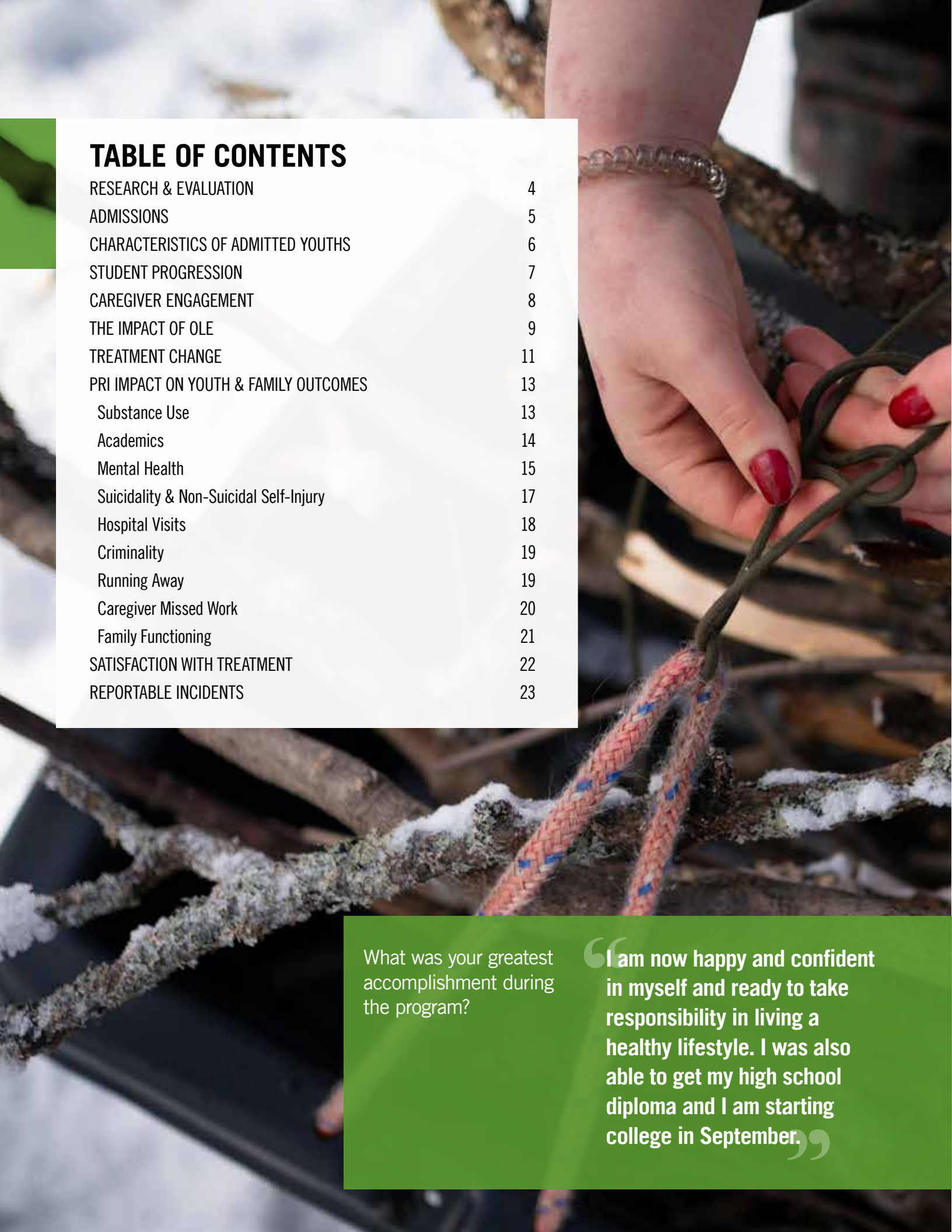
Improved Mental Health. Before PRI, most youths experienced significant depression and anxiety. After PRI, their mental health was significantly improved, and they had reduced rates of hospitalization, suicidality, and non-suicidal self-injury.

Academic Success. Before coming to PRI, youths' academic careers were sporadic, stalled, or abandoned. After PRI, youths engaged with school and earned good grades.

Increased Family Functioning. Home lives were chaotic and dysfunctional for families before PRI, and significantly improved after the program.

TABLE OF CONTENTS

RESEARCH & EVALUATION	4
ADMISSIONS	5
CHARACTERISTICS OF ADMITTED YOUTHS	6
STUDENT PROGRESSION	7
CAREGIVER ENGAGEMENT	8
THE IMPACT OF OLE	9
TREATMENT CHANGE	11
PRI IMPACT ON YOUTH & FAMILY OUTCOMES	13
Substance Use	13
Academics	14
Mental Health	15
Suicidality & Non-Suicidal Self-Injury	17
Hospital Visits	18
Criminality	19
Running Away	19
Caregiver Missed Work	20
Family Functioning	21
SATISFACTION WITH TREATMENT	22
REPORTABLE INCIDENTS	23



What was your greatest accomplishment during the program?

"I am now happy and confident in myself and ready to take responsibility in living a healthy lifestyle. I was also able to get my high school diploma and I am starting college in September."

RESEARCH & EVALUATION

PRI research & evaluation helps us to validate, understand, and inform our treatment and to contribute to the understanding of youth and family treatment.

We are recognized as a Research Designated Program by the National Association of Therapeutic Schools and Programs and Dr. Mills serves as Chair of their Research Committee.

We have developed several partnerships to increase our capacity to share knowledge about youth and family treatment. Our University partners include Dr. Debra Pepler, (Distinguished Research Professor of Psychology at York University); Dr. Amanda Uliaszek (University of Toronto [UofT]); Dr. Jennifer Eastabrook (Trent University); Dr. Nevin Harper (University of Victoria), Dr. Todd Cunningham (Ontario Institute for Studies in Education, UofT), and the practicum offices of UofT's Factor-Inwentash Faculty of Social Work and Adler Graduate Professional School.

PRI's **Board of Directors** has a **Research Advisory Committee** under the leadership of Dr. Debra Pepler. Members include Dr. Leena Augimeri, Dr. Victoria Creighton, Vaughan Dowie, Claire Fainer, Dr. Mark Greenberg, Jonathan Guss, Dr. Karen Leslie, Dr. Faye Mishna, Dr. Laura Mills, and Amy Porath. We are most grateful to these members for their guidance in our research and evaluation.

ABOUT THIS REPORT

Treatment Changes occur often in a dynamic therapeutic milieu, and not all treatment elements are tracked. As such, we can only say that, in general, the overall experience at PRI is associated with the outcomes presented in this document.

Treatment Completion. Program completion at PRI is recognized therapeutically as graduation from Aftercare. Aftercare, however, varies across families, so for evaluation, completers are defined as those who completed the **Transition** phase of the program. You will see results for **'completers' (Cs)** –completed Transition, and **'partial-completers' (PCs)** –departed before completing Transition. When the differences between Cs and PCs are statistically significant, they are noted with a star *.

Response Rate. We measure response rate by completion of an outcome survey by at least one caregiver in a PRI family. Of the families who have departed since 2010, 89% have contributed to research after departure (49% among partial completers). Among youths, 43% who completed the program and 17% of those who did not, completed at least one of our post-treatment surveys. We report health and behaviour data based on **caregiver** surveys in this report, supplemented with **quotes from youths.**

PRI & THE COVID-19 PANDEMIC.

The COVID-19 pandemic and related regulations forced PRI to make major adjustments to our program, affecting family group sessions, caregiver on-site engagement, and the structure of the Transition phase. Where possible, in this report, we note any significant COVID restriction-related findings.

> "I LEARNED THAT I AM WORTHY OF LIVING AND GETTING BETTER."

ADMISSIONS

211 DAYS ON WAITLIST

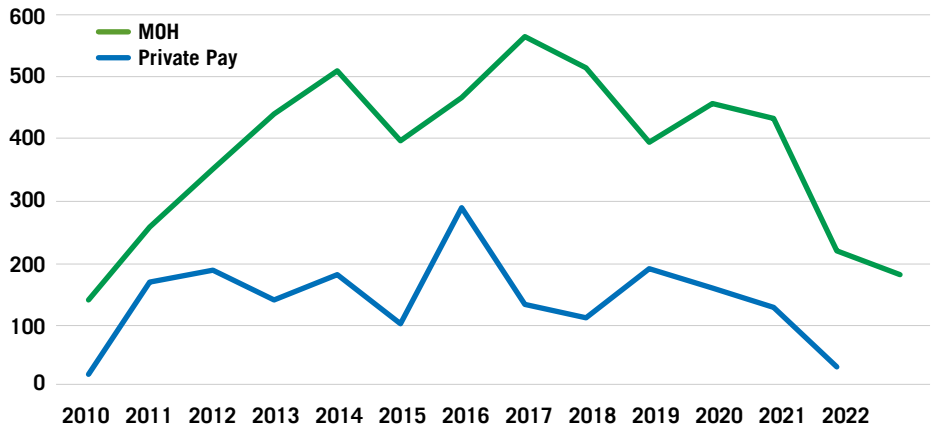
53 ADMITS

Admissions. Between 2010 and 2020, an average of 32 youths entered PRI yearly. In 2021, we secured funding to increase our capacity and 43 youths were admitted. In 2022, **53** youths were admitted. Admission inquiries are most commonly (89%) made by a caregiver, the rest from other family members (3%), professionals, (1%), or the youths themselves (1%).

Wait Times. When people contact PRI to inquire about admission, they complete our online application, submit medical and academic documents, and are placed on our waitlist. Most clients occupy beds funded by the Ministry of Health and Long-Term Care (MOH). The wait time for MOH beds since 2010 was **327** days. With the capacity expansion that started in 2021, wait times for MOH beds decreased to **304** in 2021 and **211** in 2022[1].

Some clients pay privately for treatment beds that are not funded by MOH, circumventing the need to wait for a funded bed. Families can be on the waitlist for some time before formally deciding to pay privately, after which point the time to entry is about three weeks. Between 2010 and 2021, the average wait time for privately paying clients was **141** days. The wait time for MOH and privately paying clients is significantly different[2]. Since 2022, the vast majority of our clients have been in MOH beds.

Wait Times by Funding and Year of Admission



[1] Wait times vary by year of admission (F(12,393) = 2.4, p=.004, n2=.07).
[2] Wait times were different for funded vs private pay (F(393) = 67.3, p<.001, n2=.15)

CHARACTERISTICS OF ADMITTED YOUTHS

17 at Admit

5% Adopted

1/2 from GTA

Complex array of problems

DETAILS ABOUT YOUTH CHARACTERISTICS

Demographics. The average age of youths at admission is 17.2 and about 48% of their biological parents are married, 33% are no longer together, and the remainder reported 'other' family structure or did not respond to this question. Approximately 5% of PRI youths are adopted.

Since 2010, 63% of PRI youths have identified as male, 34% as female, and 3% have identified as gender diverse. These proportions vary slightly by year and gender diversity has increased each year.

About half of PRI youth are from the GTA, most others are from elsewhere in Ontario.

> "I forgave myself, and I released myself from so many things in my past that kept me trapped. I set myself free."

STUDENT PROGRESSION

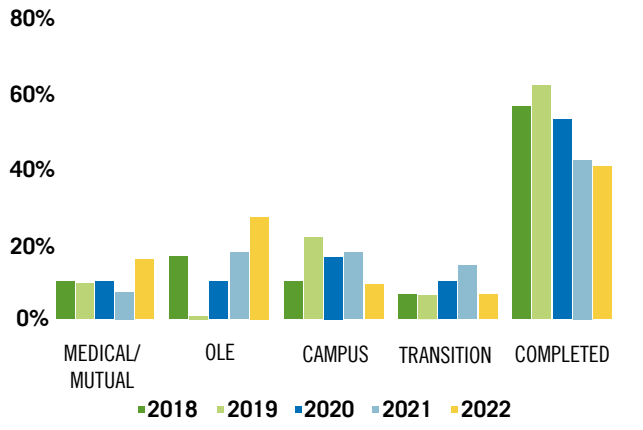
1.5 YEARS TO COMPLETE

50% COMPLETE

Treatment Progression. Treatment completion is known to foster healthy outcomes; therefore, we strive to help our youths reach Transition completion. Not all youths complete Transition and the reasons for partial completion vary by case. PRI's annual completion rates vary by year, with an average of 50% over the last five years. Some youths depart PRI early based on a mutual client-clinician decision, or for medical reasons which cannot be addressed at PRI. In 2022, there were seven such discharges; in 2021, there was one and in 2020, three. These are shown as 'Medical / Mutual'.

The past three years included the COVID-19 pandemic along with PRI doubling in size and these may have had an impact on treatment progression and discharge.

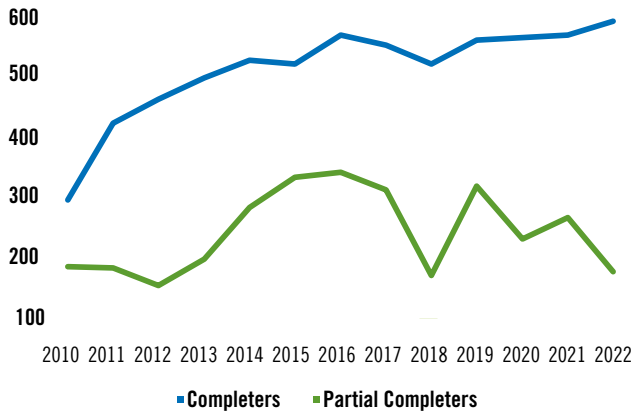
Phase at Departure by Year of Departure, in Percentages, 2018-2022



Length of Stay. Youths who completed the program in 2022 stayed an average of 592 days. Our length of stay is longer*[3] for those who completed compared to those who partially completed the program. Length of stay is more variable for those who partially complete PRI.

This blue star means there is a statistically significant difference

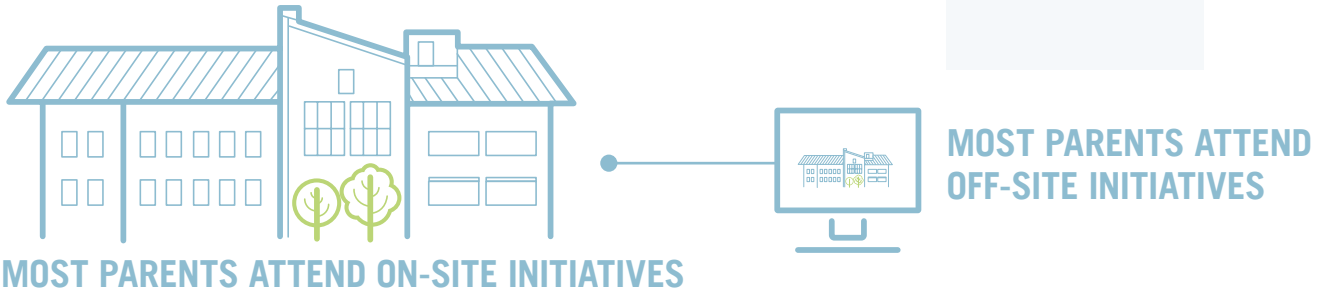
Average Length of Stay in Days by Year of Departure and PRI Completion 2010-2022



Aftercare. Youths and their caregivers who complete Transition are encouraged to participate in Aftercare, a fee-for-service option. Aftercare is different for every family but in general provides support to help families thrive and help youths integrate into community. Since 2010, 91% of our treatment completers engaged with Aftercare.

[3] Completers stay longer than non-completers ($F(12,390)=287.4$, $p<.001$, $n2=.42$)

CAREGIVER ENGAGEMENT



MOST PARENTS ATTEND ON-SITE INITIATIVES

MOST PARENTS ATTEND OFF-SITE INITIATIVES

Caregiver engagement is core to the program. In addition to individual family therapy work, caregivers engage in on-site family group sessions every other Sunday, bi-weekly evening groups, a two-day Caregiver Intensive Process Group, and two, two-day Learning Workshops per year.

Over the past five years, among caregivers whose youth progressed past OLE (Phase 1, the Outdoor Leadership Experience), 94% had at least one person attend at least one Caregiver-Only Evening Group session. Sunday in-person sessions were attended by over 90% of caregivers in the several years prior to the pandemic, but this was not possible during the period of COVID-19 restrictions, during which 52% were able to come to Sunday sessions.

Among caregivers whose youth progressed at least to the Transition phase of the program, Caregiver Intensive Process Groups were attended by at least one caregiver for 80% of PRI youths. Attendance at Learning Workshops was typically 100% over the past 10 years, except for families whose workshop was impacted by COVID-19 restrictions, but attendance is again at 100% for those who progressed at least to Transition.

The caregiver who engages in parallel work is most often a parent, but in some cases can be a grandparent or other adult guardian. An average of 1.7 caregivers per child were involved at caregiver opportunities.

THE IMPACT OF OLE

OLE OUTCOMES

At PRI, we understand OLE to be a space for youths to get grounded, get sober, and recognize that change is needed. We measured youth self-reported 'readiness for change' before and after OLE using the University of Rhode Island Readiness for Change (URICA) scale[4]. This scale assesses one's rating on three stages of readiness – Precontemplation (not yet ready for change), Contemplation (ready for change), and Action (actively working at change). Ratings have a maximum score of 5.

We expected that during OLE, youth ratings on Precontemplation would **decrease** and their ratings of Contemplation and Action would **increase**. Indeed, these expectations were realized.

Among 107 youths who completed the survey both before and after OLE, the average Precontemplation scores **decreased** from 2.7 to 2.5, a significant, moderately sized change. Contemplation averages **increased** from 3.9 to 4.0, a significant but small change. Action averages **increased** from 3.7 to 4.1, a significant and large amount of change[5]. These findings validate the clinical intent of the OLE program – youths' readiness for change is significantly improved during their time in 'the woods'.

Notably, we published a study[6] that examined the properties of the URICA scale and found that the version used for adults was not appropriate for youths. The results shown above were conducted using our newly developed 'Adolescent' version of the URICA.

[4] Greenstein, D. K., Franklin, M. E., & McGuffin, P. (1999). Measuring motivation to change: An examination of the University of Rhode Island Change assessment questionnaire in an adolescent sample. *Psychotherapy,* 36, 47-55.
[5] Precontemplation change ($F(104) = 12.9$, $p < .001$, $n2 = .11$) ; Contemplation change ($F(103) = 7.6$, $p = .007$, $n2 = .07$) ; Action change ($F(105) = 44.6$, $p < .001$, $n2 = .30$)
[6] Is your program assessing adolescents' readiness for change? Considerations and recommendations for the URICA. *Journal of Therapeutic Schools & Programs*, 15, 34-55.

In the OLE

"I proved to myself that I could do so much, and without drugs."

"I began being honest and taking accountability. I realized that I was truly trying to get better, which had never happened before."

"I learned that I'm capable to have moments of happiness without drugs – that I'm stronger, both physically and emotionally, than I thought."

TREATMENT CHANGE

IN-TREATMENT CHANGE

The clinical approach at PRI is holistic, individuated to address the myriad complexities and strengths of each youth. This individuated approach, however, includes two prominent themes that apply to all youths: Emotional Intelligence and Attachment Security.

Emotional Intelligence (EI) is the capacity to understand, process, and express emotions appropriately and navigate social and relational situations as well as engage life with positivity and optimism. We measure youth EI before, during, and after treatment to understand the impact of treatment on this important outcome.

Among the 70 youths who completed EI surveys at the beginning and end of PRI, change on EI is statistically significant and the degree of change is large[7]. Specifically, youths average score (out of a maximum 7) is **4.1**, with a standard deviation of .66 (youths, on average, differ by about .66). Meaningful change can be roughly estimated by increase or decrease of half a standard deviation, in this case, .33. Youth average scores at the end of treatment were **5.5**, a change of more than two full standard deviations.

> "I have learned who I truly am and what I want to do with my life. I have also learned new coping mechanisms and how to sit with my emotions, instead of trying to run away from my problems by using substances."

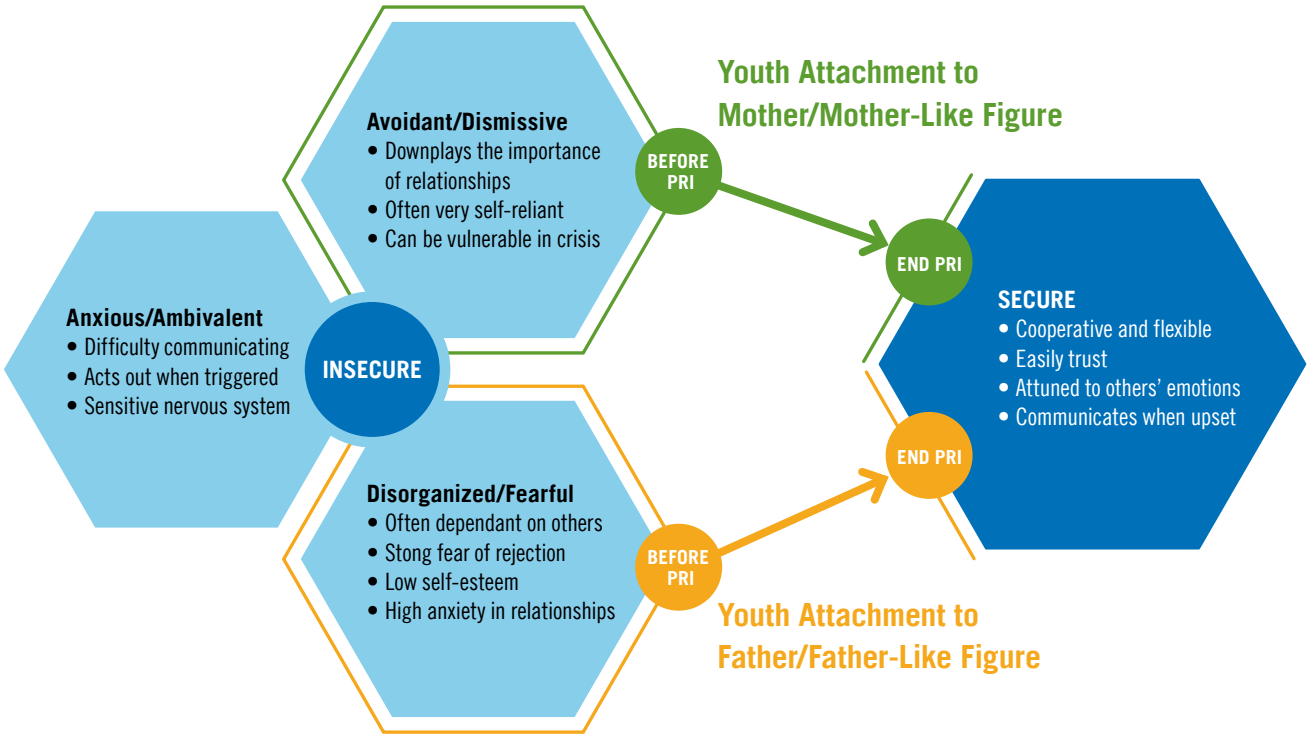
[7] EI Change from PRE to End of PRI significant ($F(69) = 237.3$, $p < .001$, $n2 = .775$)

Attachment styles are the ways we relate to people close to us, often based on how we navigated relationships early in life. People who have secure attachment styles tend to explore life and relationships knowing that safety and needs are appropriately met. People with insecure attachment have more difficulty in relationships and insecure attachment has been associated with numerous biopsychosocial disadvantages.

We measured youth attachment to each of their two most prominent caregivers before, during, and after PRI. To understand change during treatment, we assessed 80 youths who completed attachment surveys at the beginning and end of the program.

The scoring of attachment style is complex, involving the anxious domain of attachment and the avoidant domain of attachment. These combine as coordinates which are applied to a quadrant like those below.

For PRI youths, statistically, across both caregivers and all attachment domains, improvement was significant and large[8]. PRI youths, on average, began treatment with Insecure-Dismissive attachment to their mother or mother-like figure and Insecure-Disorganized attachment to their father or father-like figure. Attachment security to both caregivers, on average, improved to Secure for PRI youths. These findings are represented below.



*Note: You may notice a language change here, from 'caregiver' to 'Mother/Mother-Like Figure' and 'Father/Father-Like Figure'. This 'Attachment' survey was written when nuclear families were the typical reference, and international standards and norms were developed based on this reference and survey wording. We are working with consultants and survey developers to amend all survey questions to better align with our efforts in the area of equity, diversity and inclusion. In the course of this document, we will still be referring to mothers and fathers when using data from external sources which codify data that way.

[8] Mother/M-LF anxiety domain change from 2.4 to 1.3 ($F(77) = 40.5$. $p < .001$, $n2 = .33$) ; mother/M-LF avoidant domain change from 3.6 to 2.1 ($F(83) = 73.7$, $p < .001$, $n2 = .46$) . Father / FLF anxiety domain change from 2.8 to 1.7 ($F(77) = 24.4$, $p < .001$, $n2 = .24$); father / FLF avoidant domain change from 4.4 to 2.8 ($F(83) = 59.6$, $p < .001$, $n2 = .42$)

PRI IMPACT ON YOUTH & FAMILY OUTCOMES

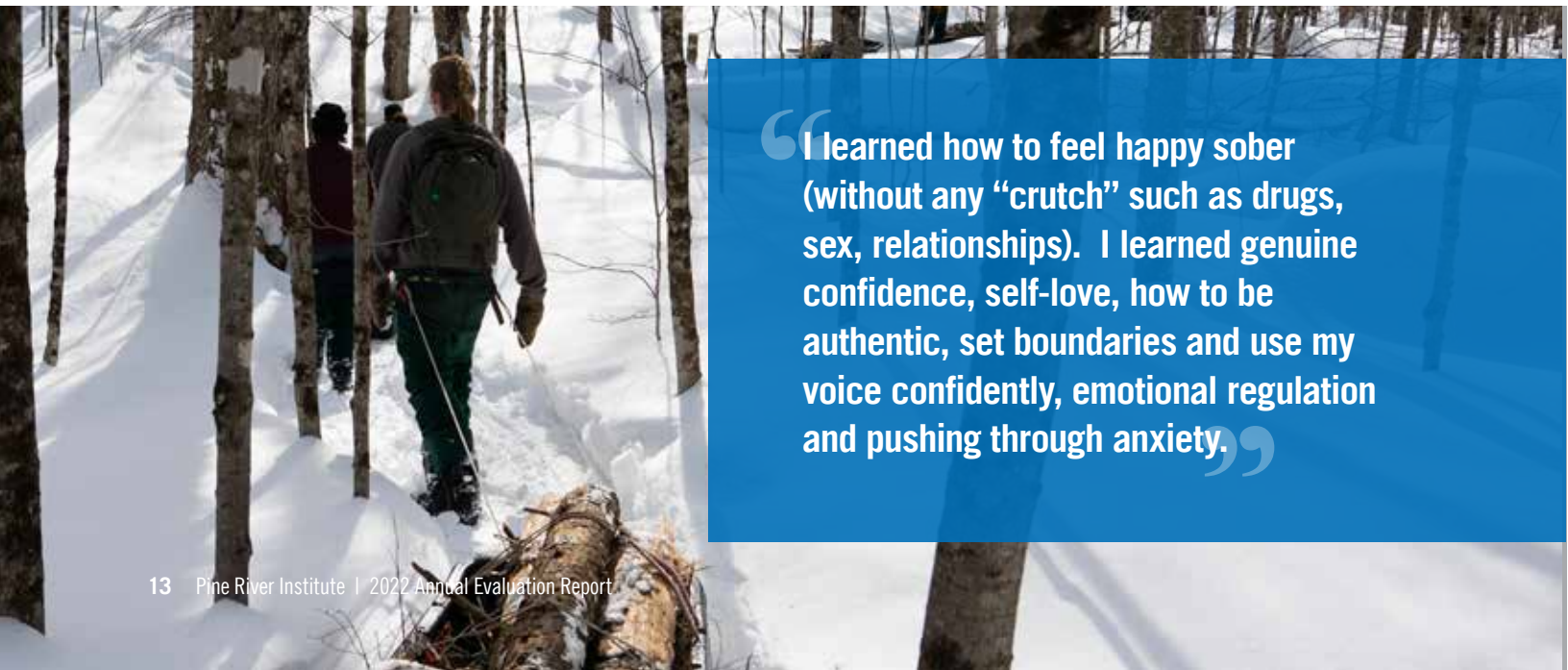
Substance use

Substance Use Frequency. We use the Drug History Questionnaire (DHQ)[9], to ask about the frequency and age of onset for 14 types of substances. Before PRI, **caregivers** indicated that youths started using substances at an average age of 13.5 (youths report first use about a year younger). Before PRI, almost two-thirds of caregivers (62%) reported that their child used substances daily, only 6% indicated no recent substance use. Most youths had tried several types of drugs. The most common youth substance of choice as reported by caregivers was marijuana (74%) and alcohol (8%).

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

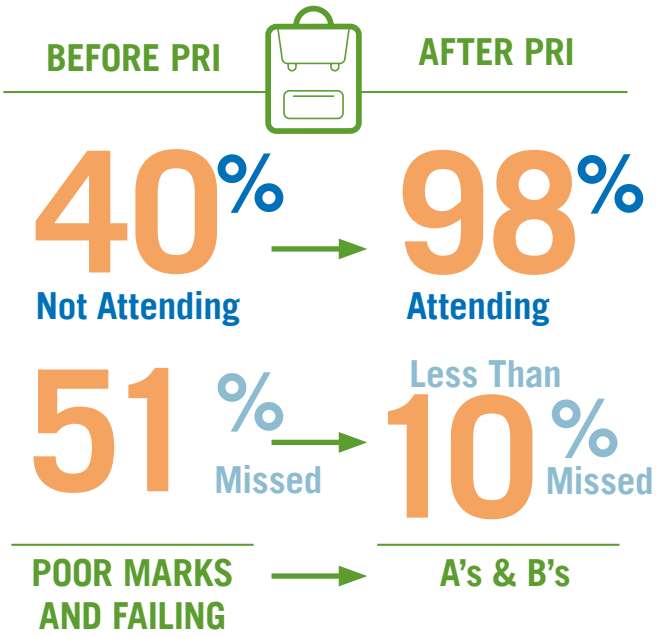
	PRE-PRI	3-6M Post-PRI		1-2Y Post-PRI		3-4Y Post-PRI	
	N=311	C (N=80)	PC (N=36)	C (N=81)	PC (N=32)	C (N=61)	PC (N=14)
Daily Use	**62%**	**9%**	**39%**	**12%**	**41%**	**31%**	**35%**
4-6 Days per Week	4%	6%	8%	12%	9%	8%	14%
2-3 Days per Week	3%	19%	11%	17%	3%	23%	7%
1 Day per week	17%	16%	8%	22%	16%	13%	14%
1x per Month	4%	15%	6%	15%	6%	11%	0%
Fewer than 1x per Month	3%	6%	8%	7%	13%	5%	7%
None in Last 3 Months	**6%**	**29%**	**19%**	**14%**	**13%**	**8%**	**21%**

[9] Sobell, L. C., Kwan, E., & Sobell, M. B. (1995). Reliability of a Drug History Questionnaire (DHQ). *Addictive Behaviors*, 20, 233-241.



> "I learned how to feel happy sober (without any "crutch" such as drugs, sex, relationships). I learned genuine confidence, self-love, how to be authentic, set boundaries and use my voice confidently, emotional regulation and pushing through anxiety."

Academics



Engagement. Before PRI, 40% of youths who should have been in school were not. At 3-6M Post-PRI, 98% of youths who completed PRI and who should have been in school were in school (for Partial Completers, 81%). At 1-2Y Post-PRI, 88% of youths who completed PRI and whose caregivers said they should have been in school were in school (for PCs, 78%).

Achievement. Among Ontario's Grade 9 & 10 students, 75% of Academic-level students and half of Applied-level students earn As and Bs. For PRI youths whose caregivers indicated they were attending school, 35% of PRI were A and B earners when they applied for the program; 53% were earning Cs and Ds, and 22% were failing. The proportion of youths earning As and Bs increased after PRI, and the proportion earning Cs, Ds, or failing decreased.

Caregiver-Reported Youth Recent Marks for Youths who Were in School

	A's & B's		C's & D's		Failing	
PRE-PRI (N=176)	24%		53%		22%	
	Cs	PCs	Cs	PCs	Cs	PCs
3-6M POST-PRI (N=131)	68%	49%	17%	36%	0%	8%
1-2Y POST-PRI (N=59)	53%	47%	23%	40%	2%	7%

Attendance. Before PRI, youths whose caregivers reported they should be in school missed an average of 51% of their school days. 3-6M after PRI, those who completed PRI missed about 10% and those who partially completed missed 23%. At 1-2Y Post-PRI, completers missed about 15% and partial completers 19%.

Post-Secondary. We examined data for all youths whose caregivers completed surveys one year or more after PRI and retained reports closest to one year after the program. These caregivers reported that 32% of completers compared to 17% of partial completers were in or had completed post-secondary pursuits.

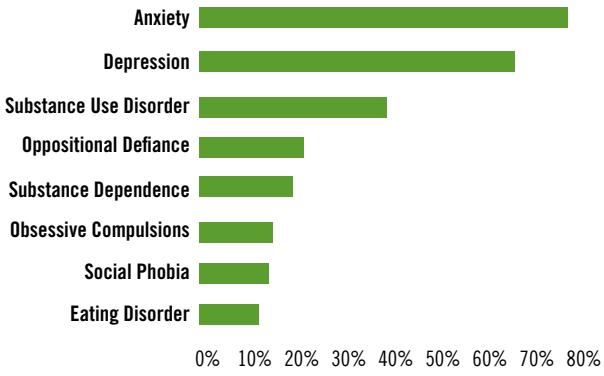
Barriers to Learning. Little is known about the connection between learning challenges, mental health, and substance use. For applicants to PRI, learning challenges are common. Almost two-thirds (60%) of youths admitted to PRI have completed a psycho-educational test. About a third (34%) have had a formal diagnosis of a learning disorder. This proportion may be underestimated, as being tested and receiving a formal diagnosis are events that are fraught with access barriers. More than half (56%) of PRI youths have a school-administered Individual Education Plan and 29% have had a formal School-Board Identification for special education needs. Attention Deficit and Attention Deficit Hyperactive Disorders sometimes fall under the category of learning challenges, and about half (48%) of PRI youths have had a formal diagnosis of ADD or ADHD.

Mental Health

Diagnoses. Understanding mental health is challenging. Many youths meet the diagnostic criteria but have no formal or finalized diagnosis from a healthcare professional. Our measure is related to caregiver reports of formally diagnosed mental health issues.

Most youths at PRI have at least one mental health diagnosis. Indeed, 75% of caregivers whose youth were admitted in the past five years report that their child has had a formal diagnosis of anxiety. The proportion of youths presenting with anxiety has risen noticeably over the years, from 40%-60% before 2017 to 75%-92% in the past five years. Similarly, the proportion of youths who have had a diagnosis of depression has also risen in more recent years to over 70%, whereas five or more years ago, 50%-70% was typical. Proportions of diagnosed mental health issues for youths admitted in the past five years are displayed in the chart.

Caregiver-Reported Formally Diagnosed Youth Mental Health Issue at Application (2018 – 2022)

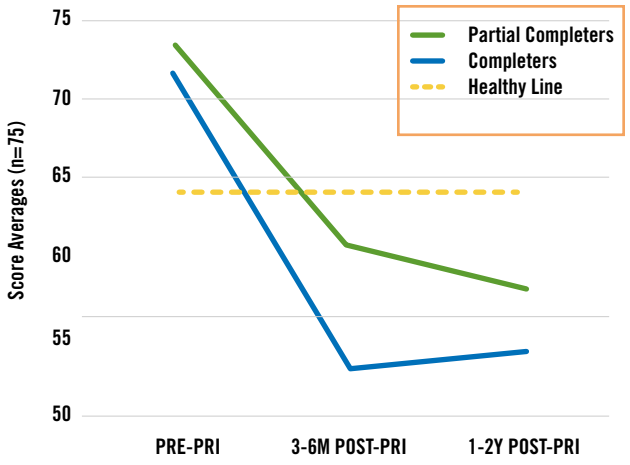


Eating Disorders & COVID-19. Emerging literature about youth mental health and the impacts of the pandemic consistently report increases in the prevalence of eating disorders. For youths at PRI, this figure is consistently around 12%.

We use the Achenbach System of Empirically Based Measurement (ASEBA) to understand youth mental health and behaviour. This is a symptom scale, and symptom scores of **64 and over** indicate Clinically Problematic Functioning[10]. Reduced scores indicate improved health (fewer symptoms).

Mental Health Symptoms. Caregiver reports indicate that, on average, youths enter PRI with clinically problematic anxiety, depression, and somatic issues (aches, pains, illness without medical reason). These symptoms reduce to healthy levels after PRI and these improvements are maintained 1-2 years post-program. The change over time is significant[11] for completers and partial completers[12], however, for scores just at the 3-6M post-treatment time, completers are healthier than partial completers[13].

Caregiver-Reported Anxiety, Depression & Somatic Symptoms Before and After PRI by Treatment Completion

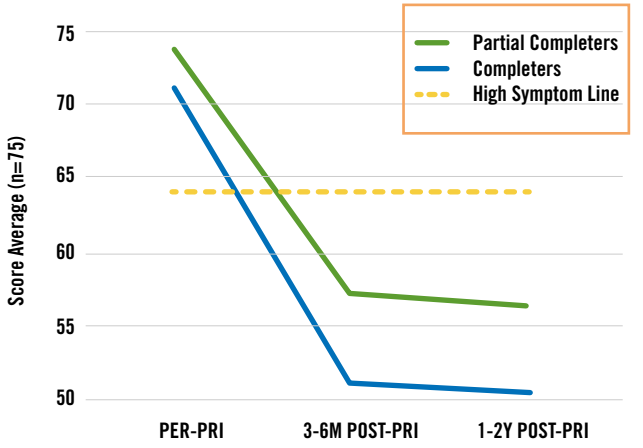


COVID-19 and Mental Health

We looked at youth mental health symptom severity as self-reported when they were admitted to PRI. Youths whose admission date was before March 31, 2020, had about the same level of severity as those who came to PRI after the onset of the pandemic.

Behavioural Functioning. The ASEBA assesses behavioural functioning by measuring rule-breaking and aggression. Caregiver reports indicate that youths enter PRI with clinically problematic rule-breaking and aggression. These improve significantly[14] to healthy levels after PRI and improvements are maintained for 1-2 years post-program. Completers and partial completers improve similarly[15] but their post-treatment differences are significant[16].

Caregiver-Reported Rule-Breaking & Aggression Before & After PRI by Treatment Completion

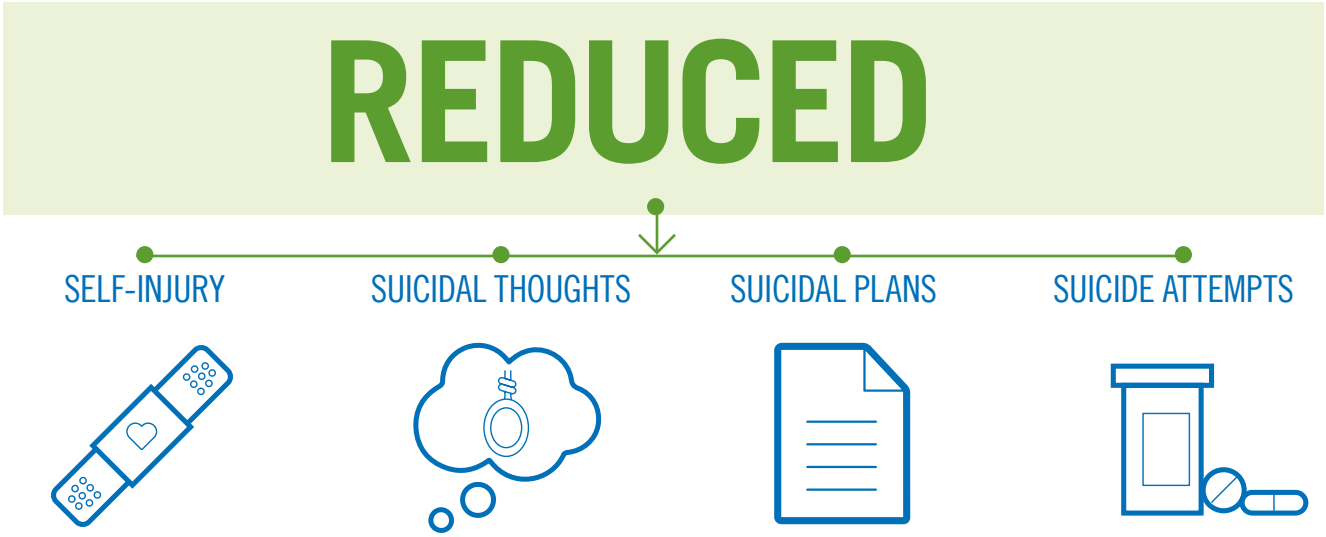


COVID-19 & Behaviour Problems.

We looked at self-reported youth rule breaking and aggression when they were admitted to PRI. There were no differences in behaviour problems before and after the onset of the pandemic.

[10] 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.
[11] Change over time is significant (F(74) = 115.7, p < .001, with large effect size n2 = .61)
[12] Groups do not change differently over time (F(74) = .8, p = .38, n2 = .04)
[13] Cs healthier than PCs at 3-6M Post-PRI (F(74) = 5.3, p = .02)
[14] Change over time is significant (F(74) = 151.9, p < .001, with large effect size n2 = .67)
[15] Groups do not change differently over time (F(74) = , p = .29, n2 = .02)
[16] Cs healthier than PCs at 3-6M Post-PRI (F(74) = 4.2, p = .04) and 1-2Y Post-PRI (F(74) = 4.5, p = .04)

Suicidality and Self-Injury



Suicidality. The Centre for Addiction & Mental Health (CAMH) reported that 18% of grade 7-12 youths had seriously thought about ending their life in the most recent year and about 8% attempted suicide.

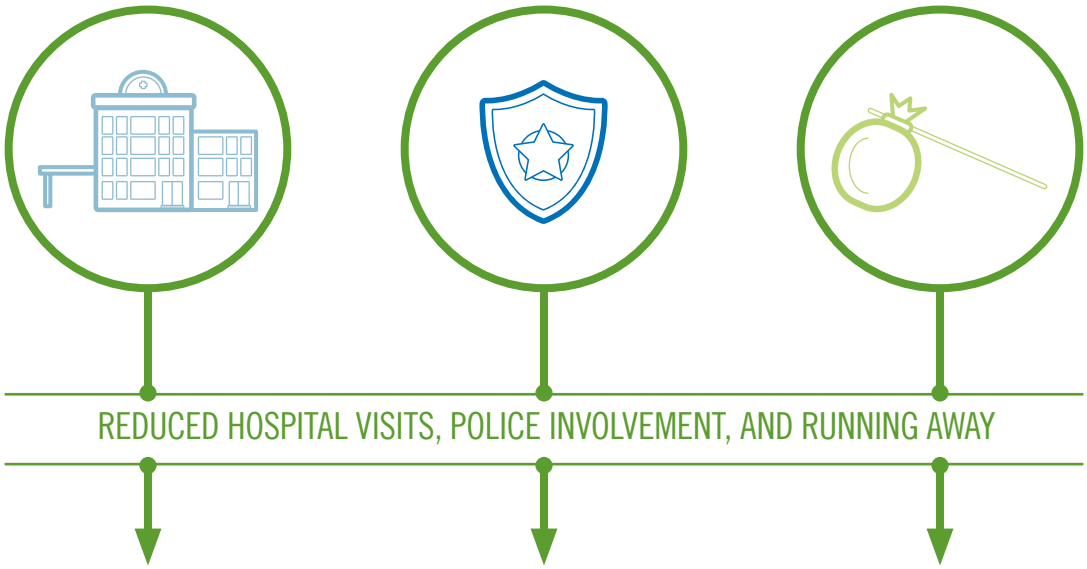
PRI caregivers reported that before their youths attended PRI, 81% had suicidal thoughts sometime in their life. Almost half reported their youth's suicidal thoughts in the previous 3 months. In their lifetime, one in three attempted to end their life; 8% in the previous three months. Suicidality was reduced after PRI.

Self-Injury. CAMH's student survey indicates that 20% of youths engaged in Non-Suicidal Self-Injury (NSSI). Self-injury spans cutting, self-hitting, burning, and other means of harm. Among PRI youths, NSSI was common. Before coming to the program, 63% of caregivers reported that their youth engaged in NSSI in their life; 35% reported youth NSSI within three months of the survey. NSSI was less common after PRI.

Caregiver-Reported Recent Suicidality & Self-Injury by Time and PRI Completion

	Pre-PRI (N=226)	3-6M Post-PRI		1-2Y Post-PRI		3-4Y Post-PRI	
		C (N=94)	PC (N=49)	C (N=73)	PC (N=23)	C (N=49)	PC (N=19)
Suicidal Thoughts	44%	6%	39%	12%	36%	10%	21%
Suicidal Attempt	8%	2%	4%	0%	5%	4%	6%
Non-Suicidal Self-Injury	35%	4%	20%	4%	17%	4%	18%

Hospital Visits, Criminality, & Running Away



Hospital Visits. Before PRI, visits to a hospital[17] were common for PRI youths. Two-thirds (64%) of applying caregivers reported that their youth had visited a hospital for mental health reasons in their lifetime; one in four had done so in the three months before applying. Thirty-nine percent had visited a hospital for substance use reasons; one in five in the most recent three months. **After PRI**, hospital visits for these reasons were comparatively low, particularly for those who completed treatment.

Caregiver-Reported Hospital Visits in Past Three Months by Time and PRI Completion

	Pre-PRI	3M Post-PRI		1-2Y Post-PRI		3-4Y Post-PRI	
	N=241	C (N=97)	PC (N=45)	C (N=73)	PC (N=25)	C (N=49)	PC (N=15)
Substance Use	19%	2%	18%	0%	13%	4%	13%
Mental Health	24%	5%	22%	4%	16%	14%	17%
Other	13%	4%	9%	7%	10%	6%	0%

[17] The reasons for hospitalization are complicated; 'overdose, injury, or accidents' might be indicative of substance use and/or mental health issues. Respondents may indicate mental health and addiction issues for the same hospital visit.

Criminality. Statistics Canada (2010) reported that about 6% of youths aged 12-17 were accused of committing a crime. Just under half were charged and just over half had charges diverted. For applicants to PRI, police contact was ten times that of the Canadian findings: 63% of caregivers reported that sometime in their child's life, they had police involvement without associated arrests (35% in most recent three months). More than one in five (22%) had been charged with a non-violent offence (11% in past 3 months) and 15% had been charged with a violent offence (6% in recent 3 months). **After PRI**, youth criminality decreased, particularly among treatment completers.

Caregiver-Reported Recent (Past 3 Months) Criminality by Time and PRI Completion

	Pre-PRI	3M Post-PRI		1-2Y Post-PRI		3-4Y Post-PRI	
	N=219	C (N=100)	PC (N=51)	C (N=74)	PC (N=25)	C (N=50)	PC (N=18)
Police Contact – no arrest	35%	4%	24%	7%	12%	12%	6%
Charges (non-violent)	11%	2%	6%	0%	4%	0%	6%
Charges (violent)	6%	0%	2%	0%	1%	4%	0%

Running Away. Youth on the run are at high risk for involvement with crime, drugs, homelessness, unprotected or forced sex, prostitution, and sexually transmitted diseases. In North America, about 1 in 7 teens (14%) runs away. Before coming to PRI, 54% of youths had run away sometime in their lives; 36% had run away in the three months before caregivers applied to PRI. **After PRI**, the percentage of caregivers who reported that their child had recently run away was lower than the North American average if they completed the program.

Caregiver Report of Youth Recent Running Away by Time and PRI Completion

	Pre-PRI	3-6M Post-PRI		1-2Y Post-PRI	
	N=252	C=(N=104)	PC (N=50)	C (N=73)	PC (N=26)
Run Away in Last 3M	36%	4%	18%	0%	4%

Note: Running away becomes a less interpretable health indicator as youth age.

Family

IMPROVED FAMILY FUNCTIONING — SUSTAINED CHANGE — LESS MISSED WORK

Caregiver Missed Work. In Ontario, working adults miss about 5% of their work time (3 days every 3 months). Before coming to PRI, caregivers missed up to three times this number of days to support their youth, excluding time they took off for other reasons. Moms missed about 16% of their work time, dads about 8%. After PRI, 2% or less of work time was missed to support their youth for either caregiver at any timepoint for families who completed the program (4% or less for partial completers).

Missed Number of Days' Work in Recent 3 Months for Parents Post-PRI by Time and PRI Completion

	Pre-PRI	3M Post-PRI[18]		1-2Y Post-PRI		3-4Y Post-PRI	
N (moms) / (dads)	250 / 216	C 116 / 95	PC 54 / 45	C 74 / 57	PC 28 / 24	C 53 / 46	PC 28 / 18
Moms avg days missed work	16%	<1%	4%	2%	2%	<1%	1%
Dads avg days missed work	8%	2%	2%	<1%	<1%	<1%	1%

*Note 1: 'Missed work' may be conceptualized differently since the COVID-19 pandemic

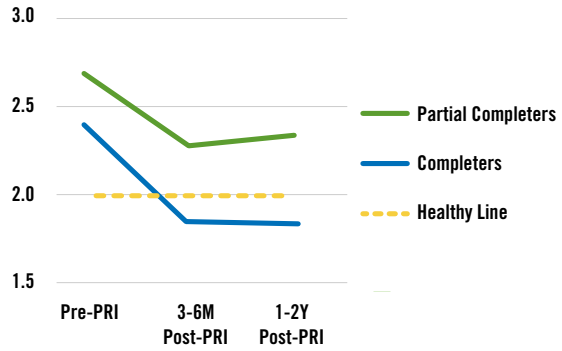
*Note 2: Some families indicate they have had to leave their jobs to support family and thus have not 'missed work'. This indicator, therefore, may be underestimated.

*Note 3: Some respondents indicate that they may not miss entire days to support their child but may leave early or be unable to work effectively.

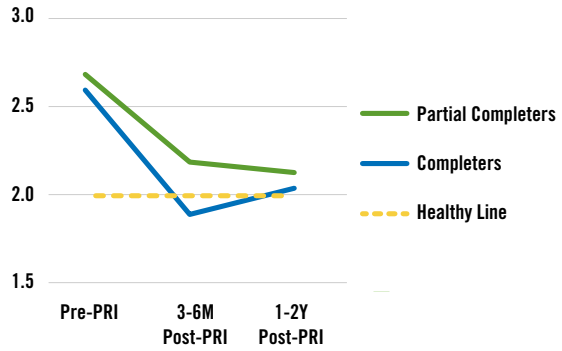
[18] For moms, difference in missed work between completers and partial completers is significant, but the magnitude of the difference is small ($F(168) = 5.0$, $p = .03$, $n2 = .03$).

Family Functioning is measured with the McMaster Family Assessment Device (FAD)[19], scored from 4 (least healthy) to 1 (healthiest). Scores **BELOW 2 are HEALTHY; differences of .25 are significant.** Before PRI, average scores were in the dysfunctional range (over 2.0). The amount of improvement experienced by moms and youths on their perception of their family functioning was significant[20, 21], and gains were maintained through two years after PRI. Too few dads have completed surveys at all three timepoints for analyses but preliminary results suggests patterns of improvement similar to those of moms.

Ratings of Family Functioning by Moms (n=87)



Ratings of Family Functioning by Youths (n = 26)



COVID-19 and Family Functioning. Some of the literature about the impacts of COVID-19 indicates that families experienced improved functioning since the onset of the pandemic. Our data trend this way. Youth reports of family functioning are about the same before and since the pandemic, mom scores are slightly (insignificantly) healthier since April 2020, and dad scores are significantly more healthy since the onset of the pandemic ($p<.01$). Regardless of COVID, averages are in the dysfunctional range pre-PRI.

> "My greatest accomplishment during the program was getting to know my true self, extending empathy, and connecting on a deeper level with my family and (new) friends."

[19] Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The McMaster Family Assessment Device: General Function Sub-Scale.
[20] Interaction between change and completion NS ($F(85) = 1.6$, $p = .3$); change was significant ($F(85) = 33.6$, $p < .001$, $n2 = .28$ (large)).
[21] Interaction between change and completion NS ($F(24) = 0$, $p = .9$); change was significant ($F(24) = 6.2$, $p = .02$, $n2 = .20$ (large)).

SATISFACTION WITH TREATMENT

Caregivers and youths rate elements of PRI from 1 (Very Dissatisfied) to 5 (Very Satisfied). Scores are shown below as an average of all data measurement timepoints and completion status, as there was very little discrepancy based on these factors. In general, caregivers and youths rated PRI with high satisfaction.

Satisfaction for Individual Treatment Elements by Time and PRI Completion

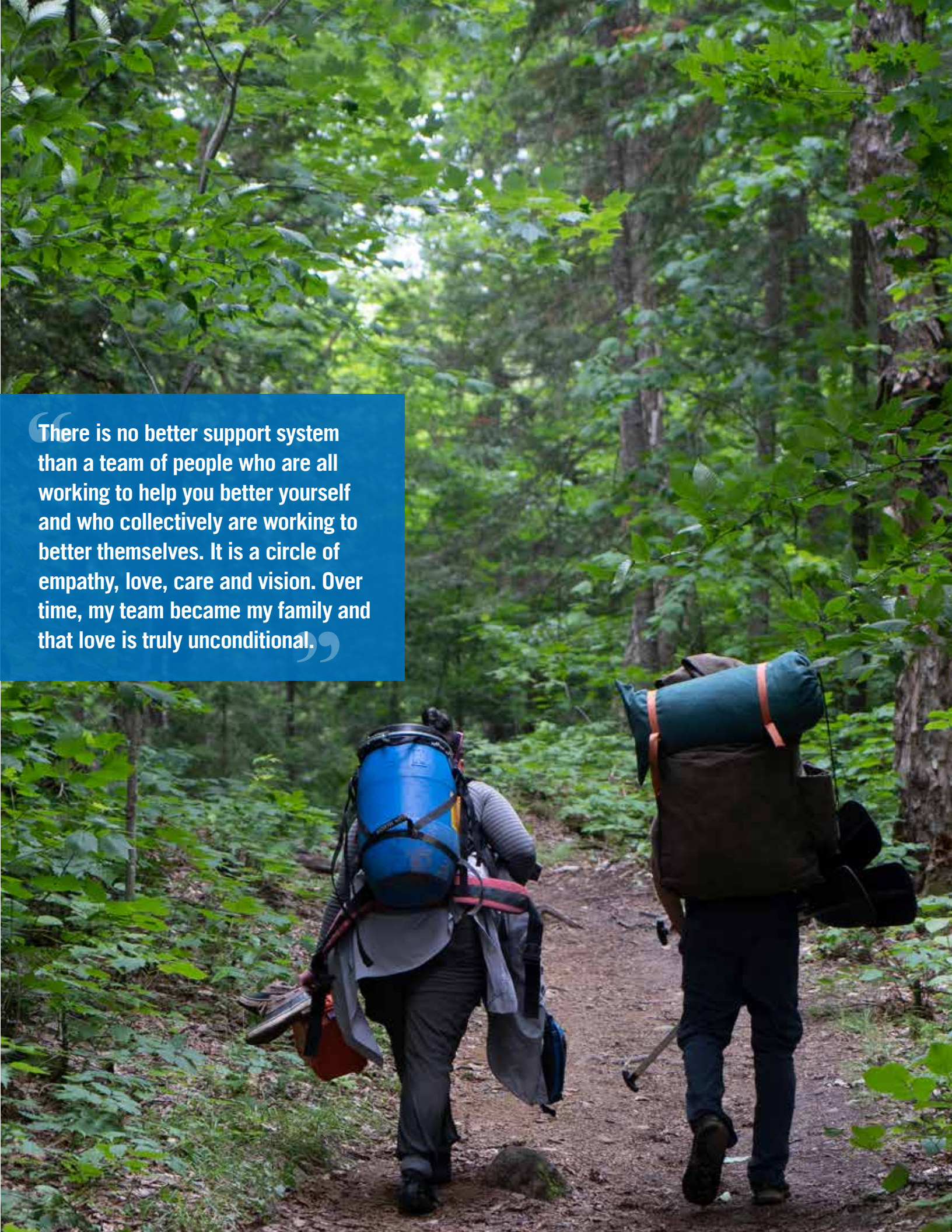
	YOUTHS (N=112)	CAREGIVERS (N=117)
OLE	4.2	4.7
Individual Therapy	4.3	4.6
Frontline Staff	4.4	4.8
Groups	3.6	4.4
Family Therapy	3.8	4.3
Mentor	3.6	3.3
Academics	4.1	4.2
Transition	3.4	3.8
Aftercare	3.2	3.6
Overall Treatment Quality	4.1	4.6

Note: Individual & Family Therapy, Staff, Groups, Academics, & Mentor, reported for clients who completed at least the Campus Phase. Transition & Aftercare reported if clients completed Transition.

> **"Being on a team and feeling connected and loved and supported through the web of my team was one of the most beautiful experiences I have ever had."**

REPORTABLE INCIDENTS

Staff at PRI keep a record of reportable incidents for risk management and quality improvement. In 2022 there were **130** incidents, in 2021 there were 94, in 2020, there were **105**. The most common incidents in 2022 were physical altercation, physical injury, property damage, and self-harm. Incidents are more common during the earlier stages of treatment (OLE and Stage 2) than later stages.



> “There is no better support system than a team of people who are all working to help you better yourself and who collectively are working to better themselves. It is a circle of empathy, love, care and vision. Over time, my team became my family and that love is truly unconditional.”

Ontario Health

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