



AFWI Developmental Evaluation

Evaluation Report and Case Studies

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Alberta Family Wellness Initiative: Developmental Evaluation Findings

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EXECUTIVE SUMMARY

INTRODUCTION

From September 2019 to April 2020, Alberta Family Wellness Initiative (AFWI) commissioned a developmental evaluation to explore the extent to which progress towards Brain Story¹ knowledge dissemination and integration into practice and policy had been made under its current strategy, and how AFWI might continue to evolve. The developmental evaluation explored changes among individuals, organizations, and sub-systems, with a focus on four sectors in Alberta: health (including addiction medicine), education, children’s services, and justice. The evaluation also considered AFWI’s partnerships beyond Alberta, and what lessons these partners have exchanged through collaboration and replication. The evaluation identified the ways that AFWI’s strategy and activities had changed during the evaluation period of 2015 - 2019, with an emphasis on open access to the Brain Story knowledge and deepened focus on supporting practice changes within organizations and systems in Alberta. In addition to the main report, the evaluation also generated two case studies focused on specific AFWI activities and impacts over the last several years: alignment of policy and practice in the children’s services sub-system, and AFWI’s partnership with the Kainai First Nation in southern Alberta.

Evaluation Purpose and Methods

The evaluation was intended to assist AFWI leadership and stakeholders in understanding progress to date and to inform future strategic decisions. To accomplish these two goals, the developmental evaluation looked both retrospectively and prospectively at AFWI’s work. The FSG team used a mixed methods approach, collecting both qualitative and quantitative data to provide for methodological, investigator, and data triangulation, as a means for increasing the validity of findings. FSG conducted semi-structured interviews with 63 people across systems, levels, and geographies. Quantitative data included a survey of 439 people who participated in the Brain Story Certification Course.

SECTION I: AFWI’S WORK

The Palix Foundation (formerly the Norlien Foundation) founded AFWI in 2007 to improve the lives of children and families in Alberta, in particular those experiencing addiction and mental health challenges. Recognizing the critical need to better connect research to policy and practice, Palix designed and launched AFWI as a multi-disciplinary knowledge translation and mobilization effort, with a focus on connections between (a) early brain and biological development and children’s mental health and (b) adult mental health, including addiction research, prevention, treatment and recovery.

Recent Evolution of AFWI: 2014-2019

Since 2014, AFWI has evolved its strategies and activities, with a focus on scaling its knowledge mobilization efforts. AFWI’s major investment generated online learning resources for the Brain Story, specifically the online [Brain Story Certification Course](#) launched in late 2016. In addition, the nature of AFWI’s support for “change agents” has shifted over time, from an early focus on the work of these “upstream” change agents towards also including work with more with “downstream” front-line service providers (e.g., physicians, social workers, treatment counselors). New areas of work also emerged in response to the change agents’ demand for support

¹ The Brain Story refers to a body of scientific knowledge, based on research in developmental neuroscience, developed by Harvard University’s Center on the Developing Child and FrameWorks Institute. A full description of the Brain Story is available on the [AFWI website](#).

applying the Brain Story knowledge and adopting Brain Story-informed practices. In addition, AFWI staff and partners began supporting the mobilization and application of the Brain Story knowledge in specific sub-systems (e.g., education and justice systems) and communities (e.g., Indigenous Peoples). Finally, AFWI established itself as a leader in Brain Story knowledge dissemination beyond Alberta's borders. AFWI staff and partners have responded to inquiries from other provinces in Canada, and communities in the U.S. and the U.K., among others. The Brain Story Certification Course also had global reach; as of April 2020, more than 50,000 people from over 100 countries had enrolled.

SECTION II: CHANGES AS A RESULT OF AFWI'S WORK

Individual Changes

At its heart, the work of AFWI is about providing individuals—including parents, educators, health professionals, and policymakers—with knowledge about the importance of healthy brain development during the early years and from an intergenerational and life course perspective to support lifelong mental and physical health and wellbeing. The theory of change posits that learning this knowledge will shift individuals' mental models and mindsets about early childhood, brain development, and the factors that may lead to poor mental health and addiction, and that this shift is a necessary precursor to behavior and practice change. FSG explored if and how individuals' exposure to this knowledge is shifting their understanding of others and oneself, inspiring compassion and empathy, and compelling individuals to change their interpersonal and professional interactions. Resoundingly, the answer was yes: learning about the Brain Story was sparking these changes.

Individuals' mental models have shifted:

- Results from a survey of over 400 Brain Story Course participants provided evidence of greater understanding of and knowledge about brain science after taking the course.
- As a result of learning the Brain Story knowledge, individuals described a number of shifts in their pre-existing mental models about people living with mental health challenges or addiction.
- Learning about the Brain Story inspired people not only to change how they thought about others, but also to shift how they viewed themselves and the role of their life experiences in shaping their present.
- Practitioners trust the Brain Story because it is rooted in science, and the Brain Story's use of metaphors helped make major brain science concepts accessible to a wide range of people.
- For many, the power of the brain science was that it offered relief and hope, and the resilience scale in particular illustrated this powerfully.

Individuals have changed behaviors in their relationships and their professional practices:

- In interviews, many people who learned about the Brain Story described feeling compelled to change their behavior as a result of this new knowledge. Such behavioral changes most frequently took the form of sharing the brain science with others, using the language of the Brain Story, and conducting themselves differently in both personal and professional relationships.
- Those who learned about the Brain Story science reported being eager to apply this knowledge to their work, though they found that exactly how to change practices was largely up to them to determine.

Organizational Changes

The profound impact of the Brain Story on individuals in turn led to impactful changes within organizations in numerous cases. The data collected for this evaluation illuminated several types of organizational changes occurring across the four sub-systems of interest in Alberta:

- **Shifts in strategic direction and resource allocation:** Learning about the brain science prompted some organizations to shift their strategic direction and to allocate funds accordingly.
- **Training for professionals:** Interview data showed that, after engaging with the Brain Story, many organizations wanted most if not all of their staff to have an understanding of this foundational knowledge for their work. Many organizations had mandatory Brain Story training for all or some staff. Other organizations did not require the full course, but found ways to introduce their staff to concepts through select resources or shorter trainings.
- **Changes to staffing:** Interviewees reported that engaging with the Brain Story led to staffing changes at some organizations, which changed hiring requirements and practices. Additionally, several organizations reported adding new positions for internal and / or external purposes, e.g., to better support personnel or provide supports and services to clients and patients.
- **Shared language within and across organizations:** The Brain Story created the opportunity for shared language within and across organizations, which had facilitated collaboration. Within organizations, staff found that the language of the Brain Story facilitated conversations about and with their clients.
- **Programmatic changes to integrate Brain Story science:** Across subsystems, interviewees identified some organizations that changed programming to align with the Brain Story by building knowledge and skills for parents and children, creating safer and more welcoming environments, and asking different questions that viewed the child or parent with a more holistic and compassionate lens.

Many organizations were intentional about ensuring that the programs they operated were congruent with the Brain Story science. Still, there remains ample opportunity for further learning as organizations seek to better codify what they have learned into sustainable and concrete organizational practice and policy changes.

Systems Changes

AFWI aspired to change systems within Alberta to better support families and children; specifically, they sought changes in four subsystems: health, children’s services, justice, and education. The evaluation found several ways in which in these subsystems changed as a result of AFWI’s work:

- All sub-systems had seen some degree of shift towards more Brain Story-informed paradigms and mental models, at least in part as a result of more widespread Brain Story knowledge and understanding.
- People across all sub-systems reported increasingly seeing parents and children as partners and viewing them with greater compassion, empathy, and agency.
- Widespread adoption of common Brain Story concepts (e.g., major metaphors) and language facilitated greater ability to collaborate and partner across organizations and sectors.
- Systems change was supported to different degrees by both “top-down” leadership and mandates, as well as “bottom-up” innovation and determination from practitioners. To spread and scale systems change, both were needed in mutually supporting ways.

Furthermore, many highlighted the positive impact of AFWI’s activities to convene change agents within and across sectors on relationships and understanding in Alberta. For some people, the benefit of these new or strengthened relationships were largely intangible (e.g., better understanding an alternative perspective) while for others, it directly affected their day-to-day work (e.g., facilitated smoother handoffs between hospitals and community-serving organizations). According to interview data, the shared language of the Brain Story facilitated partnerships and collaboration across organizations, whether in the same or different subsystems. Evaluation data also pointed to productive partnerships among education, health, justice, and children’s services to date, while acknowledging that Alberta still needs more cross-sector and cross-ministry collaboration and alignment.

Partnerships Outside of Alberta

While AFWI's principal focus has been the province of Alberta, the initiative also had several long-term partnerships in other geographies. FSG collected data for the evaluation on three other geographies: other provinces within Canada, the United States, and the United Kingdom. We found that AFWI's work had influenced partners in other geographies. First, partners across all geographies leveraged AFWI's communication tools. Second, in some cases, the partners were able to replicate AFWI's model of knowledge dissemination while customizing for their particular context. The evaluation also uncovered factors or conditions that made similar work successful in other places, including 1) the importance of having cross-sector partners, 2) authentic engagement, 3) space to create and strengthen relationships, and 4) a "backbone" entity like AFWI that could provide consistent and persistent attention, resources, and leadership. Finally, we found that other geographies in turn have had some impact on AFWI, for instance amplifying AFWI's message, core content, and approach. Nascent practices in other geographies may also provide lessons and contribute to the evidence base for practice change in ways that can inform AFWI's ongoing evolution.

SECTION III: IMPLICATIONS OF THE EVALUATION FINDINGS

AFWI has attempted an innovative, place-based effort at a large scale using a unique approach. Given this ambitious effort and the findings detailed in this report, we considered implications of these evaluation findings: **In which areas has there been great progress and impact as a result of AFWI's strategy and actions? What are the implications and what can we learn?**

- AFWI had success in its roles as a **knowledge entrepreneur and catalytic convener**. Its efforts resulted in large-scale dissemination of the Brain Story knowledge, as well as new and deepened connections among AFWI stakeholders and partners.
- AFWI effectively fostered **parallel upstream and downstream strategies** to influence individuals, organizations, and systems. AFWI increasingly focused not only on disseminating the Brain Story knowledge to key change agents "upstream" in decision-making positions, but also on reaching "downstream" practitioners with the knowledge and its application to practice.² The evaluation findings indicated that the organizations and systems that changed most were those where the upstream and downstream efforts connected, cross-pollinated, and mutually reinforced one another.
- A defining characteristic of AFWI's knowledge dissemination strategy was the purposeful **fidelity to the Brain Story knowledge**, including a set of metaphors and specific language. AFWI's choice to hold strictly to consistent language and metaphors seemed to have produced results, as detailed in the findings about the value of shared knowledge and common language within and across organizations and sub-systems in Alberta.
- In contrast, AFWI chose to **catalyze rather than dictate the application of the Brain Story knowledge**. Some interviewees expressed AFWI's chosen role as a strength and an attribute that allowed AFWI to apply its resources nimbly where there was opportunity and movement; quite a few other interviewees wished that AFWI would take a more directive and active role in sharing and promoting specifics about how different actors can align their practice with the Brain Story knowledge.
- AFWI's more **nascent work to promote and support practice change aligned with the Brain Story knowledge produced variable outcomes** to date. AFWI can consider further how best to connect people

² Upstream and downstream language references the Theory of Philanthropy for AFWI, as outlined in: Foote, N., and Radner, J. "2017-2019 Alberta Family Wellness Initiative: Embedding the Brain Story to Catalyze Sustainable Change for Children and Families." TruePoint: Boston, MA, 2019.

and organizations that are defining paths for developing and resourcing practice change efforts, and how best to play a role sharing those practices within sectors. AFWI is currently considering the use of the resilience scale as an organizing framework for domains of action related to practice change.

SECTION IV: FUTURE DIRECTIONS FOR AFWI

For more than ten years, AFWI has worked to share the Brain Story knowledge and mobilize its application across systems in Alberta. AFWI has seen enormous change in Alberta and to some extent in other geographies where they have partnered; yet, there is certainly more to be done to continue the progress and change long-term mental health and addiction outcomes for children and families through the application of the Brain Story knowledge. Building on the lessons of where progress and energy have been greatest so far, AFWI faces strategic decisions about continuing to support areas of significant headway, while also considering investment in areas where relatively less progress has been made. Below are specific questions for AFWI to consider as it makes future choices about how best to deploy the tangible and intangible resources at its disposal. Interviewees, long-time AFWI advisors, and the evaluation team at FSG informed these considerations with their insights and questions.

- How will AFWI continue **connecting decision-makers (upstream) and frontline practitioners (downstream)** to influence systems change and alignment with the Brain Story knowledge?
- Given AFWI's work to date, as well as the clear demand from stakeholders, how will AFWI **more deeply support practice change** aligned with the Brain Story science?
- Within AFWI's work in Alberta, what are **potential new or expanded areas (e.g., expanding beyond the existing AFWI network, improved advocacy, evaluation) for strategic focus**?
- How will AFWI continue to **partner with Indigenous communities** in Alberta, based on its experience to date?
- Will AFWI continue to **focus primarily on the province of Alberta, or will it more prominently expand its reach and scope** to other regions of Canada, the U.S., Europe, or other geographies?

CONCLUSION

In summary, it is clear from the developmental evaluation findings that AFWI's long-term strategy to shift individuals, organizations, and systems in Alberta is having its intended effect: knowledge dissemination is shifting mental models and practices among individuals and organizations, and eventually leading to policy and practice change within key systems that impact children and families. These positive results are consistent with AFWI's focus, strategy, and resource allocation over the last decade. AFWI's commitment and persistence have created a common language and provided a forum for a range of upstream and downstream actors in Alberta to determine collectively how to apply the Brain Story knowledge to their policies and practices.

Looking forward, AFWI is well positioned to continue its key roles of knowledge entrepreneur, catalytic convener, and systems learning partner in Alberta and beyond. AFWI will also need to consider how best to allocate its resources going forward, to both reinforce and continue areas of progress as well as potentially build new competencies and strategies to address areas within Alberta that have seen less progress to date and effectively support like-minded efforts in other geographies.

INTRODUCTION

BACKGROUND

In 2013-2014, the Alberta Family Wellness Initiative (AFWI) commissioned its first developmental evaluation to examine how, to what extent, and where the initiative was making progress and creating impact. The evaluation identified significant progress changing beliefs and mental models among individuals, some changes among organizations, and limited early signs of changes within key systems in the province. The evaluation showed the impact of AFWI's knowledge mobilization strategy and the initiative's expanding focus on change agents.

From September 2019 to April 2020, AFWI commissioned a second developmental evaluation to explore the extent to which progress towards Brain Story³ knowledge dissemination and integration into practice and policy had been made between 2015-2019 under its current strategy, and how AFWI might continue to evolve. The developmental evaluation explored changes among individuals, organizations, and sub-systems, this time with a focus on four key sectors: health (including addiction medicine), education, children's services, and justice in Alberta. The evaluation also considered AFWI's partnerships beyond Alberta, and what lessons these partners have exchanged through collaboration and replication. The evaluation identified the ways that AFWI's strategy and activities have changed during the prior five years, with an emphasis on open access to the Brain Story knowledge and deepened focus on supporting practice changes within organizations and systems in Alberta. This report summarizes findings and lessons from the 2019-2020 evaluation in four main sections:

- **Section I: AFWI's Work**
- **Section II: Changes as a Result of AFWI's Work**
- **Section III: Implications of the Evaluation Findings**
- **Section IV: Future Directions for AFWI**

In addition to this report, the evaluation also generated two case studies focused on specific AFWI activities and impacts over the last several years:

- **Alignment of policy and practice** in the children's services sub-system in Alberta; and
- **AFWI's partnership with Indigenous communities**, particularly the experience of Kainai First Nation.

EVALUATION PURPOSE AND QUESTIONS

The primary purpose of this developmental evaluation was to better understand AFWI's progress in the areas of individual, organizational, and sub-systems change over the last five years, and to identify early lessons learned from its transition to a more overt focus on work to change front-line practices. The evaluation primarily focused on AFWI's work within the province of Alberta, but also surfaced important learnings that can inform efforts outside the province, including elsewhere in Canada, the United States, and the United Kingdom. The evaluation also offers insights about the influence of the Brain Story on broader narratives about trauma, mental health, and addiction in the province.

The 2019-2020 developmental evaluation was intended to assist AFWI leadership and stakeholders in understanding progress to date and to inform future strategic decisions. To accomplish these two goals, the

³ The Brain Story refers to a body of scientific knowledge, based on research in developmental neuroscience, developed by Harvard University's Center on the Developing Child and FrameWorks Institute. A full description of the Brain Story is available on the [AFWI website](#).

developmental evaluation looked both retrospectively and prospectively at AFWI's work and possible opportunities. Looking **retrospectively**, or back over the past five years, at AFWI's work:

- Showed AFWI's **progress to date** mobilizing knowledge and changing individuals, organizations, and sub-systems towards the goal of better health and wellness outcomes for children and families in Alberta;
- Further illuminated where AFWI activities have been **successful in influencing changes in individuals, organizations, and sub-systems** and where AFWI has not yet made progress;
- Identified **areas of momentum and early signs of a movement** around the Brain Story across the ecosystem of actors in the province; and
- Provided **accountability** to AFWI's board.

Taking a **prospective** lens surfaced lessons learned about AFWI's more recent pivot toward greater support for front-line practice change and professional development and training. It also informs AFWI's future decisions about their work in and outside Alberta. Both the retrospective and prospective analyses were grounded in various frameworks (e.g., systems change⁴, practice change) and sought to understand how AFWI is shifting conditions that are holding challenges in place for families and children in Alberta.

EVALUATION QUESTIONS

To guide the collection of data and the synthesis of findings, FSG and AFWI created a set of evaluation questions that reflect the major components of the evaluation.

Evaluation Questions for 2019-2020 Developmental Evaluation

1. To what extent and how is the **Brain Story knowledge increasing awareness and understanding about the connection between early childhood development and mental health / addiction**, as well as about quality addiction treatment, among individuals? Of the Brain Story knowledge, what **specific content or framing** is gaining traction and resonating with individuals?
 - a. To what extent and how is the Brain Story Course shifting **individuals' mental models, beliefs, language and understanding related to improving health and wellness outcomes** (e.g., mental health, addiction) among children and families in Alberta? What new knowledge and / or framing **most supports these shifts**?
2. How and to what extent is knowledge of the Brain Story **influencing individuals to change their behavior and practices** for serving children and families in Alberta? How are people **using this knowledge to make changes** in their communities, organizations, and /or provincial systems?
 - a. What **additional knowledge, skills, supports, or resources do individuals need** to apply or translate the Brain Story knowledge into practice change?
3. To what extent and in what ways are AFWI's activities **facilitating organizational change**? Which activities are influencing **what types or dimensions of organizational changes** (e.g., leadership commitment, standards and norms, etc.)? What **organizational conditions support uptake** of changes informed by knowledge of the Brain Story (e.g., cohorts of staff being certified in the Brain Story)?
 - a. What, if anything, is **impeding organizational change**, and among what types of organizations? What does this suggest for AFWI's activities?

⁴ See **Appendix C: Conceptualizing Systems Change** for more information on this framework.

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- b. What **additional knowledge, skills, supports, or resources do organizations need** from AFWI in order to create meaningful, sustainable organizational change that supports better health and wellness outcomes for children and families?
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4. To what extent and in what ways are AFWI activities (e.g., knowledge transfer via the Brain Story, providing resources, consulting) **facilitating connections between individuals and organizations within a sector or sub-system** (e.g., Health, Education, Human Services, Justice)? To what extent and in what ways do AFWI activities **support cross-sector engagement and connectivity** to advance changes in Alberta?
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5. To what extent and how are AFWI activities **catalyzing changes within sub-systems in Alberta** (e.g., policy shifts, changes in professional practice / standards, shifts in power dynamics)? Which activities are catalyzing change, what types of change, how are they bringing about change, and in which sub-systems?
- To what extent and how have AFWI's activities **influenced organizations and sub-systems within the province to shift their resource allocations** or criteria for funding programs to better serve children and families in Alberta?
 - What is **impeding change in sub-systems**, and among what types of sub-systems?
 - To what extent and how are AFWI activities **shifting broader narratives, beliefs, and mental models** related to addiction in Alberta?
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6. How well are AFWI's activities (e.g., increasing knowledge of the Brain Story and influencing changes at the individual, organizational, and sub-systems levels in Alberta) **meeting the needs of the specific communities they want to serve** (e.g., Indigenous communities)? Which activities are bringing about change, and how?
- What, if any, **adaptations to AFWI's activities, messaging / communications, and / or outreach might be necessary** to better meet the needs of these communities?
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7. What **lessons do the changes in individuals, organizations, and sub-systems within the province hold** for change outside the province (e.g., elsewhere in Canada, U.K., U.S.) and vice versa? What conditions need to be in place for these types of changes to occur (or be replicated) elsewhere?
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8. What are new opportunities for AFWI to **influence systems and practice change**? How is the evolving political, economic, and cultural context affecting the ability of AFWI to achieve its goals?
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EVALUATION METHODS

The FSG team conducted data collection and analysis between September 2019 and February 2020 in two phases:

- **Phase I: September - November 2019** focused on understanding AFWI's work over the past five years. In addition to establishing a context for the work, this phase of work informed any changes necessary to the AFWI theory of change and theory of action, and culminated in the development of the evaluation questions and plan for Phase II. This work was qualitative and consisted of interviews with key informants as well as an extensive review of documents and videos provided by AFWI.
- **Phase II: November 2019 - February 2020** focused on understanding the experience of Brain Story Certification Course participants and other stakeholders who had interacted with AFWI and its tools in the past five years. Lines of inquiry included changes in individuals' understanding, knowledge, mindsets, and behaviors as a result of the Brain Story; practice changes at the individual, organizational, and sub-system levels; community partnerships and cross-sector work; and changes in geographies outside Alberta. The team used a mixed methods approach, collecting both qualitative and quantitative data to provide for methodological, investigator, and data triangulation, as a means for increasing the validity of findings.

Timing	Data Collection Method	Analytic Approach
September - November 2019 <i>(Phase 1)</i>	Media review (22 documents and six videos): Reviewed previous evaluation and progress reports conducted on behalf of AFWI; key ministerial policy and strategy documents / frameworks; and articles and reports about the work of AFWI and their partners. Watched videos on AFWI’s website (e.g., Brain Story Certification Course testimonials, How Brains Are Built).	FSG summarized takeaways from each reviewed item to inform the development of questions for key informant interviews in Phase 1 as well as the evaluation questions.
October 2019 <i>(Phase 1)</i>	Key informant interviews (11 interviews): Interviewed four AFWI / Palix staff members and nine staff from seven external organizations to better understand AFWI’s activities and impact over the past five years, inform updates to the AFWI theory of action, and inform FSG’s questions for the evaluation.	FSG used an open-coding system for analyzing interviews, to provide FSG with context for AFWI’s work and to inform the development of evaluation questions.
November 2019 – February 2020 <i>(Phase 2)</i>	Document Review: FSG continued to review documents related to AFWI’s work and the context in which it operates, including case studies developed for Practice Days, policy documents, and other documents recommended to FSG by internal or external stakeholders.	FSG summarized takeaways from each reviewed item to inform the development of questions for key informant interviews in Phase 2, and to provide context or nuance for emerging findings.
November 2019 – January 2020 <i>(Phase 2)</i>	Observation of AFWI Practice Days: Two FSG team members attended both of the Practice Day events that AFWI held, the first of which took place in Edmonton, AB on November 26-27, 2019, with the second held in Calgary, AB on January 15-16, 2020. While in attendance, FSG team members observed the proceedings, which included keynote speeches; panel discussions; lectures on evaluating resilience and systems change; and group activities and share-outs.	FSG took notes on proceedings and developed short internal memos to highlight key themes and ideas.
December 2019 – January 2020 <i>(Phase 2)</i>	Key Informant Interviews: FSG conducted 47 phone interviews with 53 stakeholders, including researchers; community leaders; practitioners (e.g., physicians, educators); late adopters / critics; policy leaders inside and outside government ministries; and funding organizations. FSG used semi-structured interview protocols for these interviews, each of which lasted approximately 45 – 60 minutes. After asking for and receiving each interviewees’ consent, FSG recorded the interviews and had the audio files transcribed by Rev.com.	After all interviews were complete, FSG developed a coding structure and used Dedoose, a qualitative analysis software program, to analyze across the interviews for findings.
January 2020 <i>(Phase 2)</i>	Participant Survey: <ul style="list-style-type: none"> • Survey sample: FSG administered a survey to 2,380 people who had participated in the Brain Story Certification Course. Palix provided FSG with a list of 12,761 Brain Story Certification Course enrollees who had consented to be contacted in the future. FSG removed participants who had completed fewer than two of the 20 modules, which left a list of 4,977 Course participants from which to sample. FSG used a sample size calculator set to a 95% confidence level to determine that 357 	FSG analyzed the quantitative results from the survey using SPSS. Our quantitative analysis consisted primarily of calculating frequencies, as well as chi-square regressions to determine statistical significance for participants’ reported changes in their knowledge, understanding,

	<p>survey responses were necessary for the results to be representative of the Course participant population. We assumed a 15% response rate from survey recipients, giving us a survey administration sample of 2,380 people.</p> <ul style="list-style-type: none"> • Survey administration: The survey was administered using Qualtrics, an online survey platform. FSG sent recipients emails with individual survey links on January 10, 2020. Of the 2,380 emails sent, 104 emails were returned by incorrect email addresses, providing a final sample of 2,276. Recipients had three weeks to complete the survey, and FSG sent intermediate reminders to non-respondents. In total, 464 people responded to the survey. After removing incomplete responses, the final number of complete survey responses was 439 (19% response rate). • The survey instrument: The survey included 32 questions, the majority of which were closed-ended and used a Retrospective Post-then-Pre design for a series of questions that asked respondents to first reflect on their knowledge and practices prior the Brain Story Course, and then rate their current knowledge, practices, and beliefs. This allowed for self-reported before and after comparisons. The survey also asked if and how individuals have used their Brain Story knowledge to contribute to changes in their organizations as well as their own practice. The online survey included embedded survey logic to hide or show some questions to respondents depending on their persistence through the Brain Story Course. Survey respondents who did not complete the Course were asked a series of questions about why they did not complete the Course and if there was anything about the Course design that could be improved to support completion. The full survey instrument with frequencies for all questions is included in Appendices B and C. 	<p>beliefs, and attitudes prior to taking the Brain Story Course and after completing it. We used Excel to organize and analyze the responses to open-ended questions.</p>
<p>January 2020 (Phase 2)</p>	<p>Reflective Practice Sessions: FSG facilitated three reflective practice sessions with 21 individuals in total. One reflective practice session took place in Calgary, AB to coincide with the Practice Days event in January 2020. This session involved six participants representing a variety of roles across sectors and focused on participants' experiences with practice change in their organizations as a result of engaging with the Brain Story. The other two sessions were held on the Kainai First Nation reserve in Standoff, AB; one session was with nine teachers, administrators, and elders who worked at and supported the Kainai Head Start program, and the other was with six teachers and administrators at Kainai High School. Both sessions were designed in consultation with Indigenous elders and other members of the Kainai First Nation to be culturally responsive and reflect Indigenous ways of knowing and understanding; the key AFWI staff member overseeing work with Indigenous populations also provided feedback. These sessions focused on participants' experiences with the Brain Story, as well as how they integrated the science into their educational settings and work with children and families.</p>	<p>FSG took detailed notes during each of the three sessions and developed short internal memos to highlight key themes and ideas. The analysis of reflective practice sessions with members of the Kainai First Nation served as much of the basis for the case study about their work.</p>

Confidence in Findings

Given the full range of mixed methods utilized for this evaluation, FSG has a great deal of confidence in the evaluation findings. Themes were consistent across qualitative and quantitative data. FSG collected extensive qualitative data that provided a deep, broad, and nuanced understanding of key themes. The quantitative data collected provided insights from hundreds of participants related to the Brain Story Course, which bolstered what we heard in interviews. Where relevant, we share quantitative findings that proved to be statistically significant. We also supplemented our primary data collection with secondary research where available. For example, when talking about changes in ministry strategy and funding allocations, we reviewed policy documents and news coverage to corroborate what we heard from stakeholders. The degree of convergence in themes and our work to triangulate insights across multiple methods gives us a great deal of confidence in these findings.

Data Collection Limitations

While FSG maintains confidence in the findings and integrity of the evaluation's methods, there are some important considerations about the data collected. The evaluators have been mindful of these limitations, mitigating against bias where possible, and have noted throughout the report where information may be incomplete. However, it is possible that these limitations and others of which we were not aware will have colored the story of AFWI's work as portrayed in this evaluation report:

- **Potential bias in survey findings:** The Brain Story Certification Course participants we surveyed only included those who provided AFWI with their consent to be contacted. It is possible that people who consented to further contact with AFWI differ in some ways from people who did not opt in to be contacted, perhaps having a more favorable view of Palix, AFWI, and / or the Brain Story Course. Another potential source of bias is within the survey sample; it is possible that people who chose not to respond to the survey differed in some way from those who opted to take it. We did not offer an incentive for taking the survey, which could mean that those who had more extreme views (very positive or very negative) of Palix, AFWI, and / or the Brain Story Certification were more motivated to respond.
- **Interviewee bias:** AFWI provided FSG with a list of people to interview for both phases of work. This list comprised people AFWI knew well, which meant they were aware of AFWI's work and had a previous working relationship. This introduces the possibility of bias on the part of interviewees towards Palix, AFWI, and the Brain Story Certification Course.
- **Ability of interviewees to speak to changes in broader system:** We interviewed a variety of stakeholders occupying different positions within the various sub-systems of interest in order to develop as full a picture as possible of systemic changes. However, given the size and complexity of the sub-systems, most interviewees had limited insight into happenings throughout the broader system. As might be expected, interviewees were best positioned to respond about changes in their own mindsets, behaviors, and practices than they were about changes among others in their organizations and throughout the system. We worked to supplement the information shared by individuals about systems changes with news reports, policy documents, and other secondary information, but it is likely there are still some gaps and incomplete information.
- **Evaluators were not Canadian:** Finally, all members of the FSG team were based in the United States. The evaluators traveled to Alberta on three occasions, two of which were for AFWI Practice Days events, and worked to absorb culture and context there to help us situate what we heard in interviews. While our remove from Alberta may have supported our ability to be objective, it is possible that there are key pieces of history, the current context, relationships, governmental and other structures, and more that Canadians—and Albertans in particular—would be aware of that the evaluators were not.

SECTION I: AFWI'S WORK

BACKGROUND AND CONTEXT FOR THE ALBERTA FAMILY WELLNESS INITIATIVE

The Palix Foundation (formerly the Norlien Foundation) founded the Alberta Family Wellness Initiative (AFWI) in 2007 in an effort to improve the lives of children and families in Alberta, in particular those struggling with addiction and mental health challenges. Recognizing the critical need to better connect research to policy and practice, Palix designed and launched AFWI as a multi-disciplinary knowledge translation and mobilization effort, with a focus on connections between (a) early brain and biological development and children's mental health and (b) adult mental health, including addiction research, prevention, treatment and recovery.

Ultimately, AFWI seeks to:

- **Improve wellbeing outcomes for Alberta's children and families** by catalyzing improvements in the public and private sub-systems⁵ that serve them;
- **Inform and educate diverse stakeholders**, so that relevant science about brain development during early childhood and its connection with mental health and addiction outcomes can become embedded in all levels of policy, funding, programming, professional education, and practice; and
- **Use this knowledge base to support a process that catalyzes change** in policy, service delivery, and frontline practices.

AFWI is grounded in several beliefs. First, any solution to the problems of addiction and mental health must involve changes in understanding, mindsets, practices, and systems. Second, influencing change along these dimensions with institutions (e.g., Alberta Health Services, Alberta Children's Services), policy makers, primary care networks, healthcare and addiction treatment providers, early childhood and family service providers, educators, and the justice system will likely lead to improved prevention, diagnosis, and treatment of addiction and other mental health problems for Albertans. Finally, given the complex and interrelated nature of the sub-systems involved, changes in one area or set of actors will likely have ripple effects throughout the province, many of which are unpredictable.

From AFWI's inception, the leadership intentionally decided against developing a fixed, detailed logic model with causal links, or any suggestion that the work would occur in a step-by-step, linear process. They assumed that there was much to learn along the way, and that as they developed new knowledge, insights, and relationships, AFWI would grow, adapt, and change accordingly.

AFWI: 2005-2013

During the early years of what would eventually become AFWI (2005-2008), the initiative explored research on addiction treatment, brain science, mental health treatment in Alberta, and early childhood. The staff read widely; spoke with leading researchers, medical practitioners, policy makers, and residents across the province; and developed deep relationships across a broad spectrum of organizations (including government and nonprofits) and individuals. Through their research process, AFWI came to understand the science base of addiction, and developed an initial path forward, positioning the Initiative as a knowledge mobilizer and change facilitator.

Between 2009 and 2012, the Foundation's work evolved into a new phase and way of thinking about AFWI and its potential role. Building on an interdisciplinary body of scientific knowledge known as the Brain Story, AFWI sought to disseminate this knowledge and support connections between relevant individuals and organizations (referred

⁵ For definitions of key terms, including sub-systems, see the box labeled "Definitions" on page 2.

to as “change agents”) across Alberta. While the knowledge mobilization effort consisted of specific activities (e.g., the symposia and curriculum development initiatives) with concrete short-term outcomes (e.g., understanding and sharing the knowledge), the systems change management effort was more developmental in nature, with experimentation around building relationships and readiness for change, both at the individual and institutional level.

FSG EVALUATION: 2013-2014

AFWI engaged FSG in late 2013 to conduct a two-phase evaluation of AFWI’s work to that point. As part of the first phase of the evaluation (November 2013 - February 2014), FSG prepared materials describing the sub-systems with which AFWI interacted and sought to influence, the theory of action for how AFWI activities influenced change, and a timeline of key AFWI activities and events. The AFWI theory of action brought together and articulated the vision for AFWI as it stood in 2013 and the high-level outcomes the initiative hoped to achieve. It reflected the goal of linking research and practice in early childhood with addiction and mental health, across all relevant sub-systems in the province of Alberta.

In the second phase of the evaluation (February - July 2014), FSG conducted a developmental evaluation of AFWI’s activities. At that time, AFWI was leveraging a knowledge translation strategy, while also trying to build the capacity of change agents to catalyze policy and practice shifts in their organizations and in the sub-systems within which they worked. The 2014 evaluation found that AFWI had influenced significant changes among participants in its programs as well as early changes in organizations and systems in Alberta.

EVOLUTION OF AFWI: 2014-2019

Since 2014, AFWI has evolved its strategies and activities, with a specific focus on scaling its knowledge mobilization efforts. The major investment made by AFWI generated online learning resources for the Brain Story, specifically the online Brain Story Certification Course launched in late 2016. This free resource has dramatically enabled AFWI to scale up access to the Brain Story knowledge; since its launch, more than 50,000 people from over 100 countries have participated in the Course’s online modules. Through a partnership with the Canadian Centre for on Substance Use and Addiction, the course is also available on the AFWI website in French. AFWI has plans for a Spanish translation and potentially other languages in the future, in support of reaching more people who can benefit from the knowledge. While the Brain Story Course and other communications materials have continued to focus primarily on an audience of practitioners and decision-makers, the materials are accessible to the general public as well.

DEFINITIONS

“**Ecosystem**” refers to the configuration of interacting, interdependent parts (e.g., individuals, organizations, and institutions across multiple sectors) with which Albertans interact when seeking improved health and wellness, particularly in early childhood development (ECD) and addiction / mental health (A/MD).

“**Sub-systems**” refers to sectors, or sets of institutions, agencies, and organizations, within the broader ecosystem across the province of Alberta in which AFWI operates. Examples of sub-systems include the health, justice, child services, and education systems / sectors.

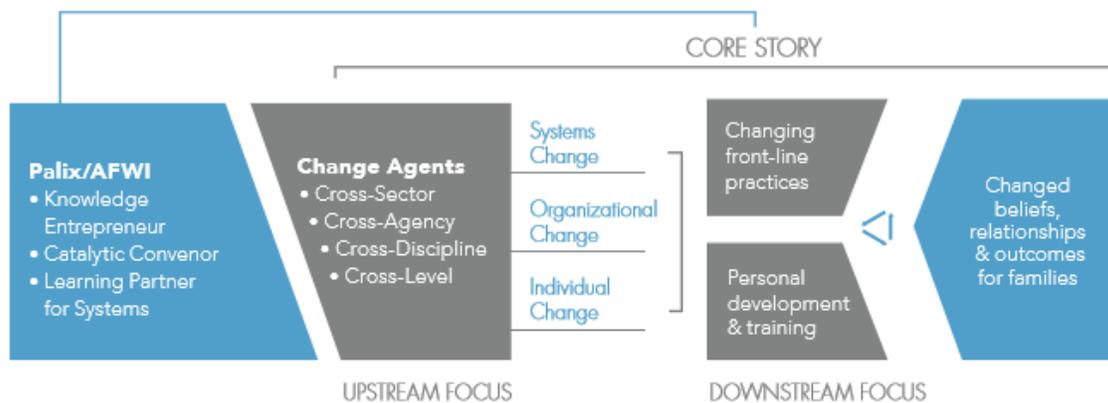
“**The knowledge**” refers to the synthesis of brain science (e.g., the Brain Story) created, curated, or shared via AFWI activities such as the Brain Story Certification Course.

“**Change agents**” refers to recipients of AFWI activities.

“**Developmental evaluation**” is a process that informs and supports innovative and adaptive development in complex dynamic environments.

In addition, the nature of AFWI’s support for change agents has shifted over time, with the network broadening to include not only those “upstream” change agents but also including more “downstream” front-line service providers (e.g., physicians, social workers, treatment counselors). In keeping, the focus of support shifted to a more distributed model—meeting people where they are, conducting workshops and seminars tailored to their work and their community, and supporting their leadership in implementing Brain Story-informed practice. New areas of work also emerged in response to the change agents’ demand for support applying the Brain Story knowledge and adopting aligned practices. Specific investments of AFWI expertise and staff time supported the research-to-practice efforts within the province, through workshops in communities within Alberta, the Change in Mind Initiative and its five local partners in Alberta, and other related efforts. This evolution of AFWI’s support for change agents is largely consistent with the TruePoint recommendations from “Embedding the Brain Story,” in which the authors recommended a shift toward mobilizing the knowledge to practice changes among frontline workers, or “downstream” actors, in the province (see Figure 1).

Figure 1: AFWI Theory of Philanthropy from “Embedding the Brain Story” by TruePoint⁶



In addition, AFWI staff and partners began supporting the mobilization and application of the Brain Story knowledge in specific sub-systems (e.g., education and justice systems) and communities (e.g., Indigenous Peoples). These more targeted strategies were largely opportunistic in their development, and represent a departure from the previous phase of work conducted by AFWI.

AFWI leadership and staff have continued their role as relationship builders and influencers in Alberta within the sub-systems that impact children and families. Staff now conduct more presentations about the Brain Story and its importance, deepen and expand relationships in relevant sub-systems, and provide time and expertise on committees and working groups within the province. In recent years as AFWI’s grantmaking role has diminished, the contribution of staff time and expertise has taken on a greater significance in the Initiative’s strategy and activities.

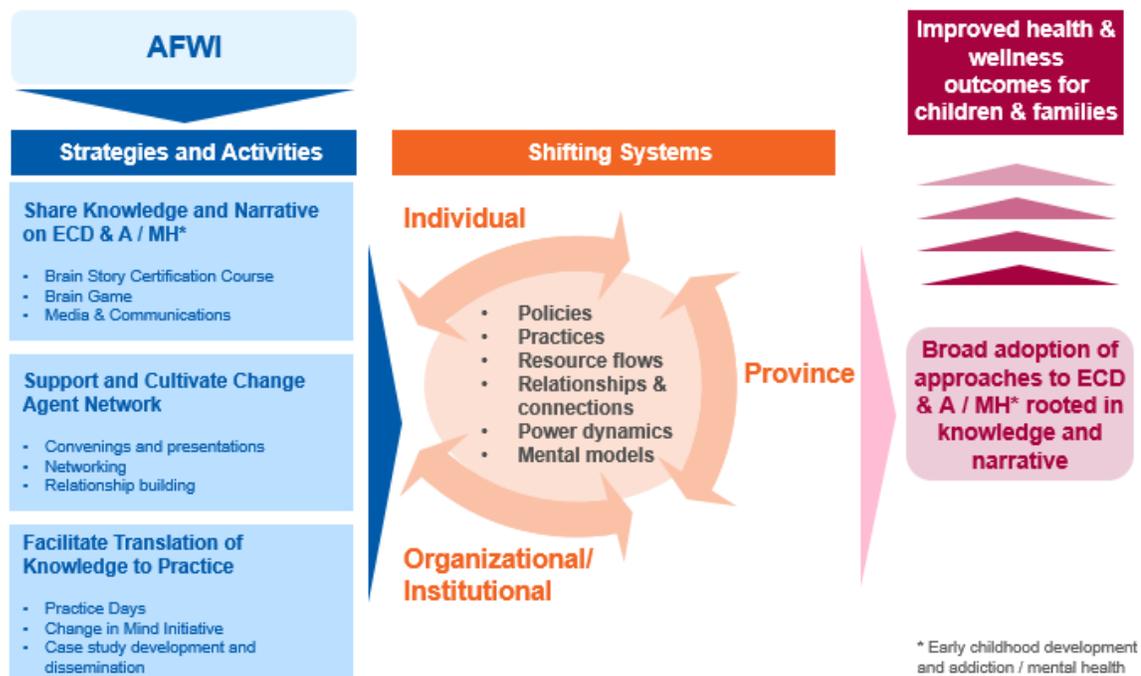
Finally, AFWI has established itself as a leader in knowledge mobilization of the Brain Story knowledge beyond the borders of Alberta. As a result, AFWI staff and partners have responded to inquiries from other provinces in

⁶ Foote, N., and Radner, J. “2017-2019 Alberta Family Wellness Initiative: Embedding the Brain Story to Catalyze Sustainable Change for Children and Families.” TruePoint: Boston, MA, 2019.

Canada, communities in the U.S. and the U.K., among others. Increasingly, AFWI is offering staff time and expertise, learning and communications resources, and coaching support to these efforts outside of Alberta.

As a result of these strategic and programmatic changes by AFWI, the following Theory of Action has been updated to reflect the state of AFWI’s work in 2019:

Figure 2: Updated AFWI Theory of Action (FSG, 2019)



CONTINUED EVOLUTION

In light of AFWI’s orientation to a strategic and opportunistic way of working to shift systems, the Initiative continues to evolve. In mid-2019, AFWI conducted an evaluation of the Brain Story Certification Course and feedback received in the first several years. As a result, they outlined ongoing strategic priorities to support the adoption and use of the course as a professional development and training resource for the understanding and application of Brain Story knowledge in Alberta and beyond. More recently, during the period of the 2019-2020 developmental evaluation, AFWI leadership continued to explore changes in strategy and focus. For instance, the leadership team is increasingly exploring the potential of the resilience scale as an organizing framework for future efforts and evaluation of related outcomes for children and families.⁷ (More detailed discussion of the resilience scale is covered in subsequent sections of this report.) As a result of AFWI’s orientation toward ongoing learning and adaptation, the following evaluation findings are necessarily a snapshot of this particular point in time for AFWI, with an acknowledgement that there continues to be well considered and strategic evolution of AFWI’s efforts in the province, in Canada, and in other countries.

⁷ The resilience scale and the related scientific research is described by the National Scientific Council on the Developing Child in “[Working Paper 13: Supportive Relationships and Active Skill-building Strengthen the Foundations of Resilience.](#)”

SECTION II: CHANGES AS A RESULT OF AFWI'S WORK

INDIVIDUAL CHANGES

The Brain Story Course and AFWI's work have changed mental models and behaviors as well as practices.

At its heart, the work of the Alberta Family Wellness Initiative is about providing individuals—be they educators, health professionals, policymakers, or parents—with knowledge about the importance of healthy brain development during the early years and from an intergenerational and life course perspective to support lifelong mental and physical wellbeing. The theory of change posits that learning this knowledge will shift individuals' key mental models and mindsets about early childhood, brain development, and the factors that may lead to poor mental health and addiction, and that this mental model shift is a necessary precursor to behavior and practice change. In interviews as well as a survey of 439 Brain Story Course participants, FSG explored if and how individuals' exposure to this knowledge is shifting their understanding of others and oneself, inspiring compassion and empathy, and compelling individuals to change their interpersonal and professional interactions.

Resoundingly, the answer was yes: learning about the Brain Story sparked these shifts. In this section of the report, we discuss the following:

- What new **knowledge and understanding** did individuals take away from the Brain Story Course?
- Which **messages and framing most resonated** with individuals?
- What **changes in mental models and mindsets** have occurred as a result of individuals' learning about the Brain Story?
- What **behavioral and practice changes are individuals making** as a result of their shifts in understanding and mindsets?

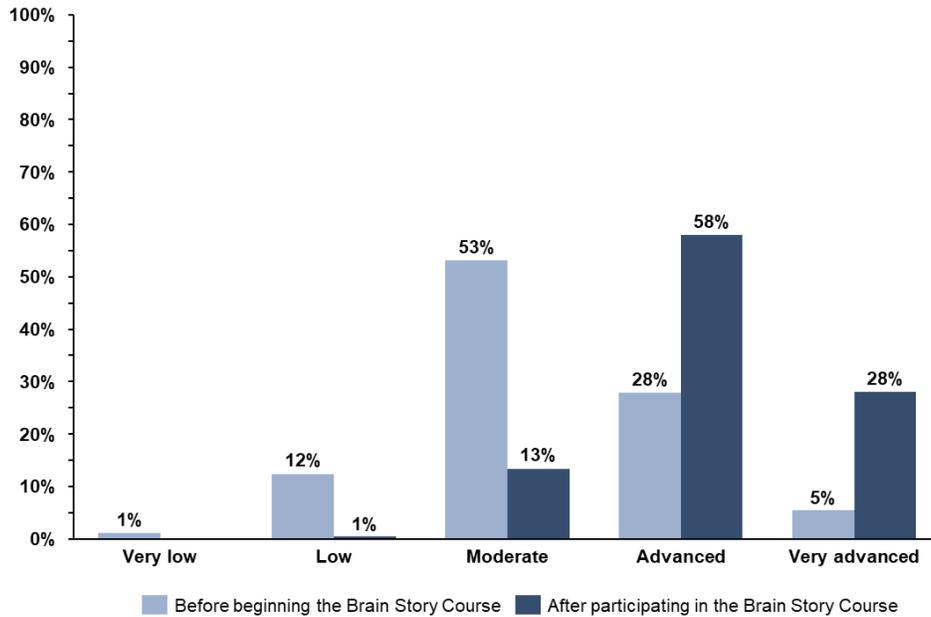
NEW OR DEEPENED UNDERSTANDING ABOUT BRAIN DEVELOPMENT SUPPORTS MENTAL MODEL SHIFTS

Whether they learned about the Brain Story by taking the Brain Story Certification Course or engaging with other resources offered by AFWI, individuals exposed to the Brain Story science reported greater understanding of and knowledge about early childhood brain development, the impact of brain development on later in life outcomes, and a number of other key concepts in the Course.

Results from a survey of over 400 Brain Story Course participants provide evidence of greater understanding of and knowledge about major brain science components in individuals as a result of taking the Course.

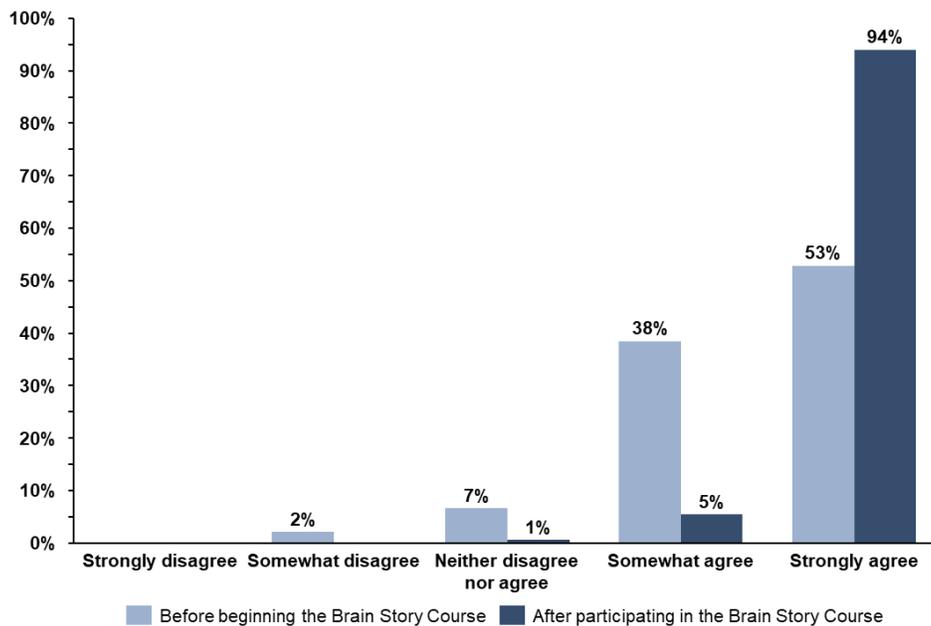
After completing the Brain Story Course, participants reported greater understanding of brain development during early childhood. Survey respondents were asked to rate their level of understanding of early childhood brain development before and after taking the Brain Story Course on a five-point Likert scale ranging from "very low" to "very advanced." Thirty-three percent of respondents reported an advanced or very advanced understanding prior to taking the Course, with 86 percent reporting advanced or very advanced understanding after completion (n=424). The change in mean level of understanding was statistically significant at $p < .001$.

Figure 3. Self-Reported Level of Understanding of Early Childhood Brain Development, Before and After Taking the Brain Story Certification Course (n=424)



When asked about the extent to which they agreed with the statement “Early childhood and brain development has a significant impact on mental health and addiction outcomes later in life” before and after taking the Brain Story Course, survey respondents reported a marked change in their perceptions (n=424). The rating scale was a five-point Likert scale ranging from “strongly disagree” to “strongly agree.” The change in the mean rating of perception was statistically significant at $p < .001$.

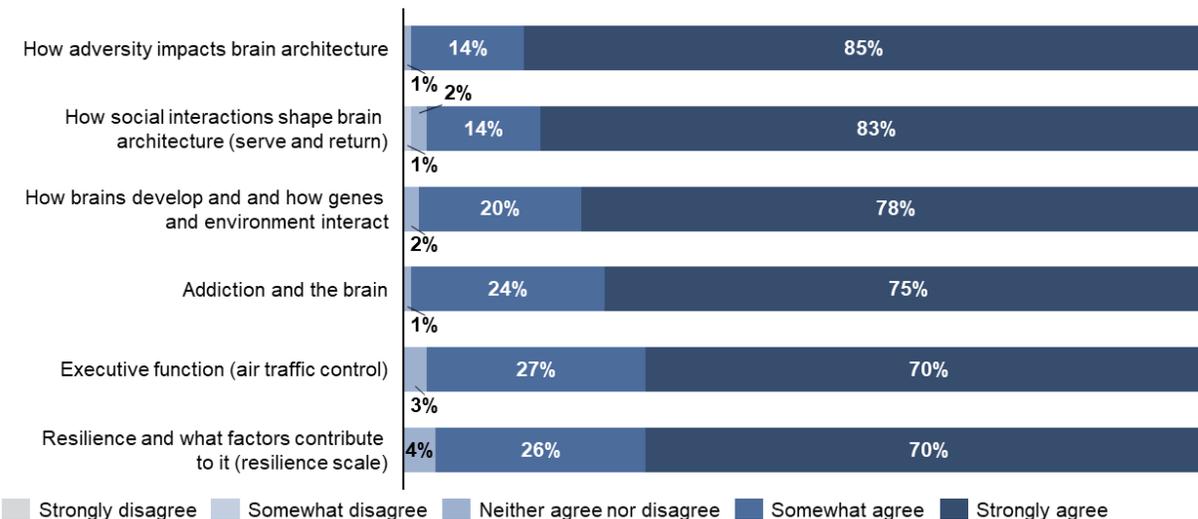
Figure 4. Perceptions of the Impact of Early Childhood and Brain Development on Mental Health and Addiction Outcomes, Before and After Taking the Brain Story Certification Course (n=424)



Brain Story Course participants also reported greater knowledge about particular concepts related to brain development after taking the Course. For each of the six major concepts about which survey respondents were asked, at least 70 percent strongly agreed they were more knowledgeable after completing the Course.

Figure 5. Brain Story Course Participants’ Reports on Increased Knowledge in Six Domains (n=321)

After completing the Brain Story Certification Course, I am more knowledgeable about...



Individuals who learned about the Brain Story not only gained understanding of and knowledge about major concepts in the Course, but also found it meaningful and impactful.

When asked to choose the top three most impactful concepts of the six major concepts covered in the Brain Story Course, survey respondents chose learning about how adversity impacts brain architecture (62%); how social interactions shape brain architecture, or “serve and return” (57%); and resilience and its contributing factors, or the resilience scale (42%).

In interviews, stakeholders further described the resonance of these concepts for themselves and others:

“So the toxic stress metaphor, from the continuum of good stress to moderate stress to toxic stress, like green yellow red... understanding the role of resiliency and decreasing the burden of someone’s adversity to help increase their resilience and boost their positive supports... A lot of people have kind of like an ‘aha!’ moment when you put it all together in how it interplays and is the precursor and the foundation for health risks and resilience and strength.” (Healthcare Professional)

For many practitioners, the brain science itself was not necessarily new knowledge, but they still found the Brain Story impactful because it provided them language to use with clients and with other practitioners.

“The information from the Core Story reinforced things that we knew in practice in the social work field but really didn’t have a great way to describe. We knew that people we were serving came from histories where there was abuse, neglect, chaos, and they came to us struggling with social-emotional issues, relationship issues, anger management issues, but we didn’t have it phrased as ACEs. Learning about ACEs was quite validating, gave us a common language across disciplines to be able to say, ‘Yeah, if bad things happen, not only are those outcomes going to happen but also physical health outcomes.’” (Children’s Services Expert)

Individuals described a number of shifts in their pre-existing mental models about people living with mental health challenges or addiction after learning the Brain Story knowledge; such mindset shifts are an important precursor to behavioral and practice change.

Moving from an increased understanding to changing behavior and practice requires a shift in one's mental models and mindsets. Mental models are "deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action."⁸

Among practitioners, one of the most frequently mentioned shifts was from seeing clients and patients as having something *wrong* with them to seeing their current behavior or health status as an outgrowth of what had *happened* to them. Understanding more about how adverse childhood experiences (ACEs) interfere with healthy brain development and how that can contribute to poor mental and physical health conditions helped them ask not, "What's wrong with you?" but "What happened to you?"

"[This lens is about] understanding the root of behavior. This is the fundamental thing that comes out all the time: don't talk about what's wrong with you, but ask what's happened to you. This notion of the context of environment and how you go about understanding that some of the [child's] behaviors are driven by different things. It's not about an individual's desire to be behaving like that. If you understand the brain science, you understand how the [child] has developed over time to come to this place, right?" (Children's Services Expert)

Among survey respondents, in response to the statement "The Brain Story Course changed my understanding of the actions or reactions of the people I serve to stressful situations," 50 percent of survey respondents strongly agreed (n=212) and another 37 percent somewhat agreed (n=158).

Educators also discussed how shifting their mindsets from a "what's wrong with you" lens to "what happened to you" made a difference in their context. Interviewees shared that after learning about the brain science, teachers viewed students who were acting out in class or having trouble sitting as experiencing challenges with "air traffic control," or executive function and self-regulation, rather than being willfully "bad kids." **In addition to better understanding how these concepts manifest in children, educators mentioned similarly having more empathy and less blame for parents.**

"We know that there's inherent judgment in our schools, and a lot of conversation about 'if only the parents would,' then you can complete that sentence whichever way you want. I think we're getting to a point where administrators are understanding and having conversations, and then filtering down to teachers, that you know what? The parents are doing the very best they can with the tools that they have. It's moving from a deficit that we tend to with kind of our white middle class lens, we think everything should be the same as what we view, but people are trying to understand." (Education Leader)

For practitioners and policymakers in the healthcare sector, the shift from "what's wrong with you" to "what happened to you?" helped them move away from stereotypes and assumptions about why people behave certain ways that seem, to a healthy person, counter to their wellbeing. For example, an addiction medicine professional who had been working in the field for decades shared how revitalizing taking the Brain Story Course had been for her work. She said, "It just changes one's whole approach to the really difficult addicted patients

⁸ Senge, P.M. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*, NY: Doubleday Currency.

because you see them in a whole different way. When you understand better, you engage people better and you make them more successful.”

It also helped them understand when their clients made choices around their healthcare and overall wellbeing that seemed counter to their best interests. Some practitioners shared that they had previously been frustrated when clients battling addiction would relapse, or when patients would not come back for a follow-up appointment or act on a referral.

“Early in my practice I had some men who would say, ‘Yeah, okay, I might have colon cancer. I’ll go get a colonoscopy or barium enema,’ but then they just wouldn’t show up. I got frustrated. I’m like, why aren’t you doing this? Then they finally said, ‘Well, I’ve never told you this, but I was sexually abused as a kid and I just can’t.’ Then eventually we got to a point where I’d say, what if I don’t examine you, and no one examines you while you’re conscious. How about once you’re sedated, can the surgeon do a rectal exam? And they’re like, ‘Okay, as long as I’m knocked out and I won’t remember it, that’d be okay.’ So I write that in my letter to the surgeons now. I say, this man we suspect may have some colorectal pathology, but he has an ACE score of nine out of 10 which includes a history of childhood sexual abuse and he has not consented to a digital rectal exam. However, he will consent to this procedure as long as he is sedated. It changes my practice approach at a really granular level in terms of people accessing the healthcare they need.”
(Healthcare Professional)

For the most part, those interviewed that work within the healthcare sector were very positive about the information in the Brain Story and shared that it had a profound impact on them. However, they noted that they had been receptive to the information in the first place, and reflected that some of their colleagues in the healthcare field are not as open to learning about it. Some interviewees mentioned that many in the healthcare field continue to hold on to the biomedical model of medicine and do not embrace the biopsychosocial model, which recognizes the role psychosocial factors like stress, trauma, lack of healthy social attachments, and more can play in health outcomes.⁹ The biopsychosocial model closely aligns with the Brain Story. One healthcare professional described the implications of this ideological and paradigmatic rift within the sector, stating, *“When someone comes with chest pain, I’m going from the physical, mental, emotional, all of those things—the biopsychosocial. The Brain Story talks about that. It fits with my paradigm. Maybe for other physicians, if they’re really into the medical model, this would be a harder stretch for them.”* (Healthcare Professional)

Some healthcare providers’ lack of willingness to consider a different approach presents a significant hurdle to overcome for widespread adoption of practices aligned with the brain science to happen. However, research conducted for this evaluation suggests that if individuals engage with the content in the Brain Story Course, it has the power to shift mindsets, even among those who may have previously held countervailing beliefs.

Research by the FrameWorks Institute and many others has shown that a dominant mindset related to addiction is that people experiencing addiction are able to control their substance use, and that abusing substances is a choice—perhaps even a moral failing.¹⁰ This stigma has been longstanding and difficult to combat—but findings from interviews and the survey suggest that learning about the Brain Story can shift individuals’ views on addiction.

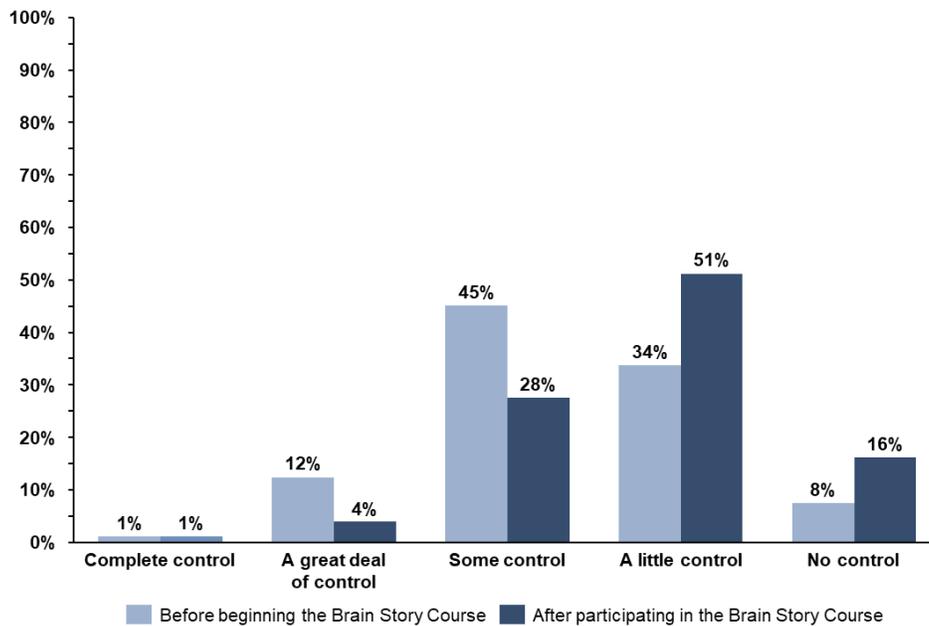
⁹ Borrell-Carrio F., Suchman, A.L., Epstein, R.M. “The Biopsychosocial Model 25 Years Later: Principles, Practice, and Scientific Inquiry.” *The Annals of Family Medicine*. 2004 (2): 576-82.

¹⁰ Bales, S. N. (2011). Talking addiction in Alberta: A FrameWorks Message Memo. Washington, DC: FrameWorks Institute; Room, R. “Stigma, social inequality and alcohol and drug use.” *Australasian Professional Society on Alcohol and Other Drugs: Drug and Alcohol Review*. March 2005, 24 (2): 143-155.

Eighty-seven percent of survey respondents (n=370) strongly agreed or somewhat agreed that participating in the Brain Story Course changed how they thought about the factors that contribute to addiction; less than one percent of survey respondents strongly disagreed. One interviewee stated, *“People are stigmatized to not share their stories about mental health and addiction, because of the historic way of seeing it as moral failings of people or families. The most beautiful thing I think [the Brain Story] does is it takes the classic moral judgment away from a situation.”* (Addiction Medicine Practitioner)

The Brain Story Course also shifted survey respondents’ mindsets about the degree of control that people experiencing addiction have over their substance use. Fifty-nine percent of survey respondents reported that before they took the Brain Story Course, they thought people experiencing addiction had complete control, a great deal of control, or some control over their substance use; after taking the Course, only one-third (33 percent, n=139) of participants held this view. The other two-thirds of Course participants (67 percent, n=287) reported that after taking the Course, they believed people experiencing addiction have a little to no control over their addiction. The change in views regarding the degree of control someone experiencing addiction has over their substance abuse was statistically significant at $p < .001$.

Figure 6. Brain Story Course Participants’ Beliefs About the Degree of Control People Experiencing Addiction Have Over Their Substance Use, Before and After Taking the Brain Story Course (n=426)



Results from the survey of Brain Story Certification Course participants provide more evidence that learning about the brain science increases empathy and compassion for others. Fifty-eight percent of survey respondents (n=248) reported that they felt much more compassionate towards people who had experienced trauma after taking the Course, and an additional 30 percent said they felt somewhat more compassionate (n=127).

Learning about the Brain Story inspired people not only to change how they thought about and felt towards others, but also to shift how they viewed themselves and the role of their life experiences in shaping the present.

Many of those people exposed to the Brain Story felt greater compassion for themselves as well as others. Seventy-two percent of survey respondents (n=308) reported that after taking the Brain Story Course, they felt

somewhat or much more compassionate towards themselves. Survey respondents also reported they better understood their own lives and how their experiences had shaped their present.

The great majority of survey respondents reported that the Brain Story Course helped them better understand themselves. Eighty-three percent of survey respondents (n=352) strongly agreed or somewhat agreed that the Brain Story Course changed their understanding about how their past experiences impact their current life, and 85 percent of respondents strongly agreed or somewhat agreed that they better understood their own actions or reactions to stressful situations after taking the Course.

In interviews, **practitioners told stories about how meaningful it was for clients to learn about themselves through the lens of brain science.** One provider shared that the majority of his patients have high ACE-Q scores, typically between seven and ten. They often live in environments where their peers have a similar number of ACEs, so they assume that is the case for the general population. However, an ACE score of seven or higher is actually statistically rare—according to a Behavioral Risk Factor Surveillance System (BRFSS) study of ACE prevalence in 23 states in the US, an estimated 75 percent of the population has a score of two or fewer ACEs. Only one in six people has experienced four or more.¹¹ This provider said learning this fact is “mind boggling” for their patients, and they begin to understand more about themselves, their behaviors, and reactions to life.

“[After doing the ACE-Q], I tell the patient, ‘You are actually remarkably strong. For you to be sitting here today asking for help, trying to address these issues...’ They usually have this moment where they become really emotional, because they finally feel validated in what has been their reality. They know that they’re decent people, they know that things are unfair in terms of their access to education, to healthcare, to housing - and then to actually have that validated by science. The part that really has impact is that it alleviates guilt and some of the self-loathing.”
(Healthcare Professional)

Practitioners trust the Brain Story because it is rooted in science, and the Brain Story’s use of metaphors helps make major brain science concepts accessible to a wider range of people.

That the information in the Brain Story Certification Course is grounded in science was mentioned by several interviewees as one of the reasons it is so compelling. This was true in particular for those working in the healthcare sector, as a strong scientific basis is crucial for getting healthcare providers engaged. One healthcare professional said, *“The science is compelling. As soon as you look up ACEs and what they mean... Now I can look at everybody differently. You can’t un-know that perspective. It’s not a perspective, it’s science. You can’t un-know that science.”*

Metaphors such as “air traffic control” and “serve and return” helped make major concepts from the brain science more easily understood and accessible to people beyond a practitioner audience. In interviews, stakeholders from across the various sub-systems explored for this evaluation mentioned how these metaphors distilled complex information into visuals that they could share with clients, patients, students, and other service recipients. One person commented, *“I think that the work that AFWI has done using things like scaffolding and serve and return has been helpful for community members or stakeholders to understand. And so then when I’m presenting our work, I can use those analogies to illustrate the research science.”* (Children’s Services Professional)

However, some participants in the Brain Story Course voiced challenges understanding and making sense of information in the Course that was not crystallized into a metaphor. Much of the science that is presented in the Brain Story Certification Course is quite complex. While that level of depth and granular explanation is what has

¹¹ Merrick, M.T., Ford, D.C., Ports, K. A., Guinn, A. S. (2018). [Prevalence of Adverse Childhood Experiences From the 2011-2014 Behavioral Risk Factor Surveillance System in 23 States](#). JAMA Pediatrics, 172(11), 1038-1044.

helped excite practitioners with deep medical or psychiatric knowledge about the Course, it also may not be accessible to everyone interested in the brain science. One interviewee reflecting on the experience of a group of employees who all took the Course as a required certification: *“Some people went through it very quickly, others struggled with the high a level of science, particularly those who were from another country and not English-speaking as their mother tongue.”* (Children’s Services Professional)

For many, the power of the brain science is that it offers relief and hope, and this is well illustrated in the resilience scale.

Practitioners shared that the biopsychosocial model espoused by the Brain Story provides hope because it incorporates multiple factors and shows that outcomes are not fixed. Interventions and positive supports can reduce the potential or existing burden of negative experiences and trauma. The concept of the resilience scale (see Figure 7) helps illustrate this idea. The scale builds understanding of the interdependent and dynamic factors—adversity, skills and abilities, and positive supports—that contribute to the development of and capacity for resilience in childhood and throughout life. The scale also provides a framework for moving from knowing to doing; in other words from being aware of and understanding the Brain Story to applying it in practice and measuring results along these three dimensions.

Figure 7. The Resilience Scale¹²



Learning about resilience and the resilience scale in the Brain Story Course helped participants to feel both more hopeful that people could improve their lives and health outcomes if provided with the necessary supports, and to feel well equipped to provide or refer people to those supports. After participating in the Brain Story Course, 36 percent of survey respondents (n=89) reported feeling much more hopeful about the ability of the people their organization serves to build their own resilience, and another 52 percent (n=132) reported feeling somewhat more hopeful. Thirty-two percent of respondents (n=134) felt very well equipped to help others build resilience, and 59 percent (n=251) felt somewhat well equipped to do so.

The concept of resilience and that a path forward is possible provides great hope for individuals as well. It helps them move away from the idea that something is wrong with them and instead understand that negative experiences in their past shaped their present—and that building their resilience through positive supports and experiences can improve their lives. After participating in the Brain Story Course, 39 percent of survey respondents

¹² Alberta Family Wellness Initiative. [Resilience](#), retrieved March 23, 2020. See also the National Scientific Council on the Developing Child’s [“Working Paper 13: Supportive Relationships and Active Skill-building Strengthen the Foundations of Resilience”](#) (2015).

(n=165) felt much more hopeful about their ability to build their own resilience, and another 38 percent (n=161) felt somewhat more hopeful.

Interview data showed that the knowledge gained through the Brain Story and the hope it inspired created a sense of responsibility among practitioners to work differently, for teachers to teach differently, for parents to parent differently and interrupt the cycle. In the next section, we discuss how this manifested in behavior and practice change by individuals.

CHANGES IN UNDERSTANDING AND MINDSETS PROMPTED CHANGES TO BEHAVIORS IN RELATIONSHIPS AND PROFESSIONAL PRACTICES

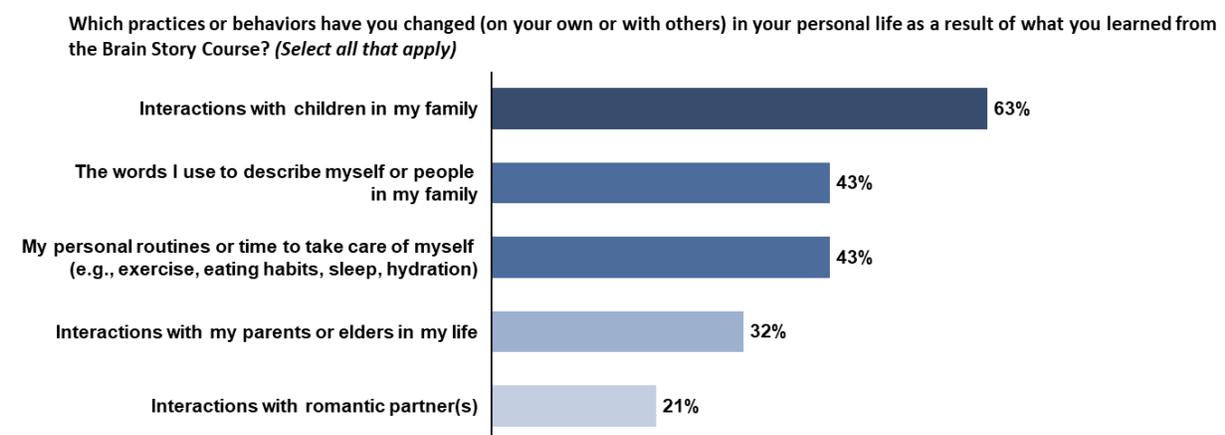
In interviews, many people who had learned about the Brain Story described feeling compelled to change their behavior as a result of their new knowledge. Such behavioral changes most frequently took the form of sharing the brain science with others, using the language of brain science in conversation, and conducting themselves differently in various types of relationships—both personal and professional. Those who described feeling more compassionate and empathetic towards themselves after reflecting on their lives through the lens of the brain science also described changes in their self-care.

Participants in the Brain Story Course reported changing their interactions with people in their personal lives as well as professional, as well as changing the language they used in conversations with others.

Results from the survey provided further evidence that the knowledge gained in the Course inspires participants to change their individual behaviors and practices in a number of ways. Eighty-three percent of survey respondents (n=356) strongly agreed or somewhat agreed with the statement “I have changed my individual practices and behaviors as a result of what I learned from the Brain Story Course.”

Those who reported changing their behaviors or practices after taking the Brain Story Course did so in their personal lives in the following ways:

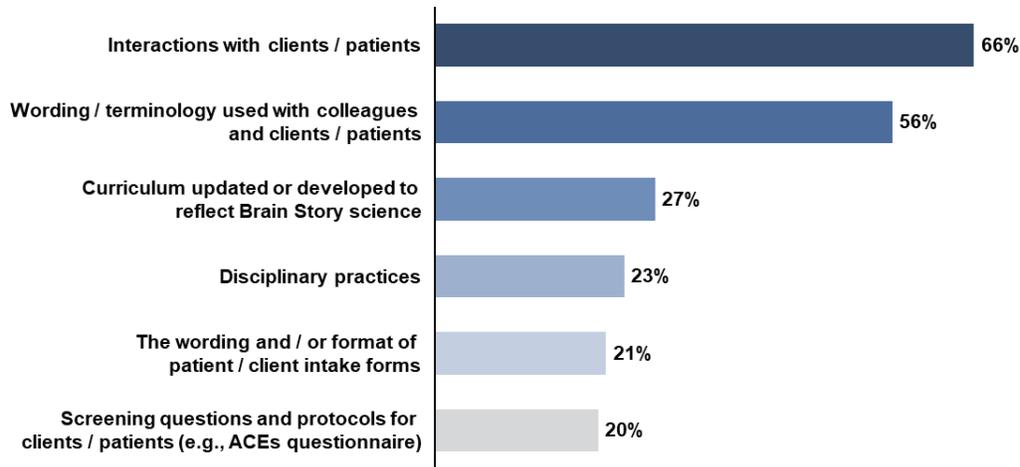
Figure 8. Behavior and Practice Changes in Personal Life Reported by Brain Story Course Participants (n=366)



Participants in the Brain Story Course also noted behavioral and practice changes they made in professional settings. All respondents to the survey who indicated that they had changed their individual practices or behaviors were invited to answer this question, whether or not they worked in professional settings where behavioral or practice changes aligned with the brain science were applicable. It is possible that the percentages of respondents reporting such changes would have been higher if the pool of respondents had been restricted to those in roles where they were able to make these changes.

Figure 9. Behavior and Practice Changes in Professional Settings Reported by Brain Story Course Participants (n=366)

Which practices or behaviors have you changed (on your own or with others) in professional settings as a result of what you learned from the Brain Story Course? (Select all that apply)



In interviews, stakeholders further explained how they had shifted the ways they communicated with others in their personal lives and in professional settings. One interviewee was so moved by reflecting on her life and her parenting after taking the Course that she reached out to her daughters to talk about it. She said, *“The first thing I did when I finished [the Brain Story Course] was I got off the phone and I got off the computer and called my two girls and said, ‘I’m so sorry.’ I felt I screwed it up, I didn’t know this stuff and I should have parented in different ways.”* (Education Expert) Interviewees said that the types and content of their conversations in the workplace had changed, and one said the language had permeated every aspect of their lives: *“It informs the way we talk about policy and the way we think about approaches to funding... I think I parent differently because of this information. I’ve used it in counseling people in the volunteer work I do, so it becomes part of everything that I do.”* (Healthcare Professional)

In professional settings, changes in communication with clients included raising the topic of trauma, aiming for Brain Story-informed conversations, and asking more information about a client or patient’s context or life beyond the obvious issue for which they were being seen. One entry point for these conversations was introducing the ACE-Q as a history-taking tool and talking with patients about reducing the burden of adversity, adding positive supports, and improving skills and abilities to build resilience. Practitioners described these conversations as transformative for many patients, and not ones they may have initiated prior to taking the Brain Story Course. We discuss the use of the ACE-Q in more detail in the individual and organizational practice change sections of this report.

Interviewees also discussed how they had adopted the language of the Brain Story and used the metaphors to share the information with others. One person said, *“The Brain’s Story language has influenced the way I speak to others about the impact of things that happen to children on their growth and development. AFWI has done an amazing job of creating a common language around the neuroscience of child development. I’ve tried to build on some of their analogies as appropriate.”* (Children’s Services Professional)

Practitioners also mentioned sharing information about the brain science with clients or patients to help them understand why the practitioner was making a particular treatment recommendation or referral for services. The

metaphors help clients understand what they are experiencing, and what can be done about it, as one interviewee explained:

"I use the vocabulary of the Brain Story and weave that into daily rounds. For example, when certain things come up or something has just happened to them and it's an example of a really poor serve and return. Or we talk about their resilience scale, if something has come up which really relates to that toxic stress. We refer to the air traffic control and why I'm going to send them to this particular group, or this is why you're going to see this psychologist, because your executive function skills have been poorly developed, not through any fault of your own, but this is why doing this particular program is really going to help you." (Addiction Medicine Professional)

In addition to using the language of the Brain Story in conversations with clients and patients, some practitioners have integrated visual resources as aids. One interviewee illustrated their use of these resources, saying, *"I've got lots of the resources sent to me by Palix. I bring out five flashcards about brain architecture, toxic stress, resilience, air traffic control, serve and return. I go through these flashcards with patients to help them understand their ACE score and the resilience scale after we complete an ACE questionnaire."* (Addiction Medicine Professional)

A nursing professional described how a shift in mindset among nurses towards their patients after taking the Course changed their interactions with patients to be more inquiry-focused and relational, rather than driven by assumptions.

"[After learning about the brain science], nurses are no longer focused on, 'Well what's wrong with you?' They're thinking about a model of care that's not episodic, that's more long-term, that's more about how you build on strengths... The understanding of how people came to where they are as opposed to the traditional biomedical model, 'Well, what's wrong with you? Oh, your fingers hurt or you fell down and you broke something. Okay, well let's fix it. Off you go.' Nobody bothers to go upstream and figure out why did you keep falling down or why does your finger keep getting caught? You keep falling down because you're living in this rundown house with broken floors or linoleum and, but nobody cares. The Brain Story backs that up and increases the understanding of how you have to nurture and care for people throughout the lifespan. It gives an understanding of why it is people come to where they are." (Healthcare Professional)

In addition to changing their interpersonal and professional behaviors and language, people who learned about the Brain Science were motivated to share the information with others and even encourage them to take the Course themselves.

One behavior reported by a majority of survey respondents was sharing what they learned in the Course with others; 79 percent shared information with coworkers, 73 percent shared with family, 61 percent shared with friends, and 48 reported sharing information with clients and patients.¹³ An interviewee relayed, *"When my niece had a baby, we sat and watched the Brain Story videos. That's how important it was to me that she understand it. She knows now why serve and return, executive function, all of that stuff, how important that is and how her baby's brain is being built. There's me as a commoner doing that with my niece."* (Addiction Medicine Expert)

Going beyond sharing the information with others, one practitioner mentioned encouraging others to take the Course itself:

¹³ All respondents to the survey had the option to choose this answer, regardless of whether or not they provided direct services to clients or patients. This percentage would likely be higher if this answer choice was restricted to direct service providers only.

“So [the Brain Story] becomes part of everything that I do. Like when we train medical students, I always say your take home point is to look at the Alberta Family Wellness Initiative website and take the brain science Course. If there’s one thing you remember from me, that’s it. I don’t care if you learn how to diagnose hepatitis B or diabetes or a fancy approach to suturing lacerations. The most important thing you can learn as a medical student is brain science and how we can use it in frontline practice.” (Healthcare Professional)

Those who learn about the brain science reported being eager to apply this knowledge to their work, though they found that exactly how to operationalize what they had learned in practice was largely up to them to determine.

Among respondents to the survey, the **most popular motivation (chosen by 39 percent of respondents, or 137 people) for taking the Brain Story Course was “I wanted to apply Brain Story Science to my work”—suggesting that practitioners were eager to translate their Brain Story knowledge into their services.**

The depth and breadth of individual practice changes varied widely, and in some cases included precursors to organizational or systemic changes. For example, in the justice system, some judges modified their sentencing practices due to changes in understanding of responsibility. In schools, teachers changed their discipline practices after understanding that children have different capacities for positive stress, depending on their brain development. In health, practitioners have incorporated more trauma-informed approaches and communication in ways that could be replicated as clinical standards of practice.

While Brain Story Course participants were clearly enthusiastic about changing their behaviors and practices as a result of learning the brain science, one of the challenges mentioned was that the Brain Story Certification Course stops short of providing recommendations for *which* practices to change and *how*. One interviewee explained:

“It’s one thing to talk about the Core Story all the time, but people don’t know what to do with the Core Story. You can’t just expect that some knowledge is going to change practice, just like parents’ knowledge of making eye contact and singing to their babies isn’t ultimately going to change how they parent. People need to know what to do. It’s one thing to know about the Core Story, but what kind of programs can I deliver differently than I have before?” (Children’s Services Professional)

A majority of survey respondents (68 percent) have advocated for changes informed by Brain Story science within their organizations. While we discuss organizational changes later in this report, the behavior of advocating for change as inspired by participating in the Brain Story Course is relevant here. Types of changes that Course participants mentioned advocating for included:

- Offering or mandating training for staff about the brain science or taking the Course
- Integrating the ACE-Q into patient care for history-taking purposes
- Offering new or changing existing programming for patients and their family members about the brain science (e.g., playing the Brain Game, show AFWI videos)
- Adopting a trauma-informed lens
- Guidance for staff around the language used to describe those served by the organization and in interactions
- A more explicit focus on relationship-building, especially in educational settings or when working with children

In the next section, the report details how organizational changes occurred, as well as what supported and hindered those organizational changes.

ORGANIZATIONAL CHANGES

The profound impact of the Brain Story on individuals has in turn led to impactful changes at the organizational level in some cases. The data collected for this evaluation illuminated several types of organizational changes occurring across the four sub-systems:

1. Shifts in **strategic direction and resource allocation**;
2. **Training** for professionals;
3. Changes to **staffing**;
4. **Shared language** within and across organizations; and
5. **Programmatic changes** to integrate Brain Story science principles.

The evaluation also identified several factors that impeded or supported organizational change for stakeholders in Alberta.

Some organizations have shifted strategic direction and resource allocation as a result of the Brain Story science.

Some organizations have shifted their strategic direction because of Brain Story science and are allocating funding accordingly. For instance, one organization made a strategic decision to focus only on children in their early years and embedded the Brain Story into their strategic plan. They made it a requirement that anyone in direct contact with families or on the leadership team has to complete Brain Story certification, and decided to pay early childhood educators more, recognizing the critical role they play in children’s lives. One interviewee explained the changes:

“Early childhood educators have been undervalued throughout history: ‘You’re just a childcare provider. You’re just looking after children. It’s no big deal.’ With this understanding of the big deal it really is, we made it a very significant thing within our organization. We said to those early childhood experts, you’re actually subject matter experts. Then we went further and we decided if they’re really that critical and crucial for the development of our young citizens, then we should compensate them as such. So we just finished a compensation review where we basically leveled the playing field internally so that social workers and the early childhood educators are making the same money.”
(Children’s Services Expert)

According to interviewees, consistent leadership commitment, dedicated funding, and institutional policy changes produced significant organizational change. Brain Story science served not only as information to guide organizational shifts but also as scientific validation for investments.

Many organizations have adopted the Brain Story Course or aligned information as part of professional training.

After engaging with the Brain Story, interview data showed that many organizations wanted most if not all of their staff to have an understanding of this foundational knowledge for their work. **Many organizations had mandatory Brain Story training for at least some staff.** For example, there was a mandate at one school that psychologists must take the Brain Story Course. Another children’s services organization ensured that all program staff who worked directly with clients completed the Brain Story certification.

Other organizations did not require the full Course, but found ways to introduce their staff to concepts through select resources or shorter trainings. For example, one pilot program for emergency room (ER) nurses translated Brain Story science into a training to reduce stigma for patients in the ER. One interviewee explained, *“We’re piloting a short Course to get at a different understanding for nursing staff who are supporting families when they come to the emergency department to have more compassion in what’s going on and to understand how this ended up happening.”* (Healthcare Provider)

A few people interviewed questioned whether the cost (in time and resources) was justified to train all staff, especially given the time commitment for the Brain Story Certification Course. However, most interviewees relayed strong motivation on the part of organizations to ensure that employees learned the Brain Story knowledge, driven by the belief that this knowledge would greatly help support clients and communities.

Changes to staffing also helped some organizations align with the Brain Story and better serve others.

Interviewees reported that engaging with the Brain Story led to staffing changes at some organizations, which **changed hiring requirements and practices.** For example, across subsystems such as health, education, and children’s services, some organizations now include the Brain Story Certification Course as a preferred or even required qualification in job descriptions. Specifically, several examples emerged from nonprofit service providers such as CUPS and Catholic Family Services. In some cases, the Brain Story certification has been a requirement for grant and contract recipients, both within Alberta and nationally in Canada.

Additionally, several organizations reported adding new positions to support children and personnel. For instance, one school created a position of a “family enhancement facilitator” who works with parents, accompanies them to doctor’s appointments, and supports the family with their goals for raising their children. To support personnel, one school added District Diverse Learning Teachers, a role intended to provide extra tools for teachers working with students who were dysregulated. The Brain Story alerted many organizational leaders to the need to hire additional people or train current employees in the Brain Story science, changing the knowledge within their organizations to better equip professionals to serve their clients and communities.

Shared language about the Brain Story within organizations improved communication and collaboration.

The Brain Story created the opportunity for shared language within and across organizations, which has facilitated collaboration. **Within organizations, staff found that the language of the Brain Story facilitated conversations about and with their clients.** For instance, once employees within children’s services organizations took the Brain Story Course and shared common concepts and language, interviewees noted that it became easier to have conversations about why families might be acting in a specific way and to promote empathy for what a client or family might be going through at any given time.

Interviewees shared that the Brain Story certification served as a baseline or unifying training in organizations where different staff members might have varied experiences or professional training:

“We have PSW social workers, MSW social workers, psychologists, dieticians, people with varied backgrounds. We have accountants. We have people with no university education. Our clients sometimes work for us. I thought [the Brain Story] was a great foundational piece of knowledge that we can all roll in the same direction, so we all have a common language and a common way of viewing.” (Children’s Services Expert)

At Edmonton Practice Days, participants reported creative ways that organizations have made the metaphors “visible” and reinforced them for staff by doing things like naming all their conference rooms after Brain Story metaphors (e.g., the “Serve and Return” room).

Finally, several interviewees noted that when parents, children, and clients were educated about the Brain Story in addition to staff, the shared language helped facilitate better communication, and practitioners could better partner with their clients to address challenges they faced.

Many organizations across sub-systems have adopted programmatic changes aligned with the Brain Story.

Across subsystems, interviewees identified some organizations that changed their programming to align with the Brain Story science by building knowledge and skills for parents and children, creating safer and more welcoming environments, and asking different questions that view the child or parent with a more holistic and compassionate lens.

At Edmonton Practice Days, evaluators heard that after people took the Brain Story Certification Course, they started to see clients as “partners of the program rather than consumers of the program” and designed their programs with that ethos in mind across organizations and sub-systems. This shift in mindset at an organizational level meant that organizations were looking to see how they could better collaborate with parents and children and co-create solutions for challenges they might be facing. Moreover, we heard that more organizations were getting at the root causes of trauma, “*addressing the bottom of the iceberg so the top can shift.*”

Building knowledge and skills for caregivers and children using Brain Story science was a common shift in programming. Across education, health, justice, and children’s services organizations, interviewees reported that some practitioners were increasingly designing programs to help clients better understand Brain Story concepts. As detailed in the section of the report on changes among individuals, adults were better able to understand themselves, their past, and children in their care after learning about the Brain Story. Many organizations across sub-systems went a step beyond understanding the science to helping adults and children build skills informed by the Brain Story. One interviewee shared an experience with a client to illustrate the impact:

“A client said, ‘I’ve taken four parenting programs. It’s not that I don’t know how to parent, but every time I’m faced with a challenge with my children, I react with anger. Now I know why I have anger, why it was passed down to me. For the first time in my entire parenting life, when my son triggered me, I took a breath, and all of a sudden, I had this aha moment and everything changed.’” (Social Work Professional)

Organizations were supporting adults and children with building knowledge and skills in many ways. One organization developed a 20-week curriculum for parents based on the Brain Story. The curriculum alternates between parents learning about theory and outreach workers going into their homes to apply parenting practices. According to interviewees, programs like this have gotten highly positive feedback from the parents participating.

One aspect of Brain Story-aligned knowledge and skills for parents included emphasizing understanding and reflective practice for parents, rather than just behaviors. In the same ways that schools were shifting from telling children and youth what to do and explaining to them more about why they were doing something, programs that work with parents were also shifting from behavioral interventions to deeper, more reflective interventions. One interviewee explained:

“Programs and services to help families affected by toxic stress really have been behavioral in nature, like teaching parents about singing and playing with your baby. The reflective notion changes everything. When you give them practice at being reflective, we see that we change their thinking. By changing their thinking, just through practice, it actually improves their serve and return relationships with their children. It actually improves their children’s development.” (Children’s Services Expert)

Organizations also began seeking different information from children and families. Across all sub-systems, the practice of asking, “what happened to you” rather than “what’s wrong with you” often transferred from an individual-level practice change to an organizational-level practice change. For instance, some children’s services organizations changed their intake forms to better understand both the risk and protective factors in a child and parent’s lives. Some healthcare clinicians now take a more comprehensive ACEs history to ensure they do not miss important history with patients. In discussing the importance of trauma-informed standards, one healthcare provider commented about why it was so important to communicate that to families, *“Trauma is prevalent. It is common. It crosses all ages, cultures, demographics, religions, and so we draw on our humanity intentionally when we’re having conversations with patients to give them more choice and more power and control over their health care decisions.”* (Healthcare Provider)

Many places, whether it was schools, clinics, or places that served families in crisis created new opportunities for their community to experience environments to improve brain development based on Brain Story science principles. Some places working with young children made sure there were more opportunities for intentional serve and return interactions, for instance, intentionally limiting technology given to Head Start children while they waited to be picked up from school, so that they could instead communicate with adults and each other. Other organizations reported creating more time and space for children or parents to experience grounding techniques to facilitate enhanced executive function.

Unintended consequences, both positive and negative, have resulted as organizations adopt Brain Story-aligned changes.

Some organizations experienced unanticipated changes as a result of integrating Brain Story science into their work—some of these changes were for the better, but some brought additional challenges. At the Practice Days events, people shared that Brain Story-aligned organizational changes not only resulted in changes for children, families, and clients, but also in more flexible and family-friendly policies for staff. Participants shared that organizations were treating staff better as well as serving clients better. One business owner shared that when they learned Brain Story science, the changes they made reduced turnover at his organization. Another representative shared that their organization stopped asking staff to clock in in the mornings and allowed people to work more flexible hours, which made a significant difference in staff satisfaction.

Other unintended consequences resulting directly or indirectly from AFWI’s promotion of the Brain Story knowledge and its application have not been as welcome. Notably, several interviewees across organizations in the health and education sub-systems elevated concerns about the developing use of the ACEs Questionnaire (ACE-Q) within their respective organizations. Interviewees stressed that the ACE-Q is not a screening or diagnostic tool, but rather a history-taking tool that practitioners should understand and use as such. According to several interviewees, this understanding and standard of practice was inconsistent in its application within their organizations and with partners. With regard to the variability in how the ACE-Q tool is being used, one person commented, *“I think that sometimes when we’re trying to translate this information into audiences that have different interests, it can lead to some of these unintended over-simplified concerns.”* In addition, interviewees also highlighted the need for the ACE-Q to be accompanied by Brain Story-informed communication in order to be most effective and prevent further harm to clients or patients. These inconsistencies with the application of the ACE-Q tool are not areas where AFWI is at fault, but rather given its influence, areas where AFWI likely can play a role to support organizations in refining and standardizing their practices.

SPOTLIGHT ON THE RILEY PARK MATERNITY CLINIC

The Riley Park Maternity Clinic in Alberta is an example of how the Brain Story science combined with strong leadership can change an organization's practices. The Riley Park Maternity Clinic is a low-risk prenatal clinic staffed by 43 family physicians, who attend births for patients they follow from the Foothills Hospital.

Dr. Teresa Killam, a provider at the clinic, shared that she and her colleagues wanted to use the knowledge about ACEs and the impact of adversity, trauma, and resilience to improve pregnancy outcomes for patients in the clinic. They began with a small pilot project, where Dr. Killam asked 30 of her regular patients to complete the ACEs Questionnaire (ACE-Q). Feedback from the patients about their experience with the ACE-Q was largely positive: *"The majority of [the patients] felt better cared for, better understood and thankful to be asked."*

After the pilot project, the physicians rolled out the use of the ACE-Q as a history-taking tool to their entire clinic. Now all 43 physicians at the Riley Park Maternity Clinic use the ACE-Q with every new pregnant patient. They did a similar evaluation of the first 360 people who came to the clinic, and again results from the patients were overwhelmingly positive—84 percent said that they felt better cared for and better understood. According to Dr. Killam, patients expressed interest in learning more about their own mental health, learning more parenting skills and strategies, and learning about how to be *"more intentional and reflective about how they chose to raise their children in comparison to how they were raised."*

Within the clinic, several challenges existed to widespread adoption of the ACE-Q tool with patients. First, providers worried that use of the tool would lead to more referrals for specialty care and that the system might not be able to accommodate increased demand. However, Dr. Killam shared that *"It wasn't like asking the questionnaire led to a higher number of referrals necessarily, it was more like people felt more educated and well informed about brain science."* Dr. Killam reported that only about five percent of patients sought specialty advice following the ACE-Q. By sharing this data from her own experience, Dr. Killam has helped other providers overcome their concerns about increased referrals.

In some cases, physicians' own discomfort with talking about trauma with their patients was another barrier to adoption. Dr. Killam developed supporting resources for physicians and created a shorter, two-hour training session based on the Brain Story for clinic staff. For example, she created scripts for physicians to help them respond to a variety of scenarios that could arise in conversations with their patients. Dr. Killam also emphasized the importance of ensuring that the doctors are trained in how to communicate with patients in a trauma-informed way, focusing on the impact of an event rather than the details. She said, *"The science is compelling. How do we apply it? What do we say? What the physicians consistently need is training on the skill to talk about it."* Both the trauma-informed communication skills and the ACE-Q went hand-in-hand in informing clinical practice.

It is worth noting some of the specific programmatic changes that emerged as a result of Brain Story science in specific sub-systems—examples here are illustrative and not comprehensive.

EDUCATION

- In alignment with Brain Story knowledge, some schools have been thoughtful about how to create common spaces (e.g., the gymnasium) comfortable for all students or provide students a place to recharge and self-regulate when needed.
- Some rural schools developed mental health capacity building for students or implemented programming such as five minutes of mindfulness for students each day. Kainai High School has a tipi room where students can go to connect with an elder or sit in a grounding ceremony before returning to the classroom.
- Schools also reported working to foster more serve and return interactions, especially for younger children. For instance, some teachers shared that they intentionally greet children in the school personally, whether they know and work with them or not, in order to facilitate an additional interaction for the student.

CHILDREN'S SERVICES

- Because of the intergenerational nature of trauma and the critical role of caregivers, children's services organizations have increased two-tiered approaches that encompass both the caregiver and the child. Many interviewees discussed the impact of incorporating elements of Brain Story science into curriculum for parents. For example, there were materials and exercises created to help parents strengthen their own executive function or understand serve and return.
- Interviewees also shared examples of changes to programming, language, and even physical space to target fathers as caregivers, recognizing the importance of the father-child relationship:

"If we can grab dad and find a way for the family to build a relationship between dad and the kids, dad will be a protective factor. We made sure that we don't have mom groups, but we have parent child groups; that we use gender neutral language; that we have specific groups for dads." (Children's Services Expert)

- Adult-serving organizations have begun to see the importance of considering their impact on children. One interviewee shared an example about domestic violence organizations, *"The [domestic violence organizations] get now that children are witnesses, and the stress and strain of being exposed to family violence affects brain development of children."* (Children's Services Expert)
- Children's services programs have also tried to map administrative processes and programming to make sure that their interactions are trauma-informed. One interviewee shared, *"It really made our assessments at intake go from what's your trauma history in the ACEs, to also what are the resilience factors and the protective factors that you have in place that we need to consider when determining the intervention plan?"* (Children's Services Expert)

HEALTH

- The incorporation of trauma-informed language in the clinic has been critical. However, doing so has also been challenging to the dominant norms and culture among physicians: *"In my clinic, we have communication skills around [how] to offer the patient more choice, which is hard for doctors because we're experts, we're in power, and we're in that culture."* (Healthcare Practitioner)
- Faculty of Nursing at a local university added Brain Story content to the curriculum of students and recommended that faculty to take the course.

JUSTICE

- Many of the changes have occurred in family law. Organizational practice shifts include training parents on the Brain Story and ceding more decision-making about what to do as a family to parents. One judge explained, *“I resist making a decision. In most cases, I don't make a decision, the parents make it. Secondly, I stick it out with a family and work it out through a series of meetings. Third, I employ whatever I have to employ for creativity, to assist them to come to resolution because it's good for their kids.”*
- Calgary Police Services changed the questions asked of survivors of sexual violence to be more trauma-informed.
- Calgary Police Services also adopted Brain Story content as part of its in-school curriculum delivered in partnership with local K-12 schools.
- Organizations leveraged new and strengthened referral channels and partnerships between the justice system and health and human services.

FACTORS THAT IMPEDED OR SUPPORTED ORGANIZATIONAL CHANGE

According to interviewees across sectors and levels of the various sub-systems, the following barriers consistently got in the way for organizations attempting to change:

- **Time.** Organizations need time to shift from being more clinical to more relational, time to train their personnel on the Brain Story science, and time to adapt practices to reflect the knowledge of the Brain Story. Yet, given the many priorities within organizations, people often cited time as a limiting resource.
- **Emotional Support Resources.** A few interviewees mentioned that the Brain Story certification work can be emotional and even trigger past trauma for staff, and there is often a lack of support for frontline workers to get mental health support. These same frontline workers also experience a lack of support for engaging in self-care.
- **Leadership.** Organizations without champions of the work of the Brain Story at the leadership level saw less traction. For example, at Edmonton Practice Days, some participants cited a need for more leadership commitment locally in the addiction and mental health space.
- **Motivation.** Some organizations faced the barrier of inertia. The Brain Story Certification Course has not been formally approved for credit-earning continuing education (e.g., for healthcare providers or legal professionals) so there was no extrinsic motivation or incentive for investing in the time required for the Brain Story certification. With the lack of incentive, it becomes easy for organizations, especially larger ones, to continue doing work in the same ways. Additionally, some practitioners reported feeling that they already know the Brain Story knowledge and thus resist the idea of the Brain Story Certification or idea that the Brain Story metaphors would add anything new to their practice.
- **Funding.** Some organizations have the motivation and desire to change their practices and policies or wish to pilot a program but lack the funding to do so. While some initiatives (e.g., Change in Mind, Frontiers of Innovation) and granting organizations have shifted to prioritize Brain Story-informed initiatives, there are still opportunities to ensure that funding dollars align with the science. Additionally, interviewees and people in Practice Days noted the lack of funding for evaluating the impact of Brain Story-aligned programming.
- **Trust or Coordination.** Organizations sometimes faced barriers with the inter-organizational partnerships required to move towards a more holistic and connected approach to serving children and families. At Edmonton Practice Days, some participants shared that the challenge was more technical—client

confidentiality and data sharing or not having common intake tools across organizations—while other times the barrier was a lack of trust among stakeholders.

On the other hand, there were key factors that interviewees cited as supporting organizational change:

- **Deep and broad leadership commitment** was critical for organizations where changes did occur. Both at Practice Days and in interviews, participants emphasized the importance of ensuring that leadership understands the Brain Story and that leadership is consistent and strategic. For example, support from school district leadership and school principals was critical where changes occurred within a school. One interviewee shared, *“I think it would have been a huge barrier if my superintendent didn't get it. He was absolutely all in, and nothing moves forward in a school jurisdiction unless you have the support of the superintendent.”* Similar experiences spanned health, community services, and children's services. In addition, interviewees noted the need to train more senior leaders and embed Brain Story-aligned content in core institutional documents in order to maintain consistency through inevitable personnel transitions.
- **Time and support for employees to take the Brain Story Course.** When an organization provided time during the workday for employees to take the Brain Story certification, it facilitated more employees learning the information. In response to the survey, when those who partially completed the Brain Story Course (n=118) were asked about the primary reason they did not finish the Course, 65 percent cited lack of time. When asked what employers can do to enable participation in the Brain Story Course, 47 percent of respondents said allocate time to complete the Course at work, 25 percent said create an opportunity for employees to take the Course together as a group, and 20 percent said to make sure that employees are paid for the time they use to take the Course. One interviewee from an organization that requires the certification said, *“We didn't expect anybody to do it outside of their work. We were willing to collaborate to help them figure out how to do it.”* (Children's Services Expert)
- **Trusting relationships** within a sub-system or across organizations (e.g., a community of practice) helped to encourage and support practice change. At Edmonton Practice Days and in interviews, people noted that the shared language of the Brain Story itself helped support community building.

A few examples of strong organizational change emerged from interviews. Their progress is useful to compare to other organizations that have made less transformational changes.

The evaluators observed that changes often tended to occur in smaller, private organizations such as nonprofits or private practices of lawyers or physicians, rather than in larger, more complex, or more bureaucratic entities such as government agencies. One example that highlights this distinction is comparing the Child and Adolescent Addiction Mental Health and Psychiatry Program (CAAMHPP) with the broader Alberta Health Services (AHS) organization in which it sits.

CAAMHPP has been deeply engaged with the Brain Story and seen widespread organizational changes as a result. There has been a significant intentional shift at CAAMHPP to focus the portfolio on reducing the burden of adversity, adding positive supports, and improving skills and abilities to build resilience over the last four years. Leadership has displayed commitment to the partnership with AFWI and to Brain Story content, and activities to promote the Brain Story knowledge have been coordinated and wide-spread throughout their division. These have included movie screenings; guest speakers from AFWI, indigenous communities, and experts on Brain Story-informed practices and interventions; Brain Story certification training; and playing the Brain Game with staff and clients. The organization has also made videos about Brain Story science easily accessible to staff and clients by

showing them in building elevators and screens in the waiting rooms. The expectation that colleagues share the same foundational language and knowledge of the Brain Story has been helpful for moving their work forward.

As a result of the focus on the Brain Story, staff at CAAMHPP reported several critical shifts in their work. First, the model at CAAMHPP incorporated attachment, developmental theory, trauma-informed care, and a focus on patient and family-centered care. This represented an organizational mental model shift from diagnosing children to a more holistic bio-psycho-social lens. Staff were looking not just at the biological, mental or emotional health of children, but also taking into consideration the interplay of the social context and environment for children. Second, CAAMHPP staff reported they were more intentionally asking about ACEs and trauma and having these important conversations upfront with clients helped to ensure that historical context was considered. Overall, they now focus more on the context of the family, rather than seeing the child as an isolated unit. The new knowledge and practices also created less stigmatization of children and their families. One interviewee explained:

“[Our Brain Story-aligned] model helps people reduce the stigma of mental health so that guilt and shame become lessened. Children and adolescents are often subject to prejudice anyway. So this does allow for a lot more compassion in addressing the needs of children and adolescents as well as their parents. I think reducing stigma, reducing prejudice, and having a common language goes together. It also engages and empowers people, which is different from some of the other models that are available.”

In contrast, the broader organization in which CAAMHPP sits, Alberta Health Services (with more than 100,000 employees) has seen less coordinated or consistent engagement with the Brain Story content according to interview data. AHS as an institution had not experienced the same transformation with the Brain Story. Rather, progress has been variable within certain provincial teams or specific programs. One interviewee commented, *“There’s pockets around Alberta Health Services in the provincial teams that have been working on developing training modules for all staff, and different clinics and programs have been doing their own individual work.”*

Interviewees cited several hypotheses for these differences. First, CAAMHPP is a smaller and more nimble program within the much larger Alberta Health Services. They shared that, with clear leadership, less bureaucracy, and less people to move, CAAMHPP could ensure that the Brain Story message was reinforced, from the waiting rooms and elevators to the programming and services offered. CAAMHPP could more easily ensure that a significant number of staff became certified so that they all shared a common language and understanding. Moreover, interviewees noted that CAAMHPP leadership clearly prioritized being a trauma-informed system and dedicated more time and resources than they had perceived AHS to have done. Interviewees posited that perhaps resources at AHS had been spread across many priorities, leading to more incremental progress in any one area of change. Finally, because CAAMHPP focused on children and adolescents, interviewees suspected that the Brain Story content might have seemed more applicable, thereby increasing buy in. They contrasted this with the adult psychiatry field, which they perceived to use much more of a medical model.

The evaluators do not elevate this contrast to criticize AHS, nor to imply that change is not possible in larger, more complex organizations. However, these findings do suggest that for larger, more complex organizations, intentional leadership, dedicated and limited priorities, focused resources, and consistent messages and strategy may be necessary to promote widespread organizational alignment with the Brain Story.

What’s next for organizational change?

Many organizations have been intentional about ensuring that the programs they operate are congruent with the Brain Story. Still, there is ample opportunity for further learning as organizations seek to better codify what they have learned into sustainable and concrete organizational practice and policy changes. In professional settings,

survey respondents most often reported changes in interactions with clients and patients (66%), and terminology/wording used with colleagues and clients/patients (56%), as compared to changing curricula (27%), changing disciplinary practices (23%), changing screening protocols (20%) or changing intake forms (20%). These findings are consistent with interview data, which also showed fewer organizations changing institutional policy and practices. Interviewees and Practice Days participants also noted the need for further support to help organizations turn knowledge, mindset shifts, and individual behavior change into to lasting organizational changes across a wide swath of Alberta.

SUB-SYSTEM CHANGES

From the beginning of its work, AFWI has aspired to change systems within Alberta that support families and children. Systems change is complex and non-linear, often requiring a mix of emergent and opportunistic strategy along with planned activities and investments for the long term. For the sake of understanding the systems change results of AFWI's work, this evaluation looked deeply at four sub-systems within Alberta: health, children's services, justice, and education. "Sub-systems" refers to sectors, or sets of institutions, agencies, and organizations, within the broader ecosystem across the province of Alberta in which AFWI operates. In addition to the deep look at these priority sub-systems that have been the main focus of AFWI's work, the findings below also examine changes in cross-sector relationships and collaboration in Alberta, partnerships with indigenous communities in Alberta, and the multi-directional impact of AFWI's collaborations in geographies outside of Alberta.

While this section explores particular changes within each priority sub-system, themes across sub-systems are also instructive and important to consider in understanding AFWI's impact in Alberta and beyond. Several cross-sector themes contribute insights into how the whole system—the Province of Alberta—has changed. Several themes are noted here and will be evidenced across the discussion of sub-systems below:

- In alignment with AFWI's work to promote the Brain Story science, **all sub-systems have seen some degree of shift towards more Brain Story-informed paradigms and mental models at least in part** as a result of more widespread Brain Story knowledge and understanding.
- Actors across all sub-systems reported **increasingly seeing parents and children as partners, viewing them with greater compassion and empathy in both personal and professional settings, and valuing their expertise, contributions, ideas, and agency.**
- Widespread adoption of common Brain Story concepts (major metaphors) and **language facilitated greater ability to collaborate and partner** across organizations and sectors.
- Systems change has been supported to different degrees by **both "top-down" leadership and mandates, as well as "bottom-up" innovation and determination** from practitioners. To spread and scale systems change, both were needed in mutually supporting ways.

HEALTH

There are a few notable shifts within the health sub-system that reflect the influence of the Brain Story, namely the inclusion of brain science into curricula for healthcare providers in training and the development of a more recovery-oriented mental health and addictions system. However, the majority of changes to align with the brain science in healthcare have occurred at the organizational level, in pockets like Primary Care Networks (PCNs), CAAMHPP, or particular clinics.

Brain Story-aligned curriculum is being taught in some preparatory courses for health professionals in the province, but has yet to be fully systematized within the healthcare sector. At the University of Lethbridge, one professor has students in various classes take the Brain Story Certification Course for credit. Many undergraduate students in these classes go on to health careers. Interviewees also mentioned several programs at the University of Calgary that have integrated Brain Story-aligned content into curricula or as part of professional training, including the Faculty of Nursing, the undergraduate medical education curriculum, and the Residency Training Program in the Department of Family Medicine. One interviewee shared that the School of Medicine recommends the Course to students, but it is up to the discretion of professors within the School about whether to require it or not. Instructors' curricula are already full, so when hard decisions have to be made about what to include versus leave out, sometimes professors prioritize technical skills over Brain Story content. To illustrate this point, one interviewee explained, *"We have a lot of nursing instructors who think, 'Oh, dressing changes are the most important thing.' Then, 'Well, we can't teach everything. We'll take out that brain story stuff, because you know, that can't be as important. Dressing changes are way more important."* (Nursing Professional)

Over the past few years, Alberta has been working to build a recovery-oriented addiction and mental health system. Recovery-oriented care "involves healthcare providers working with individuals and their families to reach their chosen recovery goals. Healthcare providers build on personal strengths and skills to enhance health outcomes and quality of life. This includes a broad range of activities that are person-centred and promote resilience."¹⁴ This approach to practice is very aligned with the brain science, and recovery-oriented practice "understands that we all live our lives in complex societies where many intersecting factors (biological, psychological, social, economic, cultural and spiritual) have an impact on mental health and well-being."¹⁵

While recovery advocates have been leading this work for decades, Alberta really began to embrace the notion of a recovery-oriented system within the last several years. One addiction medicine professional credited Palix with giving this work a huge boost: *"Until the Palix Foundation came onto the scene with Brain Story certification, with the ACEs work, with a belief in recovery from addiction and addiction in many forms, I don't think, aside from the 12 step recovery community, that academia or the medical world really gave recovery its due."* This person shared that it was not until a national summit in 2015 that policy leaders, advocates, addiction medicine professionals, and others came together on a common understanding of what recovery is and is not.

"We talked about recovery having growth in all these different areas of somebody's life and essentially creating resilience, mental, emotional, spiritual, physical, but a consistent pursuit of abstinence. So we believe addiction is a chronic brain disorder based on irrefutable science."
(Addiction Medicine Professional)

Around this same time, Alberta Health Services was leading a major cross-sector effort to develop the *Valuing Mental Health* strategy, which structured Albert Health Services' thinking about this, recommended changes within the system and to practice, and ascribed roles to partner organizations. Said one policymaker involved in these discussions about the number of organizations and ministries involved, *"It would be a shorter list to tell who wasn't involved."* One of the major actions, or recommendations, aligned with brain science was focusing specifically on identifying and increasing supports for people who have experienced adverse childhood experiences. One sub-action was to implement the ACE-Q tool, which initiated a task force to look at doing this and to evaluate its use. This has supported more widespread use of the ACE-Q tool, but as noted in earlier sections of this paper, this is not without its challenges.

¹⁴ Alberta Health Services. (2019) "[Harm Reduction: Recovery-Oriented Care.](#)" AHS Harm-Reduction Services Team.

¹⁵ Alberta Health Services. (2018). "[Valuing Recovery Oriented Practice: From Beliefs to Practice, May 30, 2018.](#)"

At the time of data collection and writing, AHS' Mental Health and Addiction Advisory Council was in the process of researching and developing recommendations for a new strategy to shape the work in the coming years. One interviewee shared, "Their report's due in June so we're between strategies at the moment but a real strong focus on a recovery, building a recovery-oriented addiction and mental health system." One positive sign for this movement is that in the most recent budget released, Mental Health and Addiction was allocated more money than previously, in contrast to other departments within AHS.

While shifts within parts of the health system explicitly dedicated to addiction and mental health are encouraging, interviewees noted that a lack of guidance as well as extrinsic incentives for practitioners may stymie widespread acceptance and integration of the Brain Story knowledge into policy and practice.

Interviewees noted that to their knowledge, there has not been explicit guidance from AHS leadership or mandates for practitioners related to training on the Brain Story science or changes to standards of care to align with it. Alberta Health is one of the largest ministries in the province, with Alberta Health Services employing about 103,000 staff and supported by about 12,000 physicians across more than 850 facilities and comprising what used to be twelve separate health entities.¹⁶ While the reach among practitioners that AFWI has achieved is impressive, interviewees mentioned it was challenging to envision widespread uptake throughout an organization as expansive as AHS in the absence of ministry-level leadership promoting the Brain Story Course or practice guidelines aligned with the science.

Even within Addiction and Mental Health Services, which has seen more of a shift to align with the brain science than other major departments within Alberta Health Services, interviewees mentioned that there is still no guidance from leaders related to the Brain Story Course or training aligned with it. One interviewee stated the need for greater support, saying, "We certainly need to get the Addictions and Mental Health Department of Alberta Health Services on board for giving this program way more recognition than it's got. To be honest, I've seen nothing from Alberta Health Services that ever refers to the Brain Story or acknowledges it, or encourages their staff to undertake the certification Course." (Addiction Medicine Professional)

Interviewees offered that another challenge is the lack of incentives for healthcare providers to take the Brain Story Certification Course. For instance, currently the course is not counted toward required continuing professional development hours for physicians, despite AFWI's efforts to have the course accredited for that purpose. As a result, there is little consistent incentive for existing professionals across the sub-system to make the time for the course.

A physician also shared that family doctors might see the current fee-for-service structure as misaligned with integrating brain science-aligned practice. As noted earlier, interviewees noted that some healthcare practitioners think that using the ACE-Q for history-taking or opening up discussions about past trauma may mean they need to spend more time with each patient—and under fee-for-service, physicians bill a flat rate no matter how much time they spend with a patient. That structure incentivizes physicians to see more patients for a shorter time each.

"I just know from a physician's perspective, when I've talked to people, because I've tried to be an advocate for the Brain Story and get people really engaged with it, the first thing they say is, 'I'm not doing 20 hours of training. I do not have time for that, there's no way.' If I have that training, now people would say, 'I don't have time to use it.' For family doctors it's really hard, unless they go to more of a salary-based alternative fee payments... I'm a true believer in the Brain Story and the

¹⁶ Alberta Health Services [website](#).

approach, but I'm just talking about the practicalities and the realities of the present day in Alberta and physicians.” (Healthcare Provider)

This physician felt that the complex care modifier, which allows physicians to bill a higher rate for an additional ten minutes with patients with complex care needs, still was not sufficient to overcome this challenge because it does not apply to preventative services. In this physician’s eyes, aligning practice with the brain science was as much about treating current health concerns as *preventing* others from happening as a result of accumulated toxic stress, like heart attacks or substance abuse disorders. The complex care code can only be used for complex conditions that are already presenting in a patient, rather a physician’s time spent on preventative services. However, at the time of writing, Alberta Health Services was reviewing current physician payment structures in response to physician concerns—the outcome of which could shift incentives in favor of brain science-aligned practice.

Data gathered in interviews and the survey suggest that hundreds, if not thousands, of practitioners across the province have embraced the brain science and are working to change their practices as a result—but their efforts are not yet accumulating into large-scale changes across the health sub-system.

CHILDREN’S SERVICES

The Brain Story knowledge has catalyzed several critical shifts in the children’s services system in Alberta. **There has been intentional alignment of policy, funding, and services with what the science says is best for families, reflecting an overall shift in the mental models and paradigm in the sub-system.** Practice shifts aligned with the brain science have occurred on the ground among individuals and organizations who work with children to spur change in a “bottom up” fashion, in parallel with policy developments to drive “top down” change. In interviews and at Practice Days, change agents shared that the field of children’s services has made some of the most concrete and robust changes as a result of Brain Story science and AFWI’s work. However, experts also acknowledged that more opportunities exist to align with the Brain Story, evaluate the impact of policy and practice change, and better serve key populations.

The Ministry of Children’s Services led from the provincial government level by providing guidance and implementing requirements aligned with the brain science.

In 2015, Alberta Child and Family Services (a precursor to the Ministry of Children’s Services, which was formed in 2017) crafted the [Foundations of Caregiver Support](#). This document recognizes that “Every responsive and supportive interaction between a caregiver and an infant, child or youth has the potential to positively alter their developmental trajectory and improve their health and well-being,”¹⁷ and therefore, caregivers need to be well-versed in the foundational knowledge of healthy childhood development, the impact of trauma, and processing loss and grief. Furthermore, it made explicit that it was incumbent upon Child and Family Services to not only provide this information to caregivers, but also support their capacity to translate the knowledge into how they caregiving relationships with children who had experienced adversity and trauma.

In 2016, the Ministry of Human Services took a similar approach with the Human Services Alignment Project, this time shifting their focus from what caregivers needed to know and do to what organizations serving children and families needed to know and do. The Alignment Project required potential vendors to commit to using knowledge about children’s brain development in their service and program delivery and aligning their work with the values expressed in relevant frameworks such as Foundations of Caregiver Support; the Prevention and Early Intervention Framework for Children, Youth and Families; or the Child Intervention Practice Framework.

¹⁷ Foundations of Caregiver Support, 2015, Alberta Human Services.

In 2019, the Alberta Ministry of Children’s Services took another significant step, making a public commitment to prevention and early intervention services aligned with the Brain Story knowledge in the form of [Well-being and Resiliency: A Framework for Supporting Safe and Healthy Children and Families](#). The framework is intended to support staff from the Government of Alberta, Indigenous communities, and contracted service providers who provide prevention and early intervention programming by articulating the government’s approach, defining a clear model of well-being and resiliency, identifying desired outcomes, and elevating a common understanding of how trauma impacts child development. One interviewee from the Ministry shared how the Wellbeing and Resiliency Framework has influenced their procurement process, explaining that as of 2020 selected vendors would need to demonstrate that they have “awareness and knowledge” of trauma-informed practices, and can “behave congruent to that policy and that science”:

“We started in child intervention, or child protection, to build the whole concept of trauma-informed, as a requirement for vendors who were going to be working alongside us in the field. It became part of our procurement process. We’ve asked all of the applicants to demonstrate that they are keeping with the Wellbeing and Resiliency Framework, which is then in keeping with the Brain Science, and trauma-informed practice.” (Children’s Services Expert)

Specifically, the Brain Story Course became a resource to support the alignment of service providers in the Children’s Services system, with the Ministry promoting the Course and requiring it of service providers under the Ministry’s Expression of Interest process. As part of any contract with Children’s Services, organizations funded through the FRNs need to ensure that, within the first year of the grant, all frontline staff providing direct services to children, youth and their families have Brain Story Certification offered by the Alberta Family Wellness Initiative.¹⁸

According to interviews, a significant impact of the policy, resource, and mindset shifts within the Ministry of Children’s Services is that there has been a ripple effect throughout the field of children’s services. There is now mandatory training on elements of Brain Story science for various roles that care for and serve children, including foster parents, service providers who apply for grants from the government, and caseworkers. The requirement that foster parents know about Brain Story science ensures that they know about child development, trauma, and grief and can provide children in their care with more informed and intentional caregiving. For example, one interviewee shared that the Brain Story has changed how foster parents understand a child who might be acting out, and that the air traffic control metaphor is an accessible way to help foster parents understand a concept like executive function:

“With [Foundations of Caregiver Support](#), the goal was to come up with some critical pillars of training that we felt caregivers, including and especially foster parents, should know. One of the first critical areas was the Brain Story and so we were writing that into that as a key pillar...and since that time, that’s become foundational, mandatory training across all of foster parents in Alberta.” (Children’s Services Expert)

The requirement that caseworkers understand the Brain Story science ensures that they are able to take into account the complex array of factors that might be impacting a child’s life. As discussed in the section on individuals, the Brain Story has helped people approach children and families with more empathy and compassion.

¹⁸ Family Resource Network Spoke Services Contract Agreement Template, Alberta Government. Page 2: “Ensure, within the first year of this grant, all staff providing direct services to children, youth and their families have Brain Story certification offered by the Alberta Family Wellness Initiative.” Received June 23, 2020.

Similarly, the expectation that grantees and service providers have this knowledge provides a financial incentive to motivate individual and organizational changes for practitioners in the field.

“A lot of training within Children's Services also started to shift over the last few years to make sure that there was requirements put on our case workers so that they understood brain science, and trauma, and so on. While the Brain Story certification itself wasn't mandated, there were components of it that were incorporated.” (Children's Services Expert)

With regard to practice and services, the Ministry of Children's Services has been rolling out a “system of early intervention and prevention programs across the province” called Family Resource Networks (FRNs) and intends to build an evaluation alongside them.¹⁹ An important component of operationalizing the Well-being and Resiliency Framework, the FRNs are “family focused, child and youth-centered, community-based” centers that “offers a full continuum of prevention and early intervention services, including universal, targeted, and intensive services and supports based on the needs of families and children and youth aged 0-18 years.”²⁰ The FRNs leverage a hub and spoke model—the hub is the actual physical center that organizes and coordinates service delivery, while the spokes are the services and programming for children youth and families.²¹ The Expression of Interest application for the FRNs launched in November 2019, with the new model set to launch in April 2020. The design of this procurement approach was informed by learnings from the procurement work under the Human Services Alignment Project that began in 2016.

Practitioners and frontline organizations also provided leadership and innovation within the sub-system.

Practitioners in the field of children's services have shifted to a paradigm of more holistic and integrated service delivery. In addition to changes at the policy and government level, there have been significant shifts in organizational practices with ongoing opportunities to continue and expand the reach of these changes for sub-system level shifts. Interviewees noted an overall paradigm shift in the Children's Services sub-system from individual service providers looking at one symptom or challenge at a time, to a more coordinated and integrated experience for parents and children. To accomplish this, organizations are less siloed, and they are beginning to collaborate more with each other to think about what services a client needs—from the perspective of the child or family and not what is easiest for the organization. One interviewee noted, *“For the last eight months we have been deep in conversation around integrated service delivery. The people we serve are less interested in what is the name on the door and the programs and more interested in access to service and filling out fewer papers.”* (Children's Services Expert)

Other innovative organizations within children's services are leading the way and demonstrating the potential for widespread practice changes in line with the Brain Story knowledge. For instance, CUPS has created new intake and assessment practices that align with the Brain Story and the Resilience Scale, and has shared these practices with others through AFWI networks and convenings. Several practitioners mentioned shifting to greater focus on two- and even three-generation approaches to interventions with families, a Brain Story aligned practice that could be adopted more systematically with continued support for adoption and standardization. Similarly, other practices noted above in the organizational changes section, such as focusing on parents' reflective skills in addition to traditional behavioral approaches, could be supported and scaled. Finally, for specific populations, such as indigenous communities, shifts to incorporate greater understanding of history and trauma have taken root in

¹⁹ [Family Resource Network](#) EOI 2019

²⁰ Ibid.

²¹ Ibid.

some cases, with the need to scale and systematize both through government and organizational policies and practices.

JUSTICE

Brain Story science has sparked changes across multiple components of the justice system in Alberta. Significant paradigm shifts, mental model shifts, and practice changes have occurred within the area of family law. The criminal justice and juvenile justice systems, including the police, have also incorporated some changes, albeit with somewhat slower uptake of Brain Story science in criminal courts. These shifts across the justice system have been supported at the macro level by Federal and Province level policy, as well as individual practice and organizational changes implemented by judges, family lawyers, child specialists, family therapists, police officers, and others involved in creating a justice system that better supports children, families, and communities.

Family justice is the primary area of the justice system that has seen significant changes.

The Reforming Family Justice System initiative is the biggest paradigm shift to date for the justice system in Alberta. The initiative brings together over 400 organizations to coordinate supports that can help families going through separation and divorce.²² **The reform effort reflects a Brain Story-aligned shift toward thinking about wellness for families, given that existing legal processes are adversarial by nature.** One supporter explained, *“When the science is telling you that the system itself is harmful, then maybe you shouldn't just settle with making it more efficient, more effective, less expensive. How would we structure a system which would actually result in wellness for families?”* (Justice System Expert)

Other justice system voices interviewed went even further, stating, *“Conflict is causing harm, and it needs to stop. We need to make change. We need to reimagine a system that takes courts out of the equation.”* (Justice System Expert)

The effort has supported increased emphasis on informing families going through a divorce about Brain Story science and of the impact of divorce on children. With more awareness of the importance of early childhood and the impact that their actions could have on their child's development, the goal is for parents to approach divorce through mediation and outside of the legal system, minimizing harm for children. To support these shifts, the broader court system is exploring changes in structures, roles and titles. Individual judges, lawyers and mediators are changing their practices as well.

A small pilot in the Ministry of Justice and some municipal-level efforts are exploring changes within the staff's structures, roles, and titles. The Ministry is piloting “Family Justice Navigators” instead of “Family Court Counselors.” These staff are Brain Science certified, usually non-lawyers, and have learned about supports for families beyond the courts.

“We convinced the Ministry to do a very tiny pilot in one small community where instead of in the courthouse, [the Family Justice Navigators] work out of a family and community services office, which has a number of different supports for families. They started to learn about the actual supports that are there for families, which they didn't know before.” (Justice System Expert)

²² Jehn, Michelle, and Spina, Jessica and Lowe, Diana and Turner, Barb. (2015) [Reforming the family justice system initiative](#). In: Relating Systems Thinking and Design (RSD4) 2015 Symposium, 1-3 Sep 2015, Banff, Canada.

As a result of changes in their location and knowledge, these Navigators are better positioned to educate parents not only about the justice system, but also about other options and resources available to them. In addition to Ministry-level changes, there have also been some municipal-level efforts to restructure and redirect families away from courts. For instance, in Calgary, families are now required to see a Family Dispute Resolution Officer or a Family Mediator before they can go to court over children’s custody.

As government officials in charge of a courtroom, judges who change their behavior have significant sub-system impact. One judge shared that after learning the Brain Story science, he completely changed his approach to family cases, where appropriate. Instead of making decisions for families, he empowers parents to make their own decisions, even if it takes more time to go through this coaching or management process. He also mandates that parents watch the short AFWI videos about the Brain Story and resilience—the first to understand the potential harm of adversarial conflict, and the second to generate hope about the ways in which they can support their child.

Federal and Province-level policy shifts are an outgrowth of the broader paradigm shift in the field and will help to facilitate deeper and more sustained shifts in the subsystem. For instance, amendments to Canada’s federal *Divorce Act* will take place on July 1, 2020. Among many changes, the updated *Divorce Act* will make a salient shift in language about care of children from “custody and access” to “decision-making responsibility, parenting time, and contact.”²³ The new Act will also encourage people to resolve disputes about parenting after separation, child support and other issues outside of court, and require lawyers to encourage their clients to resolve disagreements outside of court by offering options such as negotiation and mediation. Moreover, the amendments expand the list of factors a court should take into account when deciding what is in a child’s “best interests”, including each spouse’s willingness to encourage the child’s relationship with the other spouse, and the child’s “views and preferences” as well as cultural and linguistic upbringing, “including Indigenous upbringing and heritage.”²⁴ Alberta has also changed the *Matrimonial Property Act* to become the *Family Property Act*; shifts should facilitate property division when people separate to encourage resolution outside of court.²⁵ These Federal and Province-level policy changes align with Brain Science on healthy child development and can be expected to promote sustained ripple effects that support resilience and well-being for children and families.

Private practitioners are collaborating to change their own practices and support families. In addition to changes at the provincial and court levels, non-profit and practitioner-led changes are also creating momentum in the justice system. One example is the Collaborative Family Law movement, which focuses on educating clients about conflict de-escalation. This initiative promotes family systems therapists and child specialists to help divorcing couples mitigate the impact for the child as best they can. The team created brochures, pamphlets, and [videos](#) about the “breakup earthquake” that are now distributed in every courthouse in Alberta. This work compliments the higher-level government policy and practice changes within the family justice system.

One lawyer discussed how learning about ACEs and the Brain Story encouraged a different approach to family resolution meetings. They are now more intentional about advocating for breaks for their clients if it is clear conflict is escalating, as a result of understanding how “flooding” works. The lawyer is also more intentional about

²³ Law Now, [“Important Changes to the Law are Coming,”](#) Nov. 1, 2019; [An Act to amend the Divorce Act, the Family Orders and Agreements Enforcement Assistance Act and the Garnishment, Attachment and Pension Diversion Act and to make consequential amendments to another Act](#), SC 2019, c 16.

²⁴ [Ibid.](#)

²⁵ [Ibid.](#)

creating an environment that will not trigger a fight or flight response in the first place. In an interview, they explained:

“When [a parent who has experienced trauma] gets triggered, their fight or flight mechanism has been highly developed because they had trauma, and it takes longer for them to come down. That’s helped me think, okay, this particular client needs [more time]...So, I’ll tell the other lawyers, ‘My client needs more time. We need to stop the meeting.’ When I’m planning, I change my scheduling.”

Other parts of the justice system have not made as much change aligned with Brain Science. For example, there has been slower progress in criminal courts, mental health courts, addiction courts, and various civil courts. In an interview, a justice system expert commented, *“There are mental health courts and addiction courts, and things of that kind. They’re doing work that would align with brain science knowledge, but they’re not doing it with brain science awareness. It’s not there deeply yet.”* Change in these realms has remained largely the purview of individual judges or practitioners, but there have not necessarily been widespread, coordinated initiatives comparable to family justice reform.

Criminal and juvenile justice have seen limited changes at the system level.

The Calgary Police Service (CPS) has had a long-standing relationship with AFWI and been a leader implementing Brain Story certification. CPS is a large organization, comprised of about 3,000 employees. In addition to responding to calls for service and support in instances of violence or criminal activity, they also work on community safety and wellbeing, and prevention and early intervention initiatives. They have programs for youth including School Resource Officers intended to provide advice or assist in instances of bullying and school violence, and youth intervention programs that support kids who may need additional resources. To date over 400 members of the service, both sworn and civilian, have taken the Brain Story Certification Course. New recruits to the Police Service are also encouraged to take the Course, though it is not required. Despite this progress, barriers such as time for training and professional development are significant in pursuing further opportunities to integrate Brain Story science within the police force.

The Brain Story Course has helped shift mental models within CPS. In an interview, one police officer described that the Brain Story helped him live into the values of the Calgary Police Service:

“When I deal with people who are suffering from mental health or addiction issues or are vulnerable in the community, I do recognize that that’s not a choice anybody’s making, and that it’s probably more of a product of exposure to trauma earlier on. Recognizing too that, as much as there might’ve been damage to the brain early on, it can be fixed. That’s one of the values of the Calgary Police Service—compassion—and I think this has helped me to operationalize that value more than many other things.”

Several interviewees also cited the Brain Story knowledge as pivotal in shifting the Police Service to more Brain Story-informed approaches with several key populations, including indigenous people, survivors of sexual violence, and youth. For instance, one interviewee shared that learning about the Brain Story and understanding the intergenerational impacts of trauma and epigenetics has led to more compassion from police officers and less bias, stereotypes, or judgment when serving indigenous people. The Brain Story knowledge also has helped officers understand that they could be helpful or harmful depending on the ways in which they respond to a certain situation.

Shared language facilitates partnerships within the justice system and across sectors for more coordinated, holistic, and Brain Story-informed supports. One interviewee explained the impact of this shared knowledge and vocabulary, saying:

“[Calgary Police] partners with a lot of agencies, whether Alberta Health Services or other justice partners. In Calgary, we have community courts and drug courts. We have an indigenous court in Calgary, as well. Those folks are also educated in the Brain Story, so that they understand the people coming before those courts. And so what this whole thing has given us through AFWI is common language and common and easy to access understanding of what would otherwise be complex scientific evidence that doesn't necessarily easily translate into practice and public policy.”

The Brain Story science has had particular resonance within the children and youth services sections of the Calgary Police Service. Brain Story Certification has facilitated partnerships with Alberta Health Services and Human Services by helping officers identify different opportunities for support. An interviewee explained, *“Understanding how the brain is wired and impacted by those experiences, having the officers being able to recognize that, gives them the opportunity to make referrals and put supports in place that if you didn't have that knowledge, you might miss.”* (Justice System Expert)

For instance, the Multi-Agency School Support Team (MASST) connects children ages 5-12 with social resources, and is a program at Calgary Police Services informed by Brain Story science. To illustrate its impact, one interviewee shared an anecdote about a School Resource Officer who noticed a child struggling at school and was able to connect the child with the MASST program. The child's parents were dealing with unemployment, depression and other challenges, and the program offered support to both the child and parents, ensuring this child did not fall through the cracks at school.

Start Smart Stay Safe (S4), a collaboration between the Calgary Police Service, Calgary Board of Education, and Calgary Catholic School District, brings officers into elementary school classrooms to work with teachers and students on skills such as problem solving, respectful communication, digital safety, and building healthy relationships. Many staff have done the Brain Story certification, and since S4 is a lesson-based initiative, elements of the Brain Story related to trauma and stress response were incorporated into the lessons.

EDUCATION

In recent years, promoting and supporting mental health in schools has become a concerted focus at every level of the education system in Alberta. **At the ministerial level, the [Working Together to Support Mental Health in Schools](#) document (2017) provides guidance to schools and school partners about how to “more effectively [embed mental health] in school and system policies, practices and services.”** The document highlights the importance for educators, school and system administrators, and other education professionals of “understanding the connections between brain development and mental health” and “building resiliency,”²⁶ which are two clear areas of alignment with the Brain Story science.

A clear example to date of the Ministry shifting practice to align with Brain Story science is the redesign of the Alberta Attendance Board. Local school authorities refer chronically absent students to the Attendance Board, which previously dealt with absenteeism in a punitive manner that did not consider what factors might be

²⁶ Alberta Education. [“Working Together to Support Mental Health in Alberta Schools.”](#) 2017.

hindering students' attendance and potentially exacerbated a student's negative experience with school. An interviewee described the difference in the Board's work when they adopted a Brain Story-aligned approach:

"It's now called the Office of Student Attendance and Re-Engagement, and it uses a restorative approach because we know the majority of children who aren't attending school, it's not because they don't want to, it's because there's other things that are impacting their ability to. Whether it's their own or their family's mental health issues or other things, we've taken a restorative approach to address that." (Education Professional)

In Alberta, the Ministry of Education has authority over determining the curricula taught in schools, as well as standards for teacher professional education and certification. However, power over implementation and operationalization rests with the 379 local school authorities. As a result, **the Working Together to Support Mental Health in Schools document offers recommendations rather than mandates, but education stakeholders from various vantage points across the Province spoke to the significance of its message to schools and local school boards as a driver of change.** Another signal of Alberta Education's commitment to promoting brain science is that it mentions AFWI as a resource and links to AFWI's website on its ["Welcoming, caring, respectful, and safe schools"](#) webpage.

At the provincial level, work is underway to integrate Brain Story-aligned competencies into curriculum for students, but this effort likely needs further support to be fully systematized. One education expert described the core competencies for students, as outlined in the Ministerial Order for Learning, as *"hand in glove with what AFWI is doing—the competencies talk about critical thinking, problem solving, communication, personal growth and well-being, innovative thinking, all those things."* These competencies reflect an orientation towards educating the whole child and attending to social-emotional and interpersonal skills alongside literacy and mathematics education. However, other interviewees expressed that these changes were on the cusp, and likely in need of additional and concerted support to extend across the system in a more standardized way. For instance, one interviewee commented:

"Mental health promotion in schools is where the Brain Story fits in. There's numerous programs and practices and people trying to figure it out, and I think we're at a tipping point where we need to codify that practice. I would hope to see the Brain Story as being almost—and this is probably too strong of language—a mandated part of the curriculum or programming as kids move through schools. But because that's such a complex hairball field, lots of players, lots of programs, we need to crack that, it's a piece of work that we have to do." (Education Professional)

One interviewee also pointed to important work in early childhood education overseen by the Ministry of Children's Services that provided critical infrastructure for a more coherent education system aligned to the brain science. The Early Childhood Coalitions of Alberta (ECCA), comprised of over 100 local coalitions throughout the province, "helps to build awareness, capacity and momentum at a provincial and community level to enhance children's well-being and development through a community development approach."²⁷ While the Ministry of Children's Services leads this work, an education leader noted that the ECCA's work to promote the Brain Story as essential knowledge for early childhood education providers was an important part of a strengthened education continuum in the province.

As part of the evaluation findings, several examples emerged of changes to pedagogy and school culture aligned with the Brain Story science occurring locally across the Province. Those efforts were largely driven by decisions

²⁷ Early Childhood Coalitions Alberta website. ["ECCA Story."](#)

made at the school or local school authority level. While these pockets of change are encouraging, **one barrier to systemic change in instructional practice is that the Brain Story Course and content is not currently required for teacher certification.** Another barrier to more widespread participation among teachers in the Brain Story Course is collective bargaining agreements, which are negotiated at the local school authority level and cannot be superseded by a provincial mandate. Educator contracts typically contain limitations on assignable time, and it would be difficult if not impossible to make completing the Brain Story Certification Course mandatory for teachers given the time commitment it requires.

CROSS-SYSTEM RELATIONSHIPS AND CONNECTIONS

Throughout the data collected in interviews and focus groups, many people highlighted AFWI's activities to convene change agents within and across sectors that serve children and families, and the positive impact this has had on relationships and understanding in Alberta. For some people, the benefit of these new or strengthened relationships has been largely intangible (e.g., better understanding an alternative perspective) while for others, it has directly impacted their day-to-day work (e.g., facilitating smoother handoffs between hospitals and community-serving organizations). One person explained, *"What the Palix Foundation has been able to do in bringing agencies together...really bring people together and have these conversations and develop some different pathways for clients."* (Children's Services Professional)

Specifically, stakeholders viewed these cross-sector connections as beneficial for several reasons:

- Disparate stakeholders are starting with the same understanding of the science and a similar vocabulary
- Cross-sector meetings build mutual understanding of priorities and focus areas within respective ministries or sub-systems
- Relationships among organizations facilitate coordination and even integration of Brain Story-aligned services for clients

According to interview data, the shared language of the Brain Story facilitates partnerships and collaboration across organizations, whether in the same or different subsystems.

Many interviewees reported being better able to communicate and collaborate with people in other organizations because of shared language and understanding of Brain Science. For instance, within healthcare, a primary care provider noted being better able to communicate with a mental health professional about the needs and past experiences of a shared client. Similarly, the language of the Brain Story helps people to communicate across sub-systems. For example, in interviews we heard that educators now partner better with children's services, healthcare, and justice system professionals as a result of this common understanding about the impact and importance of early childhood development. An interviewee explained, *"Probably five years ago, or seven years ago, this rich conversation could not have happened, because we didn't have that common language. And I think that is a huge impact that Palix has had through not only their Course, but also through their website, in those easy-to-remember metaphors they developed."* (Education Expert) Another person emphasized, *"I think it just advances everything. Practice, policy, research. If everyone's speaking the same language, everyone understands the concepts and the urgency, everyone understands the neuroscience. It's made my life a lot easier."* (Children's Services Expert)

Several specific examples of how shared language and understanding has facilitated collaboration across organizations emerged from the interview data. For instance, the collaboratively written [Lethbridge Play Charter](#) explains why play is important and asks organizations in the city to commit to focusing on play. One interviewee noted, *"[The Lethbridge Play Charter] reframes play as something scientifically founded and resiliency building. I*

think that can carry far. I think that is an arena where that AFWI language will be impactful.” (Children’s Services Expert)

Another example is the C5, a collaborative of five agencies that serve over 30,000 Edmonton residents each year. About 120 of their respective staff came together to play the Brain Game and afterwards noticed their collaboration improved: *“It was better. It was smoother and particularly those that were working collectively with children and families.”* (Children’s Services Expert)

Finally, the Safe Communities Opportunity and Resource Center in Calgary is another example of inter-organizational and cross-sector collaboration enabled by the Brain Story knowledge and language. One interviewee explained:

“What AFWI has done here with the Brain Story and making the science accessible, and making it as easy to understand and creating the language, has actually paved the way for more effective partnerships that bring about better outcomes. For us in Calgary we’re part of SORCe [Safe Communities Opportunity and Resource Center]. So we have 14 agencies together co-located, and those groups have ascribed to the Brain Story. These are Albert Health Services, Calgary Police Service, various nonprofit groups, indigenous groups, all kinds of newcomer groups—all kinds of public and private sector organizations that deal with vulnerable sectors of the population. Again, they can come together, and they actually have that common understanding, and that shared language around the neurobiology of the brain, and I think it paves the way for effective partnering, which ultimately, as I say, has been more positive outcomes for individuals down the road.” (Justice Expert)

Evaluation data pointed to positive experiences with partnerships among Education, Health, Justice, and Children’s Services to date, but Alberta needs more cross-sector and cross-ministry collaboration and alignment.

Several cross-sector partnerships and models emerged as examples of work either initiated by or supported by AFWI in Alberta. For example, the Calgary Regional Service Delivery Collaboration engages Alberta Health Services, Children Services, and other providers. Alberta Health Services also has formal partnership with the education system to support addiction and mental health programming within schools. However, several interviewees offered critiques of the current collaboration among AHS and the education system, citing both friction between educators and healthcare providers, as well as a lack of systemic coordination. One person commented, *“AHS has resources and other programs, and some schools, there are different programs that they choose that they think are effective. But as a system, I would say we don’t have just one program.”* (Healthcare Expert)

Finally, one interviewee from the mental health field pointed specifically to the need for further concerted collaboration with the children’s services and justice systems. The person elaborated, *“A lot of the child welfare kids have difficulty accessing mental health services...there are a few areas or pockets where we’re collaborating well, but a majority of child welfare kids don’t access mental health services and don’t know what the Brain Story can offer.”* (Mental Health Expert) The remaining needs for collaboration, especially with the health system in the province, are in line with the findings about the limits of systemic change within the healthcare sub-system and specifically Alberta Health Services, as previously discussed.

Intermediaries who convene and facilitate partner organizations can provide an important support for effective cross-sector collaboration.

In addition to AFWI’s role as a convener and facilitator, other examples of effective intermediaries emerged as a supportive factor for cross-sector, Brain Story-aligned efforts. Several interviewees pointed to the important role

of intermediary organizations to facilitate local collaboration, based on their experiences within Alberta. Some regions pointed to municipal governments playing this intermediary role. In Calgary, several interviewees mentioned the role of the United Way as an effective convener and facilitator. One person from a local school district emphasized this point, explaining, “We have limited time, funds, all of those things, so if someone is willing to do the work in putting meetings together, if you have someone who’s being able to absorb the cost, providing some of these speakers and information for free, those will all help get people together, get the messages out.” As AFWI fosters increased cross-sector relationships and collaboration, the initiative can continue to support Brain Story-aligned intermediaries in different parts of the province to play this important role.

AFWI’S FOCUS ON INDIGENOUS COMMUNITIES IN ALBERTA

In addition to examining the deep work of AFWI to impact key systems in Alberta, FSG’s evaluation also considered AFWI’s evolving partnership and role working with specific communities, most specifically Indigenous communities in Alberta. In the last several years, AFWI prioritized sharing the Brain Story science with Indigenous communities and supporting the activation of that knowledge. AFWI principally focused on Indigenous communities in Alberta, with activities such as in-person presentations by a Cree-Métis social worker, elder, and Brain Story scientist across communities in the province. In addition, AFWI partnered with the Kainai First Nation in southern Alberta for a more concentrated set of investments. The findings below are based on interviews and focus groups with people who were involved in a variety of these activities.

Knowledge Dissemination

With regard to dissemination of the Brain Story knowledge in Indigenous communities, several key findings emerged about how to share the Brain Story most effectively. **First, integrating the Brain Story with Indigenous knowledge and culture is effective and complementary.** In particular, several interviewees cited the importance of integrating the Brain Story into key aspects of Indigenous culture and communication, specifically storytelling, history, and ceremony. Interviewees encouraged AFWI to understand themselves as messengers of a story—the science of the Brain Story—and to truly communicate it as such. One interviewee stated, “*Indigenous cultures are oral cultures, they are storytelling cultures. So it’s not even just the content of the story, it’s also the act of telling the story.*” (Indigenous Expert)

A common theme from interviews and focus groups is that much of what is conveyed within the Brain Story knowledge is fundamentally the same message or values that the elders already know and communicate, but framed differently in terms of the science. One Indigenous expert commented, “*The knowledge or wisdom are things that the elders have known and shared over generations.*” This provides an excellent point of resonance, offering an opportunity for AFWI and the Brain Story to strengthen and reinforce the value of existing Indigenous knowledge while offering the additional value of the science behind this knowledge. The resonance of the Brain Story with knowledge from the elders also supports the integration of Brain Story aligned content and practices into traditional ceremonies, as several elders cited doing in their own practice as community leaders.

Interview and focus group data also pointed to specific considerations for work with Indigenous communities because of the high rates of trauma experienced by community members. Three specific points emerged:

- **First, in teaching and communicating Brain Story knowledge, there must be a focus on both brain development and resilience.** The dual emphasis, including a focus on resilience, provides hope and agency. A focus only on the impact of negative experiences on brain development in the context of many Indigenous communities was viewed as leading to guilt or hopelessness, certainly not the intention of AFWI. One person explained the power of the resilience piece, saying, “*People look at me and they say, ‘Wow, now I get it. I’d heard it all before, but I walked away feeling, ‘It’s done. I’ve really destroyed my*

kids' lives.' I didn't really understand when they say you can change this at any time through positive experiences. I didn't hear what I really needed to hear, which is 'How do I do that?'" (Indigenous Expert)

- **Second, given the high rates of trauma among members of the community as exhibited by high ACEs scores in the population, including those in professional roles, there is an even greater need to support frontline professionals in dealing with trauma.** Whether as a result of taking the Brain Story Course or simply the trauma raised in their day-to-day work, these professionals and the partners who support them cited a need to specifically consider supports for their emotional and physical wellbeing as a result of primary and secondary trauma.
- **Third, many interviewees felt a strong need for a tool to communicate the Brain Story knowledge to families and community members.** Input suggested that this tool should be story-telling based, less clinical and shorter than the current Brain Story Course, and targeted at non-professionals. One person said, *"I know how important it is to teach the people you were working with about the core Brain Story in a way that they will understand it...I think you're going to start to see more people wanting to know, 'How do we do it for the grassroots people?'" (Indigenous Expert)*

Changes for individuals, organizations, and sub-systems

As seen in the example of AFWI's partnership with the Kainai First Nation, the impact of the Brain Story began with changes in knowledge and beliefs at the **individual level**. The application of the Brain Story in **organizations and sub-systems** has also occurred to some degree, especially within the education system, as detailed in the case study. Notably, educators and elders made strong progress within the schools integrating Brain Story and culturally aligned practices to help students self-regulate and understand their own brain development. However, the push for change seems to live within select schools or programs, such as the high school or the Head Start preschool program, largely because of leadership efforts within those organizations. There has not yet been a notable shift in the overall system, as might be reflected in changes from the Board of Education that permeate throughout all education programs and practices in the Kainai First Nation.

At a provincial level, some systemic changes and resources have emerged such as the miyo resource, a document that, according to a policy expert, *"tries to reflect and respect the voices of Indigenous scholars, and elders, and knowledge keepers. It's about going back to the sacred teachings and the learnings within those, so how do we make sure that the Cree, the Blackfoot, and so on, those learnings are incorporated there. It very much aligns with brain science, too, and recognizing the wholeness of the child."* This kind of policy-level guidance is a positive step toward aligning broader systems with Indigenous knowledge and practices, as well as the Brain Story knowledge.

Finally, with regard to provincial sub-systems, Indigenous interviewees and their partners pointed to several specific needs for continued change in Children's Services and the Justice systems. Within Children's Services, Indigenous interviewees expressed a desire for an overall change in Children's Services orientation to child welfare, and voiced a specific tension with the application of ACEs history taking. First, interviewees pointed specifically to the need to more widely and formally recognize that children need to be safe and remain connected to their culture, family, and community. Given the history of residential schools in recent history and the disproportionately high number of Indigenous children in the child welfare and foster family system, this is an important area for continued change. Interviewees also mentioned the specific fear among some Indigenous communities to disclose childhood or family trauma in the context of an ACEs history taking, since they fear that this information will become additional evidence for the removal of children from their families and communities. One children's services expert explained, *"Some of our Indigenous leaders are afraid to apply ACEs to child welfare because they are afraid that the depth of the problems in those communities will just become one more piece of evidence to remove children. So there's actually a fear that this will become a tool to continue those harms as*

opposed to understand and to bring about change.” As a result, there is continued need for systemic interventions that will ensure that use of tools such as the ACEs questionnaire in a way and in a context that does not further perpetuate harm to children and families in Alberta.

The justice system, and specifically criminal justice, is the other system specifically mentioned by interviewees as needing specific change oriented to better serving Indigenous communities. While attempts such as the Gladue Factors²⁸ have been applied, one justice system expert shared, *“Indigenous people are overrepresented in the courts. That number keeps climbing no matter what we seem to do. Well, let’s look a little deeper. I think if we look into brain science, we can start to begin to frame this and contextualize it, and maybe start to do something.”* For the criminal justice system, in which knowledge of and application of the Brain Story remains nascent or scattered, more work is needed and with a specific focus on addressing the overrepresentation of Indigenous people in the system.

Further opportunities for AFWI’s support of Indigenous communities in Alberta

In addition to the opportunities mentioned above, two additional related recommendations emerged for continued AFWI support of the Brain Story knowledge dissemination and application in Indigenous communities. First, communities **could benefit from hearing about successful practices and engagements with the Brain Story happening in other Indigenous and First Nations communities. One interviewee noted, “I would really like to see what’s being done, what has worked, and then share those resources or stories, those narratives across First Nations communities to have that platform.”** (Indigenous Expert) Related to the same idea of sharing what has worked, what has not worked, and why, another person expressed the potential value of evaluation work focused specifically on First Nations or Indigenous communities. This kind of evaluation effort would serve to make the progress and impact more concrete, and provide a resource to other communities for learning. As one person said: *“I’m sure in our heart of hearts we know that it is making a difference, but to really have that resource or to say this is how they did it, I think would really capitalize on the work that is happening using the Brain Story as that platform to have those conversations, to teach people.”* (Indigenous Expert)

CROSS-GEOGRAPHY PARTNERSHIPS

While AFWI’s principal focus is the province of Alberta, the initiative also has several long-term partnerships outside of Alberta—some of these are longstanding partnerships that have evolved with AFWI over many years, and others are newer partnerships developed in the last several years. As part of the developmental evaluation, AFWI seeks to better understand the ways that their involvement and support outside of Alberta and the work within Alberta influenced one another. In addition, looking at the work in other geographies provides a lens through which to understand what parts of AFWI’s work to impact individuals, organizations, and systems have been transferrable or valuable outside of the Albertan context where it was developed. For the sake of the evaluation, FSG collected data on three other geographies: other provinces within Canada, the United States (U.S.), and the United Kingdom (U.K.).

AFWI’s work has influenced partners in other geographies in key ways.

AFWI has invested substantially in communication tools and resources to support knowledge dissemination of the Brain Story knowledge, and partners across all geographies reported leveraging these resources. Some partners directly use AFWI’s resources, such as the Brain Story Course or other videos. For example, national

²⁸ Canada Department of Justice. [“Spotlight on Gladue: Challenges, Experiences, and Possibilities in Canada’s Criminal Justice System.”](#)

efforts in Canada from the Canadian Centre on Substance Use and Addiction mandated the Brain Story Course as a prerequisite for any group applying to participate in the Brain Builders Lab initiative. Other partners mentioned adapting the materials for local audiences or specific purposes, but valued the ability to draw on the key science and metaphors distributed by AFWI. Even when the specific videos were not thought to translate well across cultures or geographies, the existence of AFWI materials and metaphors as a starting point was cited as “massively helpful” by several partners.

AFWI’s example and leadership have influenced partners’ strategies in other geographies. AFWI is considered a model for its place-based focus and its knowledge mobilization strategy. As a result, other provinces in Canada see the potential path; a Canadian partner said, *“The provincial level is something that we have a blueprint or at least a model for, because we’ve seen that in Alberta and we’re now figuring out how to do it in Ontario.”* Partners and other funders in the U.S. and the U.K. cited AFWI as a model for place-based work. For instance, one interviewee from the U.K. commented, *“I’ve given evidence to parliamentary committees...when challenged by a member of parliament, ‘How does this really work in practice?’ I can say, ‘Oh well in Canada, in Alberta they’re doing this.’ It makes all the difference in the world to your credibility saying this is possible, it can be done, it is being done.”*

Interviewees identified cross-sector collaboration and a “backbone” entity to coordinate the work as factors or conditions supporting the success of similar work in other places.

Across interviews with partners in other geographies, two main factors emerged as particularly supportive of effective, Brain Story-aligned knowledge dissemination and practice change. **First, many interviewees cited the power of cross-sector collaboration, engagement, and relationships in the successes they have had.** One interviewee explained, *“When you go to a meeting...you have everybody around the table, the head of the city council, the director of public health, the head of education, the head of social services, everybody...I think that’s the real trick, how you get everybody speaking the same language on the same page with the same mission.”* (U.K. partner) Interviewees noted AFWI’s model of this approach in Alberta, and partners mentioned its importance in geographies in the U.K., Canada, and the U.S.

Second, one partner expressed that in their geography, the lack of an entity like AFWI that could provide “backbone” support to cross-sector, systems change approaches to Brain Story knowledge dissemination and practice change was hindering progress. The interviewee commented, *“We aren’t set up to be that spine organization that AFWI is in Alberta. And no other organization has emerged in the last few years to play that part here...And until it does, we won’t get to that tipping point of getting the scale of change or the pace of change that it would be great to see.”* (U.K. partner) This interviewee suggested that AFWI and its cross-geography partners may want to consider how best to seed or support a local “backbone” entity in each geography to facilitate systems change efforts among various partners and sectors.

Several interviewees also identified a missing tool that could help support the adoption of Brain Story-aligned work in other places—a compilation of data and evidence on the work to date in Alberta related to Brain Story knowledge dissemination, practice change, and system change. One U.K. partner explained, *“We want to have the evidence that already exists...clearly, some evaluations have been done. Some done in the States, and obviously quite a lot done in Canada.”* Partners expressed that this evidence, from systems in Alberta and even similar efforts elsewhere, could help newer partners leverage the existing evidence base and wield greater influence in their home geographies.

In turn, other geographies have influenced AFWI’s work.

In interviews, people emphasized that partners in other geographies serve to highlight and amplify AFWI's messaging, core content, and example. Many partners mentioned sharing the example of AFWI's work in Alberta whenever possible and amplifying their work to share the Brain Story knowledge. One partner in North America explained, *"[We] spread the Brain Story far and wide because we believe it's a key knowledge competency...So we're part of AFWI loudspeaker I guess, in spreading the word."*

A few interviewees in Alberta pointed to the value of the Brain Story-aligned work in other geographies as a local influence strategy in the province. One healthcare representative said, *"I think the initiatives that AFWI has made in the U.K., I think that those will really strengthen the argument that this Alberta initiative should be adopted by Alberta Health Services."*

Finally, there are several Brain Story-aligned efforts recently launching in the US, the UK, and other provinces in Canada. **Nascent practices in these other geographies may provide lessons and contribute to the evidence base for practice change in ways that can inform AFWI's ongoing evolution.** For instance, one pilot program in the US is expected to provide lessons learned about structured engagement with the Brain Story Certification Course and how best to translate course participation into practice change. These kind of pilots through partners will multiple AFWI's ability to learn and adapt its own strategies in Alberta.

SECTION III: IMPLICATIONS OF THE EVALUATION FINDINGS

AFWI has worked for more than a decade to promote and disseminate the science about brain development and its connection to lifelong outcomes, including mental health and addiction. In packaging the research and science into the Brain Story, investing in its dissemination, and using this knowledge as the basis for AFWI's strategy to shift systems in Alberta to better serve children and families, AFWI has attempted an innovative, place-based effort at a large scale using a unique approach. Given this ambitious effort and the findings detailed in this report, we now turn to considering the implications of these evaluation findings: **Where has there been great progress and impact as a result of AFWI's strategy and actions? What are the implications and what can we learn from these areas where the Brain Story and its application have had the greatest traction?**

AFWI has been successful as a knowledge entrepreneur and catalytic convener.

In AFWI's role as a knowledge entrepreneur, most of the Initiative's time, resources, and staff capacity continued to focus on disseminating knowledge of the Brain Story. In addition to new tools and activities (e.g., Brain Game and increased staff consultations), the major strategic investment was the development of the free, online Brain Story Course. As expected, this online Course has provided AFWI with greater reach and scale, far beyond its initial network of change agents in Alberta. The Brain Story Course has had varying levels of adoption across sub-systems, with relatively less adoption within the health system and relatively more among children's services, for instance. The primary uptake of the Brain Story Course continues to be within Alberta, and largely among professionals who wish to apply the Brain Story knowledge in their work. In many key sectors within Alberta, the Brain Story has established a baseline of knowledge, and interviewees credited AFWI with significantly influencing this achievement over the last decade.

AFWI has continued its role as a catalytic convener, focused on supporting and cultivating a network of change agents in Alberta and select other geographies. While early AFWI activities such as the Symposia no longer occur, AFWI is still a powerful convener across sectors in Alberta, with interview data reflecting the respect and admiration that people have for this aspect of AFWI's work. As the AFWI network has grown and its efforts have evolved, the network of change agents has necessarily become more diffuse, with AFWI often playing a more

indirect or facilitative role and relying on leading practitioners as key innovators and influencers within their respective sub-systems.

Some tensions exist related to AFWI's strategic choices regarding knowledge dissemination and practice change.

A defining characteristic of AFWI's knowledge dissemination strategy has been the distinct and purposeful fidelity to the "Brain Story," developed by the Harvard University Center on the Developing Child and FrameWorks Institute—a set of metaphors with specific language to convey the science of brain development and current understanding of its impact on people's long-term outcomes. Also, AFWI has adhered tightly to its core mission to link the Brain Story knowledge to outcomes related to mental health and addiction, specifically. This strategic choice to maintain a strict fidelity to the Brain Story metaphors and language seems to have produced a tension in the resulting outcomes. On one hand, several interviewees stated that AFWI could sometimes be a single-minded partner with a fixed vision or agenda that did not accommodate input from other actors—including well-meaning allies. However, at the same time, AFWI's choice to maintain consistent language and metaphors seems to have clearly produced results, as detailed in the earlier findings about the value of having shared knowledge and common language within and across organizations and sub-systems in Alberta. Finally, it is also important to note that AFWI has, in fact, acknowledged and supported a few specific instances where adaptation of the Brain Story content was necessary, such as for use within the Blackfoot community to make the content culturally relevant and relatable.

In contrast to AFWI's focus on the promotion and use of the specific Brain Story metaphors and language, AFWI made the strategic choice to catalyze rather than dictate the application of the Brain Story knowledge. Their approach to policy development and practice change aligned with the Brain Story has been less prescriptive—AFWI's strategy has focused on outcomes and provided space to change agents, frontline personnel, and policymakers to determine how best to apply the Brain Story science to their respective work. As with all choices, this too has produced certain trade-offs. For instance, AFWI's more catalytic approach has produced uneven results across organizations and systems, depending on the motivations, abilities, and opportunities open to respective change agents. Some interviewees expressed AFWI's chosen role as a strength and an attribute that allows AFWI to nimbly apply its resources where there is opportunity and movement; quite a few other interviewees wished that AFWI would take a more directive and active role in sharing and promoting "answers" to how different actors can align their practice with the Brain Story knowledge. It is notable that in discussion with AFWI staff and long-time advisors, a hypothesis arose that AFWI's choice to anchor on the Brain Story science, rather than any specific policy position or more prescriptive recommendations about the application of the science, has allowed AFWI to persist and remain influential across three very different provincial governments in the last decade.

Findings suggest that intentional work to bring together the parallel "downstream" and "upstream" efforts was effective to change systems.

In the last five years, AFWI has increasingly focused not only on disseminating the Brain Story knowledge to key change agents "upstream" in decision-making positions, but also on reaching "downstream" practitioners with the knowledge and its application to practice.²⁹ In pursuit of influencing provincial systems, AFWI simultaneously pursued the upstream and downstream strategies, while regularly convening stakeholders at multiple levels within and across systems to discuss what they were learning about the Brain Story science and its translation to practice.

²⁹ Upstream and downstream language references the Theory of Philanthropy for AFWI, as outlined in "Embedding the Brain Story" by James Radner and Nathaniel Foote of TruePoint.

In this role, AFWI did not provide answers so much as encourage people to make meaning from the Brain Story science and determine for themselves its value and application. **The evaluation findings indicate that the organizations and systems that have changed most are those where the upstream and downstream efforts have connected, cross-pollinated, and mutually reinforced one another.** For instance, this was clearly the dynamic within the children’s services sub-system, where key direct service leaders and organizations led frontline practice change while Ministerial-level staff and other stakeholders developed Brain Story-aligned policies. Organizations like the Science Policy Practice Network created “connective tissue” to bring people from these different levels together.

Practice change efforts have produced variable results.

AFWI’s more nascent work to promote and support practice change in alignment with the Brain Story knowledge has produced variable outcomes to date. Uptake of practice changes has differed widely according to the conditions and factors of a given sub-system, organization, context, leader, or other key conditions. In most cases within Alberta and beyond, the application of the Brain Story knowledge in policy and practice has not taken root and been codified widely at the sub-system level. In those instances of relatively greater uptake, it appeared due in part to AFWI providing funding or other resources to pilot efforts and change processes over time, such as the Change in Mind Initiative. However, in areas of lighter and more limited support from AFWI—such as a one-time convening or presentations—there seemed to be less impact on widespread practice change. Given results of investment in programs that facilitate organizational and program change, and early efforts to document and codify the work of leading change agents, the evaluation findings demonstrate that AFWI can more clearly establish its current goals for leveraging the network of change agents for practice change and Brain Story application. One implication is that AFWI can consider further how best to connect people and organizations that are defining paths for developing and resourcing practice change efforts, and how best to play a role sharing those practices within similar sectors and contexts. AFWI does not need to determine the practices and policies, but can more proactively, consistently, and effectively provide a space and framework to help stakeholders understand what is working. One potential framework to provide this coherence and track outcomes is the resilience scale, as will be explored further in a subsequent phase of the evaluation.

SECTION IV: FUTURE DIRECTIONS FOR AFWI

AFWI has been working for over ten years to share the Brain Story knowledge and mobilize its application across systems in Alberta working with children and families. AFWI has seen enormous change in Alberta and, to some extent, in other geographies where they have partnered; yet, there is certainly more to be done to continue the progress and change long-term mental health and addiction outcomes for children and families through the application of the Brain Story knowledge. AFWI is at a meaningful juncture to define its future focus and strategy, in keeping with the learning from this evaluation and emerging opportunities. Building on the lessons of the previous section about where progress and energy have been greatest in Alberta, AFWI faces strategic questions about continuing to support areas of significant movement to date, while also considering investment in areas where there has been relatively less impact.

Below are questions for AFWI to consider as it further evolves and makes choices about how best to deploy the tangible and intangible resources at its disposal—funding resources, staff time, expertise and influence, and more. Given the recent contraction in AFWI’s resources for grant-making and other contextual factors in Alberta and beyond, AFWI faces important decisions about its priorities and its role going forward.

In the last several years, AFWI has seen itself playing three complementary roles, according to the Theory of Philanthropy summarized in “Embedding the Brain Story” by TruePoint:³⁰

- **Knowledge entrepreneur**
- **Catalytic convener**
- **Learning partner for systems**

These stated roles continue to be relevant to the systems change that AFWI seeks, and therefore it seems likely that the Initiative will continue to act in these roles. Interviewees largely confirmed AFWI’s skillful approach to these roles in generating and sharing knowledge, playing a cross-sector convening role, and facilitating learning about systems change. Looking forward, interviewees suggested that the Initiative also consider additional approaches. Further, within these core roles or approaches, AFWI will need to identify specific activities or areas of focus that speak to their strategic priorities and take into account the following considerations. Interviewees, long-time AFWI advisors, and the evaluation team at FSG informed these considerations with their insights and questions.

Another significant factor to consider in thinking about the questions that follow is the COVID-19 pandemic—an example of a universal toxic stress. At the time of drafting this report, the pandemic was a new and late breaking development with substantive implications for AFWI and the community of Brain Story change agents and leaders across subsystems. Effective COVID-19 responses require a collective focus on applying the Brain Story knowledge to build individual, family, and community resilience to buffer this stress by reducing the burden of adversity, adding positive supports and improving skills and abilities. AFWI and the community are coming together with this purpose in mind to adjust strategies in the face of COVID-19.

How will AFWI continue connecting change agents and decision-makers (upstream) and frontline practitioners (downstream) to influence systems change and alignment with the Brain Story knowledge?

When AFWI is able to connect its upstream and downstream stakeholders, it catalyzed successful changes in policy and practice within organizations and sub-systems. The Initiative can consider how to deepen and strengthen

³⁰ Nathaniel Foote and James Radner, “Embedding the Brain Story,” TruePoint, 2017.

these connections across sectors within Alberta and in other geographies as well. For instance, AFWI can leverage its current strengths in Alberta—including relationships, influence, and credibility—to convene individuals representing various vantage points (e.g., frontline staff, organization leaders, policymakers) in key systems; facilitate working groups and other practical environments for this exchange; and encourage learning through communities of practice that reach across different stakeholders in the system. AFWI can also consider whether there are new areas of competency that it can develop in order to deepen its work both upstream and downstream, as well as bridge the two strategies.

AFWI can also consider where and when it will continue in its current role as a facilitator and catalyst, and where it may want to step into a more directive or prescriptive role. As acknowledged in the Implications section above, this calculation must be made carefully. While many interviewees asked AFWI to play a more directive role in promoting and sharing practice changes aligned with the Brain Story, historically AFWI's success has been predicated in part on its outcomes-focused and less prescriptive position. Even if AFWI wishes to remain outcomes-focused and less directive in supporting particular practice changes, the Initiative may choose to more deeply and consistently resource key leaders and processes for determining those specific practices and policies, promoting the adoption of those practices and standards, and convening people to share widely.

Given AFWI's work to date, as well as the clear demand from stakeholders, how will AFWI more deeply support practice change aligned with the Brain Story science?

As detailed in the report, there has been evidence in recent years of Brain Story-aligned practice change among key individuals and organizations in Alberta. However, there is still much work to be done to deepen, broaden, and systematize Brain Story-aligned practices and the ability of people to apply the Brain Story knowledge in their work. For several years now, AFWI has lightly supported practice change among its key stakeholders, through expertise and support from its staff and some of its resources and tools. Recently, AFWI moved more explicitly to convening two "Practice Days" events in Alberta to help spread and scale the innovation being practiced by leading individuals and organizations. The convenings also aimed to identify how the community of practitioners and AFWI could further support Brain Story-aligned practice change.

Through conversations among AFWI staff and stakeholders, as well as the data collected by FSG evaluators, it is clear that AFWI now has the opportunity to move more strongly into a role of facilitating practice change and the application of Brain Story knowledge in key systems in Alberta. While AFWI has avoided being an entity that tells people what to do, there is demand for their guidance, voice, and resources in the arena of practice change. One person stated, *"The [Brain Story] knowledge is there, but the translation into practice, that's the gap. And I think that we're doing the best we can, but we're not staffed to do that work deeply."* Examples of how AFWI might further engage and support practice change, without necessarily prescribing what the practices might be, include convening and facilitating sector-focused communities of practice, funding research to support specific practice changes, and supporting the development of new clinical standards or curriculum. In addition to directly supporting practice change, AFWI may also need to further support change management at the organizational level for key sectors or entities, similar to its past efforts with Change in Mind or other initiative to support organizational evolution in line with the Brain Story. AFWI has already begun to support practice change, and it can do so now explicitly and with strategic focus, evolving its engagement with change agents and leading innovators in Alberta to facilitate broader uptake of Brain Story aligned practices. One strategic tool under consideration is the resilience scale as an organizing framework for inspiring, tracking, and evaluating different domains of action related to practice change. [Placeholder for additional content on resilience scale pending phase 2.]

Within AFWI's work in Alberta, what are potential new or expanded areas for strategic focus?

From data collected during this evaluation, three potential areas for greater focus emerged for AFWI.

- First, given the strong work to date disseminating the Brain Story knowledge among key people and organizations, AFWI has reached those who were the initial receptive audience. **Now, AFWI faces a question of how best to continue to share and spread the Brain Story knowledge beyond its existing “choir” of stakeholders and change agents.** For instance, many interviewees suggested that there is a specific and targeted need for additional work to integrate the Brain Story knowledge and its application systematically within Alberta’s health system. While there have been pockets of progress, such as the CAAMHPP program within AHS previously discussed in this report, there remain important areas of the health system (e.g., adult mental health, primary care, pediatrics, addiction medicine, etc.) that have not deeply engaged with the Brain Story or aligned with Brain Story-informed practices. Similarly, AFWI might also choose to focus on key populations beyond its current core focus. For instance, there were several calls among interviewees for communications resources and channels to reach non-professional families and caregivers with the Brain Story knowledge. While AFWI’s resources are used for communicating to a general population, the core target has been professionals working with children and families; as a result, a specific focus on reaching non-professional families and caregivers would likely imply revamped communication materials and tailored strategies to reach families.
- **Second, several interviewees expressed a desire for AFWI to support more coherent and unified advocacy efforts within Alberta.** While many people acknowledged AFWI’s existing efforts to influence ministerial policy and resource allocation in the Province, there was general agreement that more could be accomplished. Specifically, several policy-oriented experts and government officials noted that the AFWI stakeholders would be more effective in promoting the core story if they spoke with a unified voice and story. Specifically, one person commented that advocacy would be strong:

“...If you went in front of a group of ministers and said, ‘Here’s a customer that can vouch for lived experience. Here’s somebody that actually delivers services to those customers. Here’s the promoter and supporter and theoretical convener, Alberta Family Wellness Initiative. Here is the scientific, academic community.’ Four legs of a stool coming in to talk to political ministers about one story.” (Children’s Services Expert)

In addition to convening and organizing advocacy for greater coherency and potential influence, several interviewees also suggested that AFWI might address the lack of cross-ministerial collaboration around outcomes for children and families. One healthcare expert explained, *“If AFWI could do one thing...look at the barriers within each ministry that keep the relevant stakeholders with an interest in people with mental illness and addictions, young children, families, from talking together.”* AFWI was acknowledged as both the natural convener of these various stakeholders and perspectives, as well as an actor with the necessary relationships and connections for such provincial-level advocacy.

- **Third, several interviewees suggested that evaluation is a key area needing AFWI’s support going forward.** Within the overall idea of supporting evaluation, two specific areas of need emerged from the evaluation data. One area is evaluation of the impact of Brain Story knowledge on practice changes and the impact of those changes in certain settings or sub-systems. One person elaborated:

“When we think about the Brain Story, how do we measure that a clinician who is taking the Brain Story, how has that changed their practice? And I think that’s a part that is kind of

missing from AFWI. And even when clinicians say, 'How is this going to better my practice? What is it going to do to support me in working with my clients?' I don't really have a great answer based on an evaluation of the Brain Story. So it would be nice if that could be part of the next phase of the AFWI." (Mental Health Expert)

In addition, others mentioned the need for evaluation focused on the impact of the Brain Story knowledge and application on the long-term impacts for children and families. Stakeholders want to know, and are looking for AFWI to lead. One person requested, *"For all of those key constructs [in the Brain Story], do they have a clear line of sight to what the outcomes and the indicators that they're hoping to see achieved by those constructs being translated into actual practice?"* (Children's Services Expert) As AFWI moves into its second decade of supporting the long-term systems change it seeks to improve mental health and addiction outcomes, a thoughtful exploration of options for evaluation of the Brain Story's impact on these outcomes is warranted and appropriate. Gathering evidence of long-term impacts at a system or population level will be, by definition, a long-term effort, but AFWI would be wise to consider how they can support building the necessary data collecting, sharing, and learning mechanisms. At present, AFWI is exploring the use of the resilience scale as an organizing framework for future focus on tracking progress in practice change and the resulting impacts on outcomes for children and families.

How will AFWI continue to partner with Indigenous communities in Alberta, based on its experience to date and feedback?

As detailed in the section of the report above related to AFWI's work with Indigenous communities, the partnership with AFWI to disseminate the Brain Story knowledge and support practice change in Kainai First Nation and other Indigenous communities has been impactful. Based on this experience and the relationships AFWI has built, the Initiative now faces a question of how best to continue to build on this work—both the deep partnership in Kainai First Nation, as well as the broader reach of more dispersed efforts in other communities. Several specific ideas are detailed above, centering around further promotion of the knowledge both to professionals and families, supporting practice change in Kainai First Nation beyond the education system, facilitating connections among Indigenous communities applying the Brain Story science, and evaluating the specific and tailored ways this work is developing.

Will AFWI continue to focus primarily on the province of Alberta, or will it more prominently expand its reach and scope to other regions of Canada, the U.S., Europe, or other geographies?

As AFWI's work in Alberta has matured, it has maintained key international partners (e.g., Harvard Center for Developing Child) and further cultivated collaboration with actors interested to disseminate knowledge and align practices with the Brain Story in other geographic regions, including the University of Oxford and Blackpool Better Start in the UK. As shown in the evaluation findings, AFWI's strategy and impact in Alberta have proven supportive and influential to others wishing to accomplish similar goals in their own communities. In more limited ways, there are also opportunities for AFWI to learn from its partners elsewhere as those partners help innovate and build the evidence base around funder practices, the Brain Story's influence on practice change, and the impact of practice and systems change on health and addiction outcomes for children and families. However, in a time of economic contraction in Alberta, there remains a strategic question about the utility of focus versus breadth in geography. AFWI will need to contemplate the specific intentions it has for any new geographies, as a tradeoff with devoting more resources to furthering their existing, deep work in Alberta.

CONCLUSION

In summary, it is clear from the developmental evaluation findings that AFWI's long-term strategy to shift individuals, organizations, and systems in Alberta is having its intended effect: knowledge dissemination is leading to shifting mental models and practices among individuals and organizations, and eventually to policy and practice change within key systems that impact children and families. These positive results are consistent with AFWI's focus, strategy, and resource allocation over the last decade. AFWI's commitment and persistence have created a common language and provided a forum for a range of upstream and downstream actors in Alberta to determine collectively how to apply the Brain Story knowledge to their policies and practices.

Looking forward, AFWI is well positioned to continue its roles as a knowledge entrepreneur, catalytic convener, and systems learning partner in Alberta and beyond. AFWI will need to consider how best to allocate its resources going forward, to both reinforce and continue areas of momentum, as well as potentially address areas within Alberta or other geographies that have seen less progress to date. For instance, in the near-term, AFWI will partner with leading community agencies in Alberta to explore the application of the resilience scale metaphor in several ways: 1) as a guiding framework for practice change, 2) as a tool for use directly with clients, and 3) as a framework for measuring clients' outcomes. Piloting these various applications of the resilience scale will be a joint effort, supported by AFWI and structured as communities of practice among the participating agencies in Alberta. (See Appendix D for further detail on the communities of practice.) Consistent with AFWI's continued evolution and adaptation, the learning from these communities of practice will help AFWI understand the potential for the resilience scale metaphor to further codify the lessons and application of the Brain Story knowledge – fundamentally, how reducing the burden of adversity, adding positive supports, and improving skills and abilities builds resilience and improves outcomes for children, adults, and families.

APPENDICES

APPENDIX A: LIST OF INTERVIEWEES

Between November 2019-January 2020, FSG interviewed **63 individuals** as part of the data collection.

Sector	Interviewee Name	Role	Organization
Children's Services	Karen Benzies	Professor, Faculty of Nursing	University of Calgary
	Carlene Donnely	Executive Director	CUPS Calgary
	Laurie Fagan	Program Director	Norwood Child and Family Resource Centre
	Lisa Garrison	Director of Programs	Children's Cottage Society
	* Mark Hattori	Assistant Deputy Minister	Ministry of Children's Services
	Peter Imhof	Executive Director	Family Centre of Southern Alberta
	Patricia Jones	CEO	Catholic Family Services
	Nicole Letourneau	Director (RESOLVE), Canada Research Chair in Parent and Infant Mental Health, Professor	University of Calgary
	Karen Orser	Executive Director	Calgary and Area Child Advocacy Centre
	* Marni Pearce	Director, Prevention and Early Intervention	Alberta Children's Services
	Pauline Smale	CEO	The Family Centre (Edmonton)
	William Smiley	Director, Community Mental Health Services	The Family Centre (Edmonton)
	Jacqueline Smith	Director of Mental Health and Wellness, Faculty of Nursing	University of Calgary
	Cynthia Tonet	Director, Louise Dean Centre	Catholic Family Services
Suzanne Tough	Professor, Scientific Director, Faculty of Medicine, ACCFCR	University of Calgary	
Education	Christine Davies	Former Director of Education	Calgary Board of Education
	Robbin Gibb	Associate Professor, Department of Neuroscience	University of Lethbridge
	Andrea Holowka	Superintendent of Instructional Services	Calgary Catholic School Division
	Michelle MacKinnon	Director of Support Services	Holy Spirit Catholic School Division
	Gary Strother	Chief Superintendent	Calgary Catholic School Division
Healthcare – Addiction Medicine	Jan Banasch	Site Chief of Mental Health Program	Grey Nuns Community Hospital
	Allison Bichel	Senior Provincial Director	Alberta Health Services
	Robyn Blackadar	President & CEO	PolicyWise
	Nancy Close	Community Relations Coordinator	City of Calgary
	Michelle Craig	Director, Adult Addiction & Mental Health	Government of Alberta
	Coreen Everington	Addiction Director	Government of Alberta

* Indicates interviewee provided information relevant to more than one sector / area of inquiry (e.g., Healthcare – Addiction Medicine and Cross-Sector Policy)

Sector	Interviewee Name	Role	Organization
Healthcare – Addiction Medicine	* Ann Harding	Director - Children Youth and Family Initiatives, Addiction and Mental Health	Alberta Health Services
	Linda Kongnetiman	Provincial Manager Information and CYFI Standards, Addictions and Mental Health	Alberta Health Services
	Saifa Koonar	President & CEO	Alberta Children's Hospital Foundation
	Laureen MacNeil	Executive Director	Canadian Mental Health Association Calgary
	Stacey Peterson	Executive Director	Fresh Start Recovery Centre
Healthcare – Child and Adolescent Mental Health and Addictions	Avril Deegan	Director of Child & Adolescent Community & Specialized Services	Alberta Health Services
	Jennifer Kuntz	ACE Program Facilitator Child and Adolescent Addiction	Alberta Health Services
	Chris Wilkes	Chief of Child and Adolescent Psychiatry	Alberta Health Services
Healthcare – General	Farah Bandali	Manager - Early Childhood, Healthy Living and Families	Alberta Health Services
	June Bergman	Professor	University of Calgary
	April Elliott	Pediatric and Adolescent Medicine Specialist	Alberta Health Services
	Julie Kerr	Executive Director	Hull Services
	Teresa Killam	Low Risk Maternity Physician	Riley Park Maternity Clinic / University of Calgary
	Laura McLeod	Physician / Zone Medical Officer of Health	Alberta Health Services
	Francesco Mosaico	Family Physician	Boyle McCauley Health Centre
Geographies Outside Alberta (Canada, UK, US)	Jim Cairns	Project Director, Global Children's Initiative	Harvard University: Center on the Developing Child
	Jennifer Jones	Director of Child and Family System Innovation	Alliance of Strong Families and Communities
	Kim McPherson	Senior Program Officer	St. David's Foundation
	Doris Payer	Knowledge Broker	Canadian Centre on Substance Abuse and Addiction
	Al Race	Deputy Director	Harvard University: Center on the Developing Child
	Kate Stanley	Director, Strategy, Policy and Evidence	National Society for the Prevention of Cruelty to Children
	Alan Stein	Head of Section, Child and Adolescent Psychiatry	University of Oxford
Justice / Law Enforcement	Gillian Bowerman	Manager, Youth and Child Wellness	Calgary Police Service
	Rodney Jerke	Judge - Edmonton	Court of Queen's Bench of Alberta
	* Diana Lowe	Executive Counsel to the Chief Justice & Deputy Executive Director	Court of Queen's Bench of Alberta
	Beryl McNeill	Family Lawyer	McNeill Family Law
	Mark Neufeld	Chief of Police	Calgary Police Service

* Indicates interviewee provided information relevant to more than one sector / area of inquiry (e.g., Healthcare – Addiction Medicine and Cross-Sector Policy)

Sector	Interviewee Name	Role	Organization
Indigenous Context	Michelle Big Swallow	All My Relations Facilitator	Family Centre of Southern Alberta
	Annette Bruised Head	Naato'saakii, Division Principal	Holy Spirit Catholic School Division
	Jacinta Fox	Head Start Director	Kainai Board of Education
	Kerrie Moore	Consultant, Social Worker, Cree-Metis Elder	Self-employed
AFWI Staff & Consultants	Kim Ah-Sue	Program Officer	Palix/AFWI
	Marisa Etmanski	Communications	Palix/AFWI
	Sarah Gay	Client Partner	Consultant – Evans Hunt
	Nancy Mannix	Patron and Board Chair	Palix/AFWI
	Geoff McKenzie	Creative Director	Consultant – Evans Hunt
	Nicole Sherren	Program Officer	Palix/AFWI

** Indicates interviewee provided information relevant to more than one sector / area of inquiry (e.g., Healthcare – Addiction Medicine and Cross-Sector Policy)*

APPENDIX B: BRAIN STORY COURSE PARTICIPANT SURVEY DATA

The following are results from the Brain Story Certification Course participant survey, administered by FSG in January 2020. All tables display percentages in descending order (e.g., the response option chosen by the largest percentage of participants is displayed first, followed by the response option chosen by the second-highest percentage of participants), **except** for questions asking respondents to indicate a relative level (e.g., their level of compassion for themselves). In those cases, the response options and corresponding percentages are listed in the relative order (e.g., much more compassionate, somewhat more compassionate, neither more nor less compassionate, etc.).

TELL US ABOUT YOURSELF

1. Where do you **currently live?** (*Write in*)

Country [n=439]	Percent of respondents (number)
Alberta	70% (306)
Canada, outside Alberta	22% (95)
United States	5% (23)
United Kingdom	2% (9)
All other countries	1% (6)

2. What is your **gender identity?** (*Select one*)

Gender identity [n=439]	Percent of respondents (number)
Female	85% (375)
Male	14% (60)
Non-binary / non-conforming	<1% (<5)
Choose not to disclose	<1% (<5)

3. Do you **identify as an Aboriginal / Indigenous Person**, that is, First Nations, Inuk (Inuit), and / or Métis? (*Select one*) [n=439]

Aboriginal / Indigenous identification [n=439]	Percent of respondents (number)
No	94% (411)
Yes	6% (24)
Choose not to disclose	<1% (<5)

4. With which of the following **Aboriginal / Indigenous Peoples groups** do you identify? (*Select all that apply*) [*Note: Survey respondents were only shown this question if they indicated in Q3 that they identified as an Aboriginal / Indigenous Person*]

Aboriginal / Indigenous group identity [n=24]	Percent of respondents who identify as an Aboriginal / Indigenous person (number)	Percent of all respondents (number)
Metis	63% (15)	3% (9)
First Nations	29% (<5)	2% (<5)
Inuk (Inuit)	4% (<5)	<1% (<5)
Other	4% (<5)	<1% (<5)

5. How would you describe your **race / ethnicity**? (*Select all that apply*)

Race / ethnicity group identification [n=439]	Percent of respondents (number)
White	61% (357)
Other	6% (28)
South Asian (e.g., East Indian, Pakistani, Sri Lankan)	3% (14)
Choose not to disclose	3% (14)
Chinese	2% (9)
Latin American / Latino / Hispanic	2% (9)
Black	1% (6)
Filipino	<1% (<5)
Korean	<1% (<5)
Southeast Asian (e.g., Vietnamese, Cambodian, Laotian, Thai)	<1% (<5)

6. Which of the following best describes your **current employment status**? (*Select one*)

Employment status [n=439]	Percent of respondents (number)
Employed – I work for a nonprofit organization (including health / social services providers)	41% (178)
Employed – I work for the government (any level / sector)	31% (135)
Employed – I am self-employed	8% (35)
Employed – I work for a company, business or other for-profit organization	7% (30)
Other	7% (29)
Not employed – I am retired	3% (13)
Not employed – I am searching for work	2% (9)
Not employed – I do not work outside the home	2% (7)
Choose not to disclose	<1% (<5)
Employed – I work for a philanthropic organization	0% (0)

TAKING THE BRAIN STORY CERTIFICATION COURSE

7. Were you required to take the Brain Story Course as **part of your job** (current or past)? *(Select one)* [Note: Survey respondents were only shown this question if they indicated in Q6 that they were employed by the government; a nonprofit organization; company, business, or other for-profit organization; or for a philanthropic organization]

Brain Story Course as job requirement [n=343]	Percent of respondents (number)
No, it was completely voluntary	56% (193)
Yes, it was required by my organization because of my role	22% (75)
No, but it was strongly recommended by my organization because of my role	15% (52)
No, but it was strongly recommended by organizational partners	4% (15)
Yes, it was required by my organization as a condition of hiring	2% (8)

8. What was your **primary motivation** for taking the Brain Story Certification Course? *(Select one)* [Note: Survey respondents were only shown this question if they indicated in Q6 that their employment status was **OTHER** than working for the government; a nonprofit organization; company, business, or other for-profit organization; or for a philanthropic organization; **OR**, in Q7, that they were **NOT** required to take the Brain Story Course as part of their job, either as a condition or hiring or for their role]

Primary motivation for taking Brain Story Course [n=356]	Percent of respondents (number)
I wanted to understand and apply Brain Story science to my work	39% (137)
I am interested in the brain / early childhood development / mental health and wanted to learn more	39% (137)
I wanted to understand more about the people my organization serves (e.g., clients, patients, constituents)	12% (41)
Other	7% (24)
I am a parent and I wanted to learn more about raising my child(ren)	3% (10)
I wanted to understand more about myself and my family upbringing	2% (7)

9. What was the **social setting** in which you took the Course? *(Select one)*

Social setting for taking Brain Story Course [n=439]	Percent of respondents (number)
I took the Course on my own	93% (407)
I took the Course with group of people who came together voluntarily	4% (17)
I took the Course with a group of people who were mandated to take it together	3% (15)
I don't remember / I don't know	0% (0)

10. What was your **timeline** for taking the Brain Story Course? *(Select one)*

Social setting for taking Brain Story Course [n=439]	Percent of respondents (number)
I took the Course on my own timeline	86% (377)
I took the Course on the timeline established by my employer / organization	14% (60)
I don't remember / I don't know	<1% (5)

11. Have you **completed all 20 modules** of the Brain Story Certification Course? *(Select one)*

Completion of Brain Story Course [n=439]	Percent of respondents (number)
Yes	73% (321)
No - I am partway through the Course and intend to complete it	26% (112)
No - I do not intend to complete it	1% (6)

12. To the best of your knowledge, **how many modules of the Brain Story Certification Course have you completed?** There are 20 total modules in the Course. *(Select one) [Note: Survey respondents were only shown this question if they indicated in Q11 that they **had not** completed the Brain Story Course]*

Number of modules of Brain Story Course completed [n=116]	Percent of respondents who have not completed the Course (number)	Percent of all respondents (number)
5 – 9 modules	38% (44)	10% (44)
10 – 14 modules	36% (42)	10% (42)
1 – 4 modules	14% (16)	4% (16)
15 – 19 modules	12% (14)	3% (14)

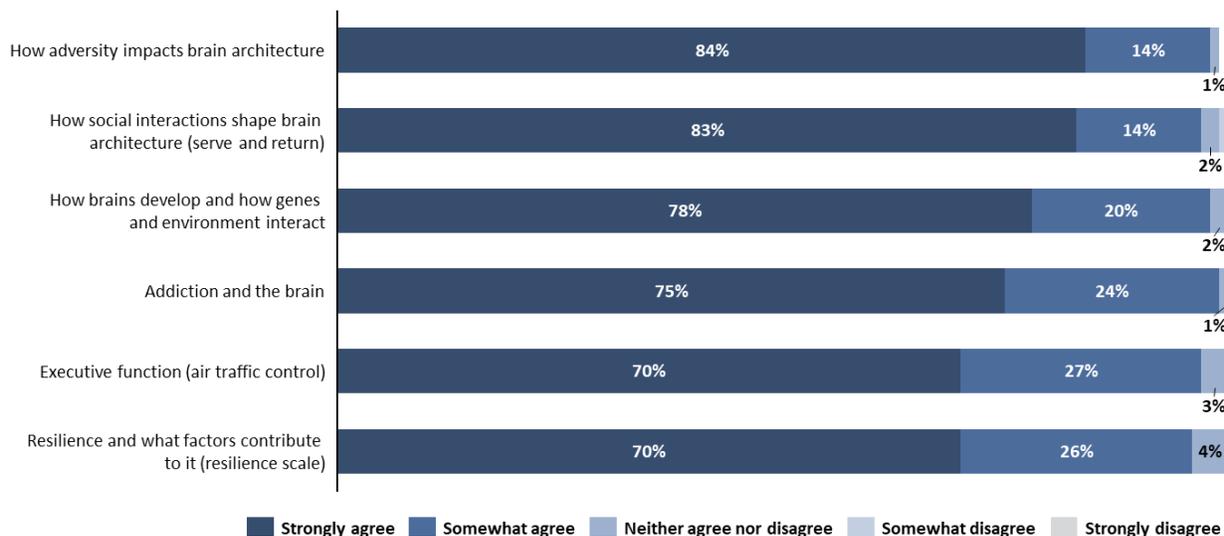
13. If you partially completed the Brain Story Certification Course, **what (if anything) prevented you from completing the full certification?** *(Select up to two that apply) [Note: Survey respondents were only shown this question if they indicated in Q11 that they **had not** completed the Brain Story Course]*

Barrier to completing the full Course [n=118]	Percent of respondents (number)
Lack of time	65% (77)
Other	25% (30)
Course was too long	19% (22)
Material became repetitive	5% (6)
Content was not relevant enough to me / my work	0% (0)

IMPACT OF THE BRAIN STORY COURSE ON BEHAVIORS, PRACTICE, AND ORGANIZATIONS

14. Please rate your level of agreement with the following statements about **the impact of the Brain Story Certification Course on your knowledge**. (Select one in each row)

After completing the Brain Story Certification Course, I am more knowledgeable about... [n=321]



15. Which **major ideas** from the Brain Story Certification Course were **most impactful for you?** (Select up to three) [Note: Survey respondents were only shown this question if they indicated in Q11 that they had completed the Brain Story Course]

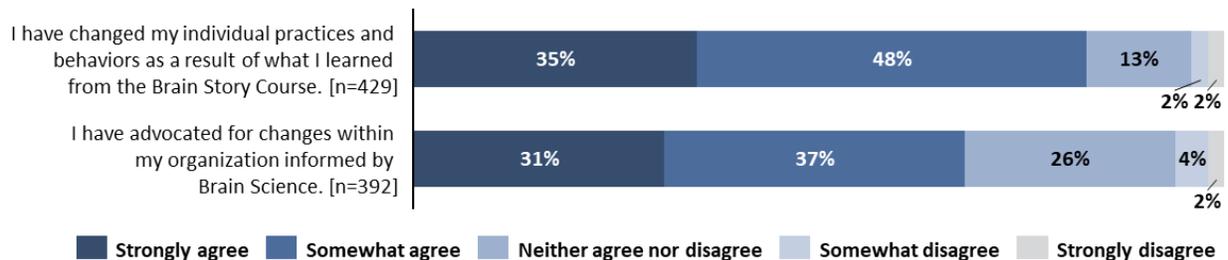
Most impactful major ideas from the Brain Story Course [n=321]	Percent of respondents (number)
How adversity impacts brain architecture	62% (198)
How social interactions shape brain architecture (serve and return)	57% (182)
Resilience and what factors contribute to it (resilience scale)	42% (134)
How brains develop and how genes and environment interact	37% (128)
Addiction and the brain	36% (115)
Executive function (air traffic control)	25% (80)

16. Why were these **particular ideas / topics impactful** for you? In **what ways** did they impact you? (Short answer – write in) [Note: Survey respondents were only shown this question if they chose response option A to Q12 (indicated they had completed the entire Brain Story Course)]

Why were particular ideas impactful [n=252]	Percent of respondents (number)
Increased understanding of general Brain Story knowledge	31% (78)
Relevant to work	24% (61)

Improved understanding of others	17% (44)
Relevant to family	10% (25)
Increased understanding of topics related to addiction	9% (22)
Increased understanding of topics related to resilience	6% (15)

17. Please rate your level of agreement with each of the following statements about the **impact of the Brain Story Certification Course on your behaviors, practice, and organization.** (Select one in each row)



18. Which **practices or behaviors have you changed** (on your own or with others) as a result of what you learned from the Brain Story Course? (Select all that apply) [Note: Survey respondents were only shown this question if they chose “strongly agree” or “somewhat agree” in Q17 to indicate they had changed their individual practices and behaviors]

Practices or behaviors changed [n=366]	Percent of respondents (number)
<i>In professional settings</i>	
Interactions with clients / patients	66% (243)
Wording / terminology used with colleagues and clients / patients	56% (205)
Curriculum updated or developed to reflect Brain Story science	27% (99)
Disciplinary practices	23% (85)
The wording and / or format of patient / client intake forms	21% (76)
Screening questions and protocols for clients / patients (e.g., ACEs questionnaire)	20% (74)
Other	8% (30)
<i>In personal life</i>	
Interactions with children in my family	63% (231)
My personal routines or time to take care of myself (e.g., exercise, eating habits, sleep, hydration)	43% (158)
The words I use to describe myself or people in my family	43% (157)
Interactions with my parents or elders in my life	32% (116)
Interactions with romantic partner(s)	21% (78)
Other	5% (19)

19. I **shared what I learned** in the Brain Story Course with the following people (*select all that apply*):

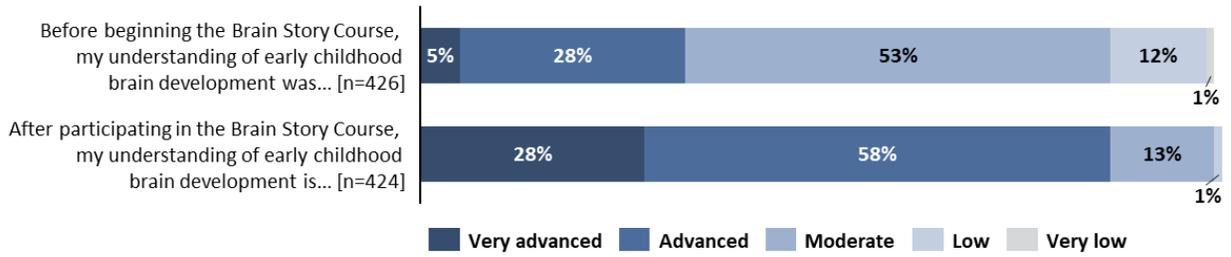
People with whom shared learning from Brain Story Course [n=439]	Percent of respondents (number)
Coworkers	79% (347)
Family	73% (319)
Friends	61% (258)
Clients / patients	48% (211)
Other	9% (40)
None of the above	3% (12)

20. In your opinion, what can **organizations do to enable their employees to participate** in the Brain Story certification Course? (*Select your top choice*) [Note: Survey respondents were only shown this question if they indicated in Q7 that they were required to the Brain Story Course for their job (as a condition of hiring or for their role) **OR** they indicated in Q8 that their primary motivation for taking the course was either to apply their learning to their work or to better understand the people their organization served]

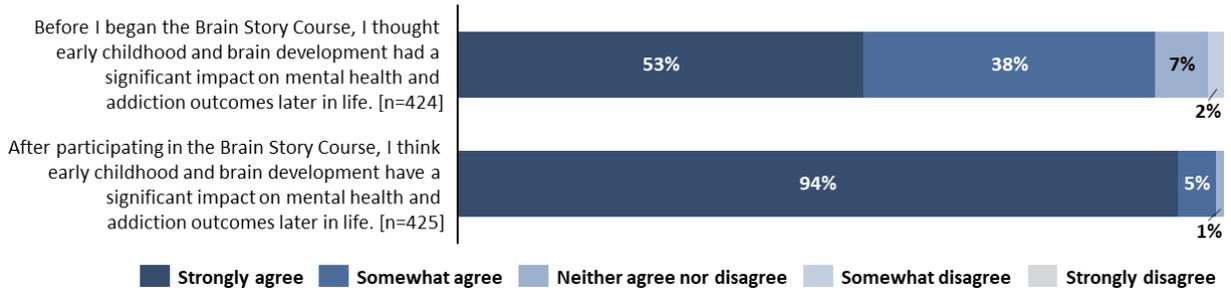
How organizations can enable employees to participate [n=251]	Percent of respondents (number)
Allocate time for employees to complete the Course at work	47% (118)
Create an opportunity for employees to take the Course together as a group	25% (63)
Make sure that employees are paid for the time they take the Course	20% (51)
Other	8% (19)
I don't know	0% (0)

IMPACT OF THE BRAIN STORY COURSE ON UNDERSTANDING AND MENTAL MODELS

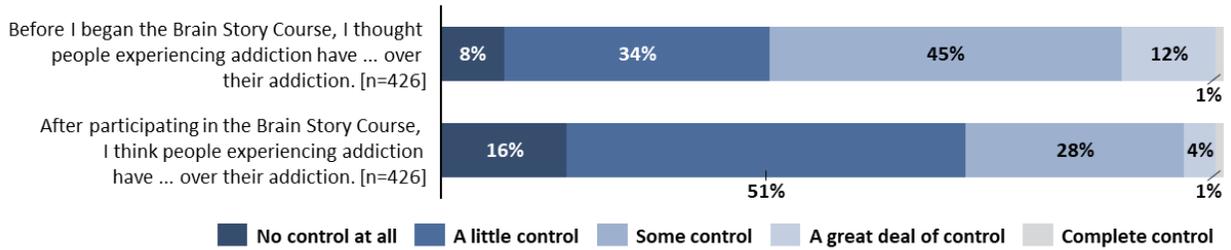
21. Please rate your level of understanding about **early childhood brain development before and after participating** in the Brain Story Course. *(Select one in each row)*



22. Please rate your level of understanding about the **impact of early childhood and brain development on mental health and addiction outcomes later in life before and after** in the Brain Story Course. *(Select one in each row)*

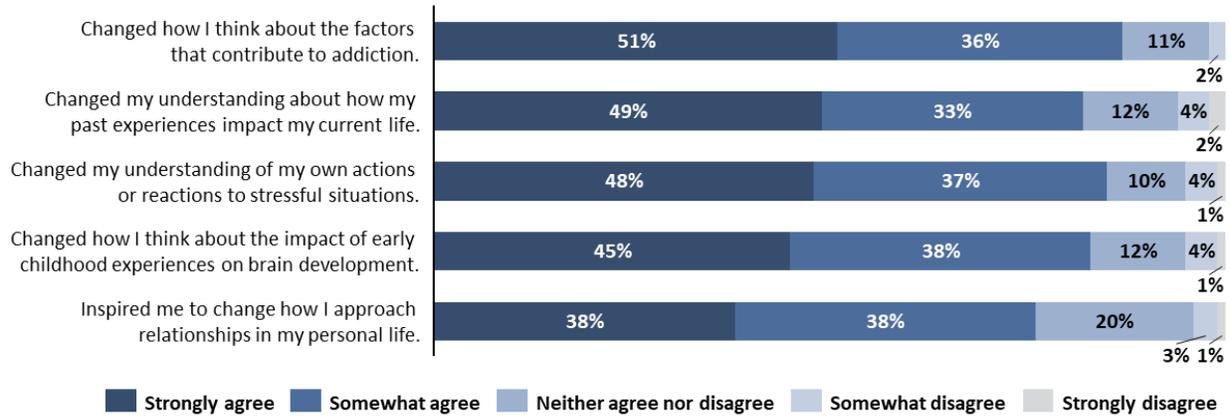


23. Please rate your level of understanding about your views regarding the **degree of control over their addiction** that people experiencing addiction have **before and after** you took the Brain Story Course. *(Select one in each row)*



24. Please rate your level of agreement with each of the following statements about the **impact of the Brain Story Course on your thinking about and understanding** of issues. *(Select one in each row)*

The Brain Story Course... [n=426]



25. Compared to before you began the Brain Story Course, how **compassionate do you feel towards yourself now** after participating in the Brain Story Course? *(Select one)*

Level of compassion for self [n=426]	Percent of respondents (number)
Much more compassionate	28% (121)
Somewhat more compassionate	44% (187)
Neither more compassionate nor less compassionate	28% (117)
Somewhat less compassionate	<1% (<5)
Much less compassionate	0% (0)

26. Compared to before you began the Brain Story Course, how **hopeful do you feel about your ability now to build your own resilience** after participating in the Brain Story Course? *(Select one)*

Level of hope about ability to build own resilience [n=426]	Percent of respondents (number)
Much more hopeful	39% (165)
Somewhat more hopeful	38% (161)
Neither more nor less hopeful	23% (99)
Somewhat less hopeful	<1% (<5)
Much less hopeful	0% (0)

27. Compared to before you began the Brain Story Course, how **compassionate do you feel now towards people who have experienced trauma** after participating in the Brain Story Course? (*Select one*)

Level of compassion for others who have experienced trauma [n=426]	Percent of respondents (number)
Much more compassionate	59% (249)
Somewhat more compassionate	30% (127)
Neither more compassionate nor less compassionate	12% (50)
Somewhat less compassionate	0% (0)
Much less compassionate	0% (0)

28. Compared to before you began the Brain Story Course, how **hopeful do you feel now about the ability of the people your organization serves (e.g., patients, clients) to build their own resilience** after participating in the Brain Story Course? (*Select one*) [*Note: Survey respondents were only shown this question if they indicated in Q7 that they were required to the Brain Story Course for their job (as a condition of hiring or for their role) OR they indicated in Q8 that their primary motivation for taking the Brain Story Course was either to apply their learning to their work or to better understand the people their organization served*]

Level of hope about others' ability to build their own resilience [n=251]	Percent of respondents (number)
Much more hopeful	36% (89)
Somewhat more hopeful	53% (132)
Neither more nor less hopeful	11% (27)
Somewhat less hopeful	1% (<5)
Much less hopeful	0% (0)

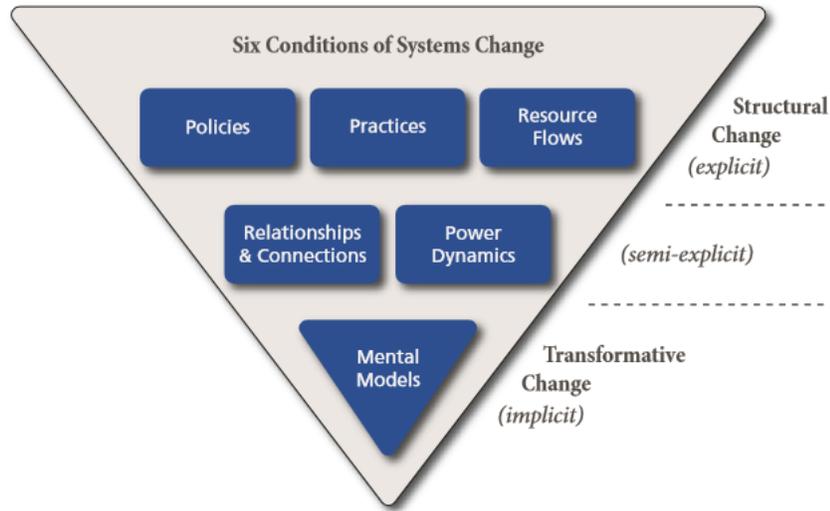
29. Compared to before you began the Brain Story Course, how **well equipped do you feel now to help others build resilience** after participating in the Brain Story Course? (*Select one*)

How well equipped to help others build resilience [n=426]	Percent of respondents (number)
Very well equipped	32% (134)
Somewhat well equipped	59% (251)
Neither well equipped nor unequipped	9% (39)
Somewhat unequipped	<1% (<5)
Very unequipped	0% (0)

APPENDIX C: SYSTEMS CHANGE THEORY AND FRAMEWORK

The systems change framework referenced here is informed by several definitions of systems change. FSG’s *Six Conditions of Systems Change* framework draws heavily on *The ABLe Change Framework: A Conceptual and Methodological Tool for Promoting Systems Change*, a peer-reviewed framework by Pennie Foster-Fishman and Erin R. Watson.³¹

Figure A: Six Conditions for Systems Change



The definition of systems change for this evaluation reflects the recognition that six major conditions hold a problem in place, or six major components of a system that need to change in order to make progress on a social issue. It is useful to examine the evaluation findings in an effort to understand how AFWI’s activities and the Brain Story have contributed to change in each of the following six components:

System Change Component	Definition
Policies	Government rules, regulations and priorities that guide an entity’s own and others’ actions
Practices	Espoused activities of institutions, coalitions, networks, organizations and other entities. Within an entity, the procedures, guidelines, or informal shared habits that comprise their work
Resource Flows	How money, people, knowledge, information, and other assets such as infrastructure are allocated and distributed
Relationships and Connections	Quality of connections and communication occurring among actors in the system, especially among those with differing histories and viewpoints. This includes feedback loops and interdependencies

³¹ Foster-Fishman PG, Watson ER. *The ABLe change framework: a conceptual and methodological tool for promoting systems change* Am J Community Psychol. 2012 Jun; 49(3-4):503-16. doi: 10.1007/s10464-011-9454-x.

Power Dynamics	The distribution of decision-making power, authority, and both formal and informal influence among individuals and organizations
Mental Models	Habits of thought, deeply held beliefs and assumptions that influence one's actions

The Resilience Scale Metaphor: A Proposal for Collaborative Investigation

Background

With the early success of the Brain Story Certification Course and increasing leadership from change agents who are integrating it into their organizations, there is a timely and important opportunity to deliberately encourage and develop a more distributed leadership model for course uptake, knowledge application, data collection, and evaluation. Innovative new Brain Story based policy platforms in Alberta (e.g., Alberta Children’s Services Well-Being and Resiliency Framework) are also paving the way for this next phase of deeper collective work to standardize evaluation frameworks and develop common indicators and outcomes. With this in mind, AFWI recently launched a next phase in its strategy called “From Knowledge to Action: Using brain story science to improve outcomes for children and families in Alberta.” Using a two-pronged approach, convening symposia in November 2019 in Edmonton and January 2020 in Calgary and drafting a number of case study examples of integrating brain story science as fodder for discussions at these events, AFWI is aiming to play a role in helping organizations better understand and assess change based on the brain story knowledge and its contribution to better outcomes for children and families.

As presented at the From Knowledge to Action events in Edmonton and Calgary, the resilience scale metaphor (part of the Brain Story) provides a simple, universal framework for thinking about how to apply the brain story concepts in practices and policies across the prevention, intervention, and treatment sectors. While the scale concept illuminates factors that contribute to individual resilience, it can arguably also be applied to understanding what resilience means at the family, organizational, and community/system levels as well. It also elucidates possible indicators and outcomes to assess the difference adopting a brain science aligned approach can make. Feedback from participants at both events revealed a key spark of interest around using the resilience scale concept more deliberately in each of these ways.

To further explore these ideas, Palix Foundation consulted with several community agencies who have been leaders in applying brain story science in their organizations and services (YW Calgary, Catholic Family Services, CUPS, The Family Centre, UK’s National Society for the Prevention of Cruelty to Children (NSPCC), Child and Adolescent Addiction Mental Health and Psychiatry Program (CAAMHPP - Alberta Health Services), and Fresh Start Recovery Centre). The purpose of these meetings was to seek community input and gauge capacity and interest in using the resilience scale concept in one of four possible ways:

1. As a tangible, visual tool for use directly with clients, to more clearly understand how clients are showing up and explain what they need to do to build their own resilience, and to chart client progress as they engage with agency-level programs and services.
2. As a tool to understand how to better measure client outcomes, and what measures are pertinent to this goal.
3. As a tool to frame organizational theories of change, and better understand how organizations can more fully integrate brain story science for the benefit of their clients and staff.
4. As a tool to explore within- and cross-sector partnerships and client referral pathways that can provide more comprehensive, wrap-around supports than any one agency can provide alone.

During these meetings, the desire to continue thinking collectively about the resilience scale concept and its utility surfaced with force and passion. Each consulted agency expressed interest in being involved in further opportunities in this area.

The opportunity: Using the resilience scale metaphor to guide practice and assess change

Palix Foundation is proposing support for three targeted communities of practice (CoP) that could be convened virtually over the next several weeks and/or months while social distancing measures due to Covid-19 are in place.

Each CoP would be limited to a maximum number of agencies given the challenges and limitations associated with virtual convening, and the aforementioned agencies that provided input into this proposal will be given precedence for participation.

The CoPs will be staggered in terms of start date with additional CoPs coming online as agencies/participants gain familiarity with the use of the resilience scale concept, and as agency time and resources allow.

CoP 1: Using the resilience scale concept with clients.

Purpose: This CoP will support agencies interested in piloting the use of the resilience scale directly with clients. The CoP will help agencies plan their pilot project through group discussion, identify needed resources such as training and scripts, and facilitate the sharing of learnings and resources across agencies.

Each agency will have the ability to adopt the approach and practices that work best for their clients and staff. However, it is anticipated that most will opt to use a quality improvement approach, starting with only a few practitioners and clients, and use learnings from that to refine and optimize the engagement over time.

Palix will be responsible for convening this CoP on a mutually agreed upon timeline for the agencies involved. Palix will provide overall facilitation for these meetings, as well as one-on-one consultation and additional support as requested by the participants, wherever possible.

FSG, the organization that is conducting Palix's developmental evaluation, will be contacting participating agencies as the pilot unfolds to determine how this approach has been helpful in practice.

Anticipated outcome: Agencies will have a new approach to better understand how to work with their clients, and how to more deeply motivate them to engage in programs and services for the purpose of leading to better health outcomes.³²

Timeline: Immediate start, end date TBD.

CoP 2: Using the resilience scale concept to measure client outcomes.

Purpose: This CoP will support agencies with internal capacity for evaluation to explore how the concept of the resilience scale can influence how they measure client, as well as potentially other, outcomes. Participating agencies will have a venue to discuss their current evaluation practices and challenges, generate new ideas and explore potential metrics for measurement, and share learnings and wisdom across agencies.

There are many tools currently available for evaluation and measurement and it is expected that each agency will continue to use the tools and practices that work best for them. However, this CoP may provide agencies with new insights on how to evaluate outcomes, as well as group support to pilot new metrics if desired.

Palix will be responsible for convening this CoP on a mutually agreed upon timeline for the agencies involved. Palix will provide overall facilitation for these meetings, as well as one-on-one consultation and additional support as requested by the participants, wherever possible. At key junctures, Palix may be able to bring in outside consultation from evaluation experts such as Meg Hargreaves, a Senior Fellow with NORC, who has considerable experience evaluating community initiatives based on brain story science.

³² Shen, Q., McLellan, A.T. & Merrill, J.C. (2000). Client's Perceived Need for Treatment and Its Impact on Outcome. *Substance Abuse*, 21, 179–192. <https://doi.org/10.1023/A:1007898102565>

Anticipated outcome: Agencies will have a better understanding of how to measure outcomes at the client level and possibly beyond. A broader opportunity offered by this CoP includes the possibility of agreeing on some shared metrics, as well as leveraging the lessons learned from this work across other organizations and with government and other funders.

Timeline: Start date follows inception of CoP 1, at a time mutually determined by participating agencies, end date TBD.

CoP 3: Using the resilience scale concept to more fully integrate brain story science into organizations.

Purpose: This CoP will support agencies interested in more fully integrating brain story science into their organizations. Participating agencies will have a venue to explore how and why they are meeting their clients' needs. Discussions will focus on organizational and/or programmatic theories of change, strategic plans, and administrative policies.

Palix will be responsible for convening this CoP on a mutually agreed upon timeline for the agencies involved. Palix will provide overall facilitation for these meetings, as well as one-on-one consultation and additional support as requested by the participants, wherever possible.

Anticipated outcome: Agencies will have a better understanding of how they can integrate brain science more fully and strategically in their organizations.

Timeline: Start date follows inception of CoP 1, at a time mutually determined by participating agencies, end date TBD.



CASE STUDY OF POLICY AND PRACTICE ALIGNMENT WITHIN CHILDREN'S SERVICES

June 26, 2020

Prepared by FSG

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INTRODUCTION

The 2019-2020 AFWI developmental evaluation explored how learning about the Brain Story science compelled changes in individuals' mindsets, knowledge, behaviors, and practices, and how individuals then applied this knowledge in their organizations and throughout four sub-systems: children's services, education, health, and justice. While AFWI's promotion of the Brain Story and support for its translation into policy and practice has seen some degree of success in each of the four sub-systems, the extent to which the Ministry of Children's Services has adopted brain science-aligned policy and affiliated organizations have shifted their practices stands apart. Today, the system is more coherent as a result of consistent alignment with the Brain Story knowledge. This case study provides a deeper look at what occurred in children's services over the past five years and serves as a companion to the main evaluation report.

In this case study, we further explore developments in policy and organizational practice; the roles that AFWI played in the evolution of this sub-system; conditions or factors that enabled shifts in the children's services sub-system; and lessons offered by the experience in children's services.

BACKGROUND

AFWI has been disseminating knowledge about brain development to mobilize policymakers and practitioners for over a decade. In its early days, AFWI primarily used an upstream approach to cultivate and convene change agents, decision-makers in policy and practice roles across provincial systems, to share the Brain Story knowledge.

Within this focus on upstream change agents, AFWI engaged people within the children's services sub-system—including leaders from the Ministry of Human Services³³ and CEOs of organizations serving children and families—who were excited about the science and its application. As a result, children's services was well represented in the AFWI cohort of change agents. One such change agent was a senior official from the Ministry of Human Services, who was passionate about the Brain Story science and its implications for early childhood education policy and practice. This official built collaborative efforts between government and community agencies serving children and families, such as implanting a strengths-based parenting support program for at-risk families and introducing the Brain Story to key individuals at the Parent Link Centre network and the Alberta Child Care Association. In her words, this work among AFWI and change agents to build cross-sector partnerships helped bridge some of the pre-existing gaps in the system: *"Community agencies have often looked at us in government like we don't get it. We come to those tables now and we're speaking the same language. It's a unified agenda, not you're government and you're community. They see that we've learned something, and we can move the agenda together."*³⁴

At the same time, the Ministry of Human Services was facing enormous pressure to improve and deliver better services to vulnerable families and children. Its services were not aligned with community needs, and there were several well publicized incidents of poor care for children within the system. The combination of increased interest in brain science and the pressure to improve the system created a window of opportunity for the *Together We Raise Tomorrow* strategy, which included *An Alberta Approach to Early Childhood Development*, in 2013. A collaboration among the Ministries of Human Services, Health, and Education, the framework outlined a systemic approach to early childhood development to ensure that every Albertan child and their families have access to

³³ Prior to 2017, the Ministry of Human Services was the governmental home for Child and Family Services. In 2017, the Ministry of Human Services split into two ministries: the Ministry of Children's Services and the Ministry of Community and Social Services.

³⁴ FSG. (2014). AFWI Developmental Evaluation: Change Agent Vignettes – Lynn, Ministry of Human Services.

high quality programs and services. The strategy included five priorities: improved maternal, infant, and child health; enhanced parenting supports; enriched early learning and care; safe and supportive environments for children; and integrated early childhood development systems. This provided a strategic focus for the next five years, which included the evaluation period. At the time, a senior official with knowledge of the strategy noted that any opposition to this strategy could potentially be overcome by a broader expansion of the knowledge mobilization work AFWI had already done: *“We need broader dissemination of the scientific background [of early childhood development] which is what AFWI has really worked hard to spread. They’ve done a wonderful job, but we need more of that.”*³⁵ The Brain Story Certification Course and other related materials in 2016 and beyond were developed by AFWI with this purpose in mind.

To help facilitate this work, AFWI dedicated resources to numerous efforts that supported progress in the children’s services sub-system, including:

- **Meetings between prominent leaders in brain science and Ministers, Deputy Ministers, and Assistant Deputy Ministers** to raise their awareness and understanding of the core story of brain development;³⁶
- **Grant funding for pilot programs** like Supporting Father Involvement, which aimed to strengthen fathers’ involvement with their families, promote healthy child development, and prevent conditions that may lead to child abuse;³⁷ and for child-serving organizations like CUPS Calgary, which operates a Family Development Centre that provides parent education and skill development;³⁸ and
- **Research about promising interventions** to support the healthy development of the most vulnerable children and youth (e.g., [Child Health Intervention and Longitudinal Development](#)).³⁹

AFWI’s work in the area of children’s services prior to the evaluation period (2015-2019) helped lay a strong foundation for the policy developments and practice changes that we profile in this case study.

MOVING TOWARDS SYSTEMIC COHERENCE THROUGH ALIGNMENT WITH THE BRAIN STORY

In keeping with the AFWI strategy to influence change agents across different levels in the system, and later AFWI’s deepening focus on supporting frontline practitioners, the evolution of children’s services developed on multiple fronts in parallel. These efforts catalyzed greater coherence to the system in Alberta, supported by policy changes at the Ministerial level, and policy and practice changes from leading service providers and nonprofits.

BRAIN STORY-ALIGNED POLICY CHANGES IN CHILDREN’S SERVICES

Over the last five years, several policies highlighted below (among others) comprised an effort for the Children’s Services system to codify the knowledge and practices that the Ministry believes are necessary to be a caregiver or service provider.

³⁵ FSG. (2014). AFWI Evaluation: Policy Win Briefs - Together We Raise Tomorrow: An Alberta Approach to Early Childhood Development.

³⁶ Alberta Family Wellness Initiative. (2019). Case Study: The Ministry of Children’s Services, Integrating Brain Story Science. Provided to attendees of AFWI Practice Days, November 2019 and January 2020.

³⁷ [Supporting Father Involvement](#); Alberta Family Wellness Initiative. (2017). [“Can One Story Change Everything? A Ten Year Report: How the Story of Brain Development Is Creating Healthier Communities.”](#)

³⁸ CUPS Calgary [website](#)

³⁹ Alberta Family Wellness Initiative. (2017). [“Can One Story Change Everything? A Ten Year Report: How the Story of Brain Development Is Creating Healthier Communities”](#)

- 1) [Foundations of Caregiver Support](#) (2015): In Alberta, Child and Family Services (CFS) and Delegated First Nations Agencies work to place children whose situations necessitate their removal from the home with caregivers who “accept them as they are, respond to them in a developmentally appropriate manner, interpret their behaviour through a trauma-informed lens and have an appreciation for the impact of grief and loss.”⁴⁰ This document outlines the principles and practices underpinning that effort in the range of care, from early intervention to temporary or permanent care.
- 2) [Human Services Alignment Project](#) (2016): This effort by the Ministry of Human Services (under which Children’s Services sat until its formation as a separate Ministry in 2017) required potential contractors and vendors to complete a pre-qualification process. Through this process, potential partners committed to using knowledge about children’s brain development in their service and program delivery and aligning their work with the values expressed in relevant frameworks such as Foundations of Caregiver Support; the Prevention and Early Intervention Framework for Children, Youth and Families; or the Child Intervention Practice Framework.⁴¹
- 3) [Well-being and Resiliency: A Framework for Supporting Safe and Healthy Children and Families](#) (2019): This framework from the Ministry of Children’s Services supports staff from the Government of Alberta, Indigenous communities, and organizations that provide prevention and early intervention programming by articulating the government’s approach, defining a clear model of well-being and resiliency, identifying desired outcomes, and elevating a common understanding of how trauma impacts child development. The Ministry also developed an [Evaluation Framework](#) for assessing implementation and effectiveness, as well as the [miyo resource](#), which outlines a model for delivering culturally responsive services in Indigenous communities and measuring outcomes in ways that honor indigenous beliefs and worldviews.⁴²
- 4) [Family Resource Network Expression of Interest](#) (2019): One component of the Well-being and Resiliency Framework is establishing Family Resource Networks (FRNs) that use a hub and spoke model to “offer a full continuum of prevention and early intervention services, including universal, targeted, and intensive services and supports based on the needs of families and children and youth aged 0-18 years.”⁴³ The FRN Expression of Interest application launched in November 2019, with the new model set to launch in April 2020. The design of this procurement approach was informed by learnings from the procurement work under the Human Services Alignment Project that began in 2016. As part of the contract with Children’s Services, organizations funded through the FRNs need to ensure within the first year of the grant, that all staff providing direct services to children, youth and their families have Brain Story Certification offered by the Alberta Family Wellness Initiative.⁴⁴

An ecosystem of champions and supporters were involved in developing these policy changes, including Ministerial staff, service providers, academic specialists, and policy experts. In particular, a major source of support for policy shifts to align with the Brain Story science has been the long-standing partnership between the Ministry for

⁴⁰ Foundations of Caregiver Support, 2015, Alberta Human Services

⁴¹ Agency and Alberta Human Services Procurement Advisory Table. (2016). “[Final Report and Recommendations to the Minister of Human Services](#)”; Alberta Family Wellness Initiative. (2017). “[Can One Story Change Everything? A Ten Year Report: How the Story of Brain Development Is Creating Healthier Communities](#)”

⁴² FSG Notes from Practice Days Presentation.

⁴³ [Family Resource Network](#) EOI 2019

⁴⁴ Family Resource Network Spoke Services Contract Agreement Template, Alberta Government. Page 2: “Ensure, within the first year of this grant, all staff providing direct services to children, youth and their families have Brain Story certification offered by the Alberta Family Wellness Initiative.” Received June 23, 2020.

Children’s Services and PolicyWise for Children and Families, dating back to 2003.⁴⁵ For instance, PolicyWise was a key partner to the Ministry in developing the Well-being and Resiliency Framework.

Interviewees expressed that the Brain Story science provided an important input into these policies. When reflecting on the role that the brain science played in the development of the 2015 Foundations of Caregiver Support, an interviewee from Children’s Services shared:

“[Our goal] was to come up with critical pillars of training that we felt caregivers, including and especially foster parents, should know who are working with young people who’ve experienced trauma. One of the first critical areas was the brain science, so we wrote that in. Since that time, that’s become foundational mandatory training across all foster parents in Alberta. It went across the province and the Foundation of Caregiver Support is now a document that has become quite a backbone document to anyone who’s applying for funding for children services.”

In the same vein, when reflecting on the intent of the Family Resource Network Expression of Interest, a Ministry official shared: *“It’s supporting the field through future funding and grants that are lined up with the Wellbeing and Resiliency model. While the document is not a mandated document, the Expression of Interest basically says, ‘Your proposals need to demonstrate alignment with the framework in order for us to consider funding.’”* The EOI uses financial incentives to compel program, service, and practice changes aligned with the Brain Story science in child-serving organizations throughout the province.

It is particularly compelling that these policy changes took hold over the span of several years, and persisted through several changes in provincial government. An AFWI staff member shared that between 2015 and 2019, power in Alberta was held by the Progressive Conservative party, followed by the New Democratic Party, and the current United Conservative Party. This staff member credited AFWI’s emphasis on the science to drive policy, regardless of ideology, as integral to keeping the Brain Story at the center of policy change despite these government leadership transitions.

PRACTICE CHANGES IN ORGANIZATIONS SERVING CHILDREN AND FAMILIES

AFWI’S SUPPORT FOR FRONTLINE PRACTICE CHANGE

While AFWI’s work to introduce frontline staff to the Brain Story science began prior to the evaluation period, their downstream work was accelerated by a number of targeted activities:

1. **The development and launch of the Brain Story Certification Course in 2016.** The Course helped spread the Brain Story knowledge to many thousands of additional people.
2. **Professional development workshops for service / program providers.** AFWI staff designed and delivered training sessions for frontline staff to introduce them to the Brain Story science and help them translate the knowledge into practice change.
3. **Opportunities for people representing different levels and components of the children’s services sub-system to come together.** One example is the Children’s Mental Health Science Policy Practice Network (SPPN) to “mobilize the science of children’s mental health and addictions to inform policy development

⁴⁵ Based in Alberta, PolicyWise’s mission is “to inform, identify, and promote effective policy and practice to improve the well-being of children, families and communities.” PolicyWise is an AFWI partner and has published research reports and policy analyses related to children’s mental health, early childhood development, trauma, and adversity. More information in: PolicyWise for Children and Families, [Annual Report](#), 2018-2019.

and implementation by engaging policy makers, practitioners, funders, researchers and educators from across disciplines.”⁴⁶

4. **Change in Mind (CiM) initiative.** In partnership with the Robert Wood Johnson Foundation, AFWI co-funded five organizations in Alberta (10 sites in the United States also participated) to infuse Brain Story-aligned practices into their organizations and programming via the Alliance for Strong Families and Communities’ two-year CiM initiative. All five Alberta-based organizations provided direct services to children, youth, and families.

OUTCOMES OF AFWI’S EFFORTS IN CHILDREN’S SERVICES SUB-SYSTEM

In all of these efforts, AFWI acted as a consistent champion of the Brain Story knowledge, supported connections within and across different levels of the system, and selectively resourced change management processes within leading organizations. In this way, AFWI has continually and persistently tilled the ground for continued policy and practice evolution to align with the Brain Story science, and created the conditions for more coherent policy and practice throughout the system.

Within children’s services writ large, this resulted in:

- **Broad uptake of the Brain Story Course among leaders.** In addition to practitioners, the Course captured the attention of some Children’s Services policymakers. One high-level interviewee from the Ministry shared that they had taken the Brain Story Course, as had their boss. They were also considering making the course mandatory for the leadership cadre of at least one Children’s Services division.
- **The Brain Story science as a component of training for staff as well as caregivers.** The Ministry has developed a comprehensive training program for all child intervention staff, and has also contracted with ALIGN Association of Community Services to develop and deliver five modules related to caregiver support. One interviewee shared, *“We certainly promote the Brain Story Certification Course [to Ministry staff]. We do a lot of contract and grant engagement with service providers. As a direct consequence of our awareness and knowledge of the Brain Story, we’ve been promoting the certification course to them, and many of our contract holders and grant holders have already taken the course.”*
- **Common language within and across organizations working with children.** Extrapolating from our findings in the main evaluation report, we assume that the broad uptake of the course among children-serving organizations contributed to shared language about brain science and facilitated collaboration.
- **Broadened and deepened connections.** In 2009, AFWI joined the SPPN Working Group as a founding member.⁴⁷ These opportunities to build relationships and connections have facilitated mutually reinforcing changes from the Ministry level to the direct service organization level. Speaking about the value of being part of the SPPN, one Children’s Services expert noted: *“It’s always helpful to have a critical mass of people who are talking about the same things in the same way, and also to challenge each other. Because we come from different professional areas or domains, whether it’s government with non-government people or policy with academics, it’s a great opportunity to bounce things off of people.”*

We also saw evidence of changes within organizations, for example:

- **Training for frontline staff.** Some organizations made it mandatory or otherwise incentivized staff to take the Brain Story Certification Course. Other organizations developed their own trainings for staff that

⁴⁶ Connections First, [“Adverse Childhood Experiences”](#) Retrieved April 8, 2020.

⁴⁷ Alberta Family Wellness Initiative. (2017). [“Can One Story Change Everything? A Ten Year Report: How the Story of Brain Development Is Creating Healthier Communities”](#)

integrated the brain science. AFWI worked directly with some organizations to provide this training or advise them within the context of their work.

- **Reorganizing and streamlining operations to better serve children and families.** Upon learning about the brain science, some organizations took the opportunity not just to rethink programming and service delivery, but also how they were structured and organized. For example, one organization previously had a dozen or more possible entry points for families, creating confusion and inefficiencies for clients and staff alike. The organization restructured its work so that clients had just one point of entry and completed a needs assessment, which informed the development of a treatment plan.

ALIGNING OPERATIONS AND SERVICES WITH THE BRAIN STORY:

ONE ORGANIZATION'S EXPERIENCE

"The more we [learned about the brain science], the more we knew that was what we had been seeing for decades, why our clients or families could move forward and look relatively stable and then something would fall apart or they'd hit a crisis and they'd go back to beer or, in some cases, died.

"I made a commitment that that wasn't good enough, just meeting people's basic needs and housing was not good enough. We had to get to the root of...why they were making decisions that were harming them. This was really when we started to say, we need to figure out how to apply this [Brain Story] in practice. What does it mean to get to the root of the problem? How do we assess and label trauma and interventions to mitigate that?"

"We quickly invested in the knowledge that was out there, and from the leadership point of view, I basically said to our staff of 200 people, 'We're going to make a change. We are not doing what we can do to really get our families more resilient in the sense that they don't need us anymore and they can manage their way through a crisis and know where their supports are, either in the family or outside support.'

So that was our passion of the last probably 15 years. It's painful, it's slow, we have a lot of things that failed, a lot of things that worked; but through that process, we've relied on AFWI to not only help us look at data and redirect our course as needed, but also to feed that information back so that [our experience] could be a template, a model, even though it's not finished yet."

FACTORS SUPPORTING POLICY AND PRACTICE COHERENCE IN THE CHILDREN'S SERVICES FIELD

Although children's services is a distinct sub-system, there may be insights regarding what factors supported these changes in practice and policy in children's services that can inform the work in other sub-systems in Alberta.

First, children's services has done particularly well mainstreaming the Brain Story science. Several interviewees noted that AFWI's dissemination of the Brain Story knowledge in Alberta was concurrent with and supported by a broader movement in North America that included the adoption of brain science and attention to trauma and mental health in fields such as health, children's services, and education. Though the brain science itself was decades old, and many in the field had learned about developmental neuroscience and the role of trauma / ACEs

on the development of the brain, there was something unique about the way in which the Brain Story science resonated. An academic working in the sector shared:

“I certainly had the knowledge, but not everybody else did. One thing that happened here in Alberta is everybody else gets it now. It's so much easier to do research with agencies that want to do something to improve relationship quality for their families that they serve, affected by toxic stress. It just advances everything: practice, policy, and research. Everyone's speaking the same language. Everyone understands the concepts, the urgency, the neuroscience.”

It is possible that because some people in the children's services field were already knowledgeable about the science, they had more of a “readiness factor” for practice change. In other words, they did not need as much time to digest and make sense of the science, because some people already knew it.

Another supportive factor was the mission of Children's Services to support healthy child development, especially among vulnerable populations, which lined up well with the brain science about child and adolescent development. Compared to some other systems where it might be a less direct or clear link, the brain science was neatly aligned with Children's Services charge as a Ministry. In addition, interviewees noted the children's services was a relatively simple sub-system in terms of its scope and organization. One nonprofit leader contrasted it with other systems, saying: *“Change in health and change in justice, they're such big bureaucratic systems, they're just very, very difficult to change.”* While the children's services sub-system is diffuse in that hundreds of contracted organizations across the province provide the majority of programs and services to families, there are also relatively few layers of bureaucracy between the Ministry and those organizations. The Ministry is able to place requirements on contracted organizations to work in a certain way that, for example, the Ministry of Education is not empowered to do for local schools.

Third, leaders worked as change agents at multiple levels within the sub-system. For example, a number of Ministry leaders took part in various AFWI activities from the start (e.g., the symposia, completing the Brain Story Certification Course). Throughout the shifts in government over the years, AFWI actively worked to engage the new group of decision-makers and build relationships with supportive leaders in the Ministry.

Leaders themselves were clear that change was necessary at multiple levels and that it needed to align in order to be effective: *“If all parts of the system are not moving in some sort of anticipated or expected pattern, from the governance decision-making level, executive level, to the operational levels... [our work] is about that congruency between policy and operations.”* A nonprofit leader agreed that AFWI's work attending to different parts of the system was critical, and something that nonprofits cannot do on their own: *“I think that what [AFWI does] with academics and what they do with government is really, really critical to the work at the community level. The ministries, the political world, the bureaucrats—that's the door that's really hard for us to open sometimes.”*

AFWI also worked to engage change agents in child-serving organizations, for example CUPS, Family Centre, and the Calgary Area Child Advocacy Centre. In some cases, this facilitated large-scale changes within organizations, including overhauls in how organizations were structured to deliver programs; how clients interfaced with the organization; and how staff were trained, supported, and deployed. AFWI supported these organizations to share their work with others, which provided evidence to other organizations and to the Ministry that change was possible on the ground. One nonprofit leader reflected that the coherence created within their organization in service of the Brain Story science actually saved money, further bolstering the appeal of doing so for both the Ministry as a funder and nonprofits continually seeking to reduce costs.

Finally, the data suggest a particular importance on resourcing organizational change efforts. For example, one of the most important benefits of the CiM program was that it supported the change process within organizations, which involved rethinking organizational structure, operations, programming, and service delivery. Reflecting on this, an AFWI staff member shared:

“The people who’ve been able to make the most progress have been people who have been able to resource a change process...if you can’t actually assign resources to making the change, what happens is nobody has time. Everybody’s strapped, everyone’s already full, right? And so there’s no time set aside to thinking about what do we do with the knowledge base...Maybe there’s a few shifts that happened that are unexpected or unplanned...But if you’re going to try and create broader systemic and sustainable change, then you literally need to resource that process.”

When reflecting on what made change in their organization possible, one nonprofit leader agreed that resources for the change process are critical. *“There has to be some kind of incentive to be willing and brave enough to do this work because I’ll tell you, having done it, it’s a lot of work and it can be quite expensive.”*

CONCLUSION

WHAT ARE THE LESSONS FOR CHILDREN’S SERVICES?

Over the past five years, Brain Story-aligned developments in both policy and practice across the children’s services sub-system have supported greater coherence. To keep forward momentum and spur further change, we suggest the following:

- **Look for opportunities to continue highlighting examples of practice changers.** There are several organizations within the children’s services sub-system that have been at this work for a few years or more, and interviewees as well as participants in Practice Days sessions shared that learning about these organizations’ work inspired them to make changes within their own sphere of influence. As more examples of practice change emerge, it will be important to continue to lift up the stories of how these organizations engaged in a change process to shift operations and practice.
- **Continue to build and support Brain Story champions at all levels.** AFWI has been intentional about cultivating, supporting, and convening leaders from the Ministry, policy organizations, and nonprofits. Data collected for the evaluation suggests this work has been an important driver of the changes across the sub-system, and continuing in this vein will be fundamental for sustained progress.
- **Continue to support the Brain Story Course.** The children’s services sub-system has seen good uptake of the Brain Story Certification Course, and the fact that Ministry-level leaders as well as frontline providers find the course valuable suggests that continuing to promote the course to those who have not yet engaged with it would pay off.
- **Deepen focus on indigenous populations.** Indigenous families and children are overrepresented in the children’s services sub-system, and more can be done to enact trauma-informed policies and practices that specifically serve Indigenous families and account for historical wrongs that produced trauma and distrust of children’s services among Canada’s Indigenous communities.
- **Collaborate with other entities whose work intersects with that of children’s services (e.g., mental health services, justice, education).** Many children and families who interact with children’s services are

also served by other systems in the province. Children’s services can work with these entities to apply the Brain Story knowledge, and in turn, better align the various sources of support for families.

While the child services developments are promising, they are relatively recent, and there is little evaluation of the results or impact of these policy and practice changes to date. Major components of the Well-Being and Resiliency Framework are yet to be enacted, and the outcomes in the related Evaluation Framework are broad. A Ministry official shared that this was intentional, because the model is a new endeavor and the intent is to learn and co-develop the evaluation as the work unfolds. Going forward, it will be important to measure changes across the children’s services sub-system to understand whether the Brain Story alignment of policy and practice is positively impacting children and families; use the developmental findings to inform the Framework; and share information back with stakeholders in a timely fashion.

WHAT ARE THE LESSONS FOR OTHER SUB-SYSTEMS IN ALBERTA?

Examining the developments and lessons from the children’s services sub-system can offer lessons across other systems in Alberta and beyond. While some aspects of the context, culture, mental models, and structures are unique, other aspects of the children’s services story are instructive for shifting other systems.

- **Share lessons learned about the impact of parallel, coordinated policy and frontline practice change.** In a limited way, these lessons are already being transferred, as evidenced by key personnel from Children’s Services seconded to the Ministry of Education to share lessons and increase linkages there.
- **Seek corollaries of the policy and guidelines developed by Children’s Services in other sub-systems**—for example, the guidelines for well-being and resiliency, qualifications and standards for practitioners, and requirements that leverage contracting and other resource allocation mechanisms.
- **Support other sub-systems in building the case for why the Brain Story science is core to their mandate,** in order to motivate commitment from leaders and relevance for frontline workers.
- **Resource the change design and adoption process among leading organizations** within other sub-systems to help seed innovation, demonstrate that change is possible, and provide examples of practice change that other organizations can follow.
- **Continue to convene leaders across levels within sub-systems,** with the specific purpose of highlighting and promoting alignment between policy, practice, and other key points of leverage within sub-systems.

APPENDIX

DEFINING THE CHILDREN'S SERVICES SUB-SYSTEM

In 2017, the Alberta Ministry of Human Services split into two ministries: Communities and Social Services, and Children's Services. The Alberta Ministry of Children's Services "focuses on early intervention, child development and delivering supports and services to children, youth and families. It works to ensure that children in Alberta have the tools they need to thrive in healthy families and communities."⁴⁸ Children's Services also leads foster and kinship care services as well as adoption. The Ministry also funds nonprofit organizations that provide a "continuum of programming and services to reduce the impacts of adversity by focusing on the safety, wellbeing and resiliency of children and youth."⁴⁹ Together, the Ministry of Children's Services and child-serving organizations that deliver programs and services comprise the children's services sub-system.

More specifically, the Ministry delivers or supports the provision of services via seven child advocacy centers, Early Learning and Child Care Centers, and the newly formed Family Resource Networks (FRNs). These networks deliver prevention and early intervention services and supports for children 0 to 18 years old via a hub-and-spoke model; the FRNs (hubs) coordinate the services provided in geographic areas and in cultural communities across the province, and the spokes are direct service organizations or qualified service providers.

The primary reason that children come into the child intervention system is neglect and exposure to family violence. Upon referral to Children's Services, the Ministry evaluates whether there is a severe and imminent risk to a child.⁵⁰ On average, approximately 11,000 children and youth receive child intervention services per year. Of those, about 7,800 children receive services in temporary or permanent care, while the other 3,200 children receive services at home. On average, the Ministry provides financial support to approximately 4,800 families who adopt or obtain guardianship of children under 18 years.⁵¹ Notably, Indigenous families are overrepresented in the system, compared to their presence in the general population: Indigenous children comprise about 60% of those receiving intervention services and 69% of children in temporary or permanent care situations.

CASE STUDY METHODS

FSG collected both primary and secondary data for this case study, leveraged data collected for the main evaluation report, and reviewed additional policy documents, Ministry-produced reports, and a case study on Children's Services developed by an AFWI partner. The primary data collected included key informant interviews with Palix Foundation staff, leaders of nonprofit organizations serving children in the province, Ministry staff, and academics knowledgeable about the children's services ecosystem.

⁴⁸ [Alberta Ministry of Children's Services](#).

⁴⁹ FSG Notes from AFWI Practice Days presentation by Ministry official, November 27, 2019.

⁵⁰ Data for the [Child Intervention Practice Framework](#) (2012), as published in *The Foster Care Handbook* (2017), Alberta Ministry of Children's Services. Retrieved April 1, 2020.

⁵¹ Alberta Ministry of Children's Services, [Child Intervention Information and Statistics Summary](#), 2019-20 Third Quarter (December) Update. Retrieved April 7, 2020.



CASE STUDY OF KAINAI FIRST NATION AND THE BRAIN STORY

June 26, 2020

Prepared by FSG

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EXECUTIVE SUMMARY

OVERVIEW

The Palix Foundation launched the Alberta Family Wellness Initiative (AFWI) in 2007 to improve the lives of children and families in Alberta, in particular those struggling with addiction and mental health challenges. AFWI focuses on mobilizing knowledge of the Brain Story, a core story that explains how experiences—especially in early childhood and adolescence—shape human brains. The Brain Story is based on scientific research from the Harvard University Center on the Developing Child and metaphors about brain science developed by the FrameWorks Institute (See appendix for more about Brain Story concepts and metaphors). Through their work, AFWI aims to catalyze changes in policy, funding, programming, professional education, and practice that are grounded in brain science in order to support healthy and thriving children, families, and communities.

In late 2019, AFWI commissioned FSG to conduct an interim developmental evaluation to explore how, to what extent, and where the initiative was making progress and creating impact. As part of the evaluation, FSG explored the impact of AFWI's work with Indigenous communities, particularly highlighting their ongoing partnership with the Kainai First Nation (also known as the Blood Tribe) in detail in this case study. The depth of AFWI's investment and partnership with Kainai First Nation provides an opportunity to understand what has worked well and what adaptations to AFWI's work might be necessary to better support Kainai First Nation. AFWI also hopes that lessons learned can provide insight for work with other Indigenous communities. This case study draws on reflective practice sessions with Kainai First Nation members, key informant interviews, and secondary research.

MAIN FINDINGS

Through a multi-year partnership, AFWI shared the Brain Story knowledge with teachers, administrators, and early childhood educators in Kainai First Nation. Overall, the Brain Story was well received among the Kainai educators, elders, and students involved. Participants expressed that the Brain Story knowledge resonated and aligns with existing community knowledge and traditional wisdom, so should not be regarded as completely new. As a result of experiences with the Brain Story itself, however, teachers and administrators reported changes in their individual mindsets, behaviors, and professional practices. Additionally, several educational institutions have changed at an organizational level to better align with the Brain Story knowledge. Leaders and members of the Kainai community have adopted the brain science and developed ways to apply this knowledge. For instance, in March 2018, the Kainai Board of Education hosted the Nitsitapii Reziliency Conference, which convened students, professionals, and community members from several Nations of the Blackfoot Confederacy to discuss trauma and adversity and create an action plan to build resilience for better outcomes.⁵²

PRINCIPLES OF PARTNERSHIP: WHAT WORKED TO FACILITATE SUCCESSFUL COLLABORATION?

The evaluation highlighted several aspects of the work with Kainai First Nation that contributed to progress:

- **Trust and consistency.** The partnership between AFWI and Kainai First Nation has been rooted in relationships. Interviewees and focus group participants shared that the sustained investment and reliability of AFWI's partnership was critical to the positive reception of the knowledge and the ongoing momentum.
- **Alignment with Indigenous ways of knowing.** People shared that the knowledge communicated within the Brain Story concepts resonated with the wisdom passed down in the community by elders. The brain

⁵² Conference video can be viewed here: <https://www.albertafamilywellness.org/resources/video/nitsitapii-reziliency>

science and Kainai traditional knowledge complemented each other, and the integration of traditional ways of knowing with brain science provided a powerful tool to reduce the burden of adversity, add positive supports, and improve skills and abilities to build resilience.

- **Acknowledgement of Canada’s colonial policies.** Indigenous focus group participants and interviewees shared the importance of any discussion of brain science, trauma, and adversity including acknowledgement of history. The Canadian government and settlers in Canada committed violence against Indigenous peoples of Alberta, including through stolen land and destructive policies such as the “Indian Residential Schools,” which forcibly separated children from their families and aimed to destroy their culture. Acknowledgement and understanding of the past viewed through the lens of the Brain Story opened pathways to healing.
- **Rooting the core Brain Story knowledge in Indigenous identity, culture, and history.** AFWI partnered with Elders and other community members to communicate about the Brain Story. We heard about the importance of using stories, elements of Indigenous circle process, and rituals for Brain Story trainings. For instance, one non-profit partner uses the *All My Relations* curriculum, which blends Blackfoot teachings with early childhood development research.
- **Kainai ownership of the work.** Most importantly, the focus group participants and interviewees found value in the Brain Story concepts and recognized opportunities for that knowledge to change their schools and communities. Kainai leadership and innovation, as in the case of the Niitsitapi Reziliency Conference, the *All My Relations* (an adaptation of Supporting Father Involvement) curriculum, and Bringing Hearts and Minds Together program, catalyzed and sustained changes to align with the Brain Story and integrate Blackfoot language and culture.

BRAIN STORY ALIGNED PRACTICE: WHAT CHANGED IN THE EDUCATION SYSTEM?

Leaders from the education system in Kainai First Nation have been the primary partners to AFWI. Both Kainai Head Start and Kainai High School implemented changes within their schools to better align practices with the Brain Story knowledge. Educators made changes to the school environment and to teacher practice, and deepened their emphasis on grounding education in cultural practices consistent with the Brain Story.

- **School environment.** After learning about the Brain Story, teachers and staff placed even greater emphasis on creating safe, stable, and supportive environments for students. For instance, teachers were intentional about integrating serve and return into their interactions with students and children and making connections with their families. The Brain Story helped illuminate the importance of integrating practices and spaces that help students with emotional regulation.
- **Teacher practice.** After learning about the Brain Story, teachers began asking different questions of their students to better understand why a child might be acting a certain way and emphasized the importance of creating an atmosphere where students do not feel judged. Brain Story knowledge inspired teachers to prioritize students’ agency and understanding of their own brains. Finally, teachers and staff expressed an increased sense of responsibility as a consistent, caring adult who can provide safe, stable, and supportive relationships in each student’s life.
- **Rooting in cultural practice.** Teachers and administrators reinforced the importance of rooting all practice changes in Blackfoot culture. Teachers and administrators found ways to meld the Brain Story knowledge with traditional ways of knowing, emphasizing Blackfoot language, culture, prayer, and names to build up cultural resilience.

CHALLENGES AND FUTURE OPPORTUNITIES: WHERE CAN KAINAI FIRST NATION AND AFWI GO FROM HERE?

Kainai First Nation and AFWI can also continue to deepen the spread of Brain Story knowledge and increase the positive impact, through several opportunities identified in focus groups and interviews:

- **Support more emotional and mental health resources.** Several people from the Kainai community shared that the toxic stress and intergenerational trauma concepts from the Brain Story resonated with them because of their own personal experiences. They suggested that additional supports for processing and moving through these emotions would be beneficial and help them prepare work with students.
- **Foster more opportunities to bridge knowledge and practice.** AFWI activities have been effective in sharing Brain Story knowledge, and in beginning the process of translating that knowledge to practice. However, several people expressed that additional support would be helpful to further practice change.
- **Catalyze additional systems level changes.** There were some changes at the systems level, for instance, the Kainai Board of Education adopted a trauma-informed mandate. To build on this progress, all schools on the Reserve could become trauma-informed and integrate Brain Story-aligned practices. Additionally, other systems like the Blood Tribe Health Department, Police Service, and Children’s Services may also find that the Brain Story complements their work.
- **Facilitate learning across communities.** The Niitsitapi Reziliency conference was an excellent example of how various communities can share knowledge about the Brain Story, its integration with Indigenous wisdom, and collaboration to address challenges such as the opioid crisis. AFWI could fund and bolster opportunities for partnership, and support the elevation of what’s working in Kainai First Nation and other Indigenous communities. This can also include sharing Brain Story knowledge more broadly in the community across caregivers and children themselves.

CONCLUSION

The role that AFWI has played as a partner—and not a leader—has been critical to the co-creation of practices to support healthy early childhood and adolescent development in Kainai First Nation. Our hope is that this case study facilitates deeper understanding of the strengths and opportunities of Brain Story-aligned work in Kainai First Nation and motivates sustained, deep investment in the health and well-being of Kainai children, families, and communities, as well as all Indigenous people across Canada and beyond.

INTRODUCTION

From September 2019 to April 2020, the Alberta Family Wellness Initiative (AFWI) commissioned FSG to conduct an interim developmental evaluation to explore how, to what extent, and where the initiative was making progress and creating impact. The developmental evaluation focused on key changes among individuals, organizations, and sub-systems. As part of the evaluation, the FSG team explored the impact of AFWI's work with Indigenous communities, particularly highlighting their ongoing partnership with the Kainai First Nation in detail in this case study. This case study is a companion piece to the main evaluation report.

Among Indigenous communities, AFWI has worked most deeply with Kainai First Nation to date. AFWI and Kainai First Nation's partnership provides an opportunity to understand what has worked well and what adaptations to AFWI's activities, communications, and / or outreach might be necessary to better support Kainai communities. AFWI also hoped that lessons learned could provide insight for work with other Indigenous communities. Information in this case study was drawn from reflective practice sessions with Kainai First Nation members, key informant interviews, and secondary research. (More detail on methods can be found in the appendix.)

CONTEXT

KAINAI FIRST NATION

This case study focuses on lessons learned in Kainai First Nation as a means of understanding more about the impact of the Brain Story to support Indigenous communities. Kainai Nation is a First Nations band government in Southern Alberta (2019 population: 12,700 members).⁵³ Kainai translates to "many chief," and the common English name for Kainai is the Blood Tribe. Kainai First Nation is one of three nations comprising the Blackfoot Confederacy, along with the Piikani and Siksika Nations.

The Blood Reserve is the largest in Canada and is located in Southern Alberta; rolling hills, wide plains, and farms stretch from Monarch and Lethbridge to Cardston. The Reserve is bordered by three rivers (Old Man, St. Mary, Belly Rivers) and occupies approximately 530 square miles, with the administrative center in Stand Off. Not all Kainai people live on the Reserve; some teachers and professionals live in Lethbridge, the nearest large city, and commute to the Reserve for work. Some schools and programs in Lethbridge serve high numbers of Kainai and other Indigenous students and families.

The Blood Tribe is governed by one Chief and an elected council of 12-15 representatives, who serve four year terms. The Kainai First Nation has its own police service, Health Department, Board of Education, and college (Red Crow), among other agencies and entities.⁵⁴

CANADIAN POLICIES AND THEIR IMPACT ON INDIGENOUS PEOPLES

Since the country's founding in 1867, Canada asserted control over Indigenous land. In some locations, Canada negotiated treaties with First Nations; in others, the land was occupied or seized. The negotiation of treaties was often marked by fraud and coercion. Beginning in 1871, the federal government began negotiating "Numbered

⁵³ The Canadian Constitution recognizes three groups of Indigenous or Aboriginal peoples: First Nations, Inuit and Métis. Over 1.67 million people in Canada identified as Aboriginal in the 2016 Census. Aboriginal people are the fastest growing population in Canada (grew by 42.5% from 2006 to 2016) and the youngest population in Canada (~44% were under 25 years old in 2016). Source: Government of Canada, [Indigenous Peoples and Communities](#)

⁵⁴ [Blackfoot Confederacy](#), The Canadian Encyclopedia; Blood Tribe [Website](#).

Treaties” which included provisions by which the First Nations agreed to “cede, release, surrender, and yield” their land to the Crown.⁵⁵ The Canadian government sometimes forced First Nations to relocate from agriculturally valuable or resource-rich land onto remote and economically marginal reserves. Without legal authority or foundation, in the 1880s Canada instituted a “pass system” that was intended to confine First Nations people to reserves.⁵⁶

For over a century, the central goals of Canada’s Aboriginal policy were to eliminate Aboriginal governments; ignore Aboriginal rights; terminate the Treaties; and, through a process of assimilation, cause Aboriginal peoples to cease to exist as distinct legal, social, cultural, religious, and racial entities in Canada. ⁵⁷

“Several colonial policies contributed to the eradication of Indigenous cultures and impaired survivors’ ability to create healthy family relationships. Those policies include the creation of residential and boarding schools, the apprehension of Indigenous children (known as the Sixties Scoop), and over-representation of Indigenous children in the child welfare system. The loss of connection and communication between children and their parents and grandparents severely damaged essential family relationships, blocking the transmission of cultural, ethical, and normative knowledge between generations.”⁵⁸

The establishment and operation of residential schools by the Canadian government was a central element of this policy, and are often described as cultural genocide. When Canada became a country in 1867, churches were already operating a small number of boarding schools for Indigenous people. In the 1870s, Roman Catholic, Protestant, and other missionaries established missions and boarding schools, which were financed by the Canadian government.^{59,60} In establishing residential schools, the government essentially declared Indigenous people unfit parents. Children were forcibly removed from their homes if their families tried to keep them out of the schools. Once in the schools, brothers and sisters were kept apart, and the government and churches even arranged marriages for students after they finished their education. Children were abused, physically and sexually, and many died in the schools.⁶¹ **Over 150,000 children attended Indian residential school; the last residential school closed in 1996, marking over one hundred years of state-sanctioned violence to Indigenous culture, families, and communities.**⁶²

EFFORTS FOR RECONCILIATION

Efforts for healing and reconciliation in Canada began in the 1980s, when some churches apologized for their treatment of Indigenous peoples and disrespect of their cultures. In the 1990s, the Royal Commission on Aboriginal Peoples was formed. Their 1996 report urged Canadians to begin a national process of reconciliation to

⁵⁵ Truth and Reconciliation Commission of Canada, [Honoring the Truth, Reconciling for the Future](#)

⁵⁶ Ibid.

⁵⁷ Ibid.

⁵⁸ Trauma, Child Development, Healing and Resilience A Review of Literature with Focus on Indigenous Peoples and Communities, by Dr. Patti LaBoucane-Benson Dr. Nicole Sherren Dr. Deanna Yerichuk

⁵⁹ Truth and Reconciliation Commission of Canada, [Honoring the Truth, Reconciling for the Future](#)

⁶⁰ Union of Ontario Indians, [“An Overview of the Indian Residential School System,”](#) 2013.

⁶¹ Truth and Reconciliation Commission of Canada, [Honoring the Truth, Reconciling for the Future.](#)

⁶² Union of Ontario Indians, [“An Overview of the Indian Residential School System,”](#) 2013.

fundamentally change Canada's relationship with Aboriginal peoples. However, a majority of the commission's recommendations were never implemented.⁶³

Over the next decade, survivors of the residential schools brought thousands of lawsuits against the government of Canada. In 2006, the **Indian Residential Schools Settlement Agreement (IRSSA)** was signed—an agreement between the Government of Canada and approximately 86,000 Indigenous peoples in Canada who at some point were enrolled as children in the residential school system. It established a \$1.9-billion compensation package for all former students.⁶⁴ IRSSA also allocated \$60 million for the **Truth and Reconciliation Commission (TRC)** to document and preserve the experiences of survivors. The Commission was launched on June 2, 2008. On June 11, 2008, Prime Minister Stephen Harper and the leaders of all federal political parties formally apologized in the House of Commons for the harms caused by the residential school system. June 11 is now known as the Day of the Apology.⁶⁵

LASTING IMPACT OF CANADIAN POLICIES ON INDIGENOUS COMMUNITIES

The impacts of Canada's policies, including the creation of residential schools and the Sixties Scoop, and discrimination and bias against Indigenous people, have resulted in disproportionately negative consequences for Indigenous communities in Canada. For instance, Indigenous communities face **disproportionate rates of poverty**, with 21.7% living in homes in need of major repairs compared to 6.8% of non-Indigenous people.⁶⁶

Prejudicial attitudes toward Indigenous parents and a tendency to see poverty as a symptom of neglect, rather than as a consequence of failed government policies, have resulted in **disproportionate rates of child apprehension** among Indigenous communities:

- A 2011 Statistics Canada study found that 3.6% of all First Nations children aged fourteen and under were in foster care, compared with 0.3% of non-Indigenous children.⁶⁷
- Indigenous children are significantly overrepresented as subjects of child maltreatment investigations. For every 1,000 First Nations children, there were 140.6 child maltreatment investigations, as compared with 33.5 investigations for non-Indigenous children.⁶⁸
- Investigations of First Nations families for neglect were substantiated at a rate eight times greater than for non-Indigenous families.⁶⁹

Mental health and addiction specific data reflects a similar pattern:

- Indigenous people die by suicide at a higher rate than non-Indigenous people. The suicide rate for First Nations male youth ages 15-24 is over five times that of non-Indigenous male youth (126 per 100,000 compared to 24 per 100,000).⁷⁰ In Kainai First Nation, the suicide rate is three times higher than the rate for non-Indigenous Albertans.⁷¹

⁶³ Truth and Reconciliation Commission of Canada, [Honoring the Truth, Reconciling for the Future](#).

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Statistics Canada, [National Household Survey](#), 2011.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Center for Suicide Prevention, "[Indigenous Suicide Prevention](#)," Accessed March 2020.

⁷¹ Interview with Esther Tailfeathers, Family Physician, 2018.

- In Kainai Nation, the opioid crisis hit very hard starting in 2015 and continuing for several years.⁷²

These inequities have serious consequences: the average lifespan for Kainai First Nation is 12 years less than the average Albertan.⁷³

AFWI COLLABORATION WITH KAINAI NATION

From its inception, the Alberta Family Wellness Initiative (AFWI) has dedicated a portion of its work to supporting Indigenous communities in understanding the Brain Story and applying it to professional practice. Over the years, AFWI staff realized the importance of being even more intentional about resourcing work with Indigenous communities and reached out proactively to various stakeholders. One Kainai leader in the education sector was especially passionate about the work, which sparked the partnership with AFWI around the Brain Story. While AFWI has met with other Kainai institutions including the Blood Tribe Police Services, Blood Tribe Department of Health, and Kainai Children's Services, the initiative has particularly invested in the education sector. AFWI collaborated with Kainai First Nation in various ways, as summarized below in the following snapshot of the ongoing partnership.

KAINAI HIGH SCHOOL AND KAINAI BOARD OF EDUCATION

AFWI worked with Annette BruisedHead (former deputy superintendent of the Kainai Board of Education) and Charlton Weasel Head (associate principal of Kainai High School) to implement a professional development training program for teachers and staff of Kainai High School (KHS) to learn about the Brain Story. Annette and Charlton began implementing the training program over the academic year starting in September 2016, with teachers and staff taking the online Brain Story Certification Course as a group in the spring of 2017. Additional professional development opportunities complemented the online course, including film screenings and presentations from experts on Brain Story science and on the impact of drug exposure on the adolescent brain. Annette, Charlton, and others also attended various summits with teachers and administrators from other locations (e.g., Washington State) to discuss strategies for building a trauma-informed school.

In 2017, the Kainai Board of Education (KBE) staff also viewed presentations about the Brain Story and impacts of trauma on the developing brain, and some KBE staff registered for the Brain Story Certification Course. In 2018, AFWI engaged KBE superintendent, Cam Shade and the new KHS principal, Ramona Big Head. Kerrie Moore, a Cree-Métis elder, social worker, and consultant to AFWI, presented on Brain Story science to the KBE, and there have been subsequent events to bring together educators to discuss application of the Brain Story.

THE NITSITAPII REZILIENCY CONFERENCE

In March 2018, the Kainai Board of Education hosted the Nitsitapii Reziliency Conference, which brought together students, professionals, and community members from several Nations of the Blackfoot Confederacy to discuss trauma and adversity and to create an action plan to promote resilience. This conference took place amid the opioid crisis, lending increased urgency to the linkages between trauma, Brain Story knowledge, and addiction and mental health outcomes.⁷⁴

⁷² The Guardian, "[Canada First Nations Reserve Bars Outsiders Amid Opioid Crisis](#)," May 2017.

⁷³ Interview with Esther Tailfeathers, Family Physician, 2018.

⁷⁴ Conference video can be viewed here: <https://www.albertafamilywellness.org/resources/video/nitsitapii-reziliency>

BRINGING HEARTS AND MINDS TOGETHER

In 2018, Bow Valley College received a grant from the Social Sciences and Humanities Research Council of Canada to create a curriculum for Indigenous Early Childhood Educators (ECEs.) The college collaborated with AFWI and Kainai First Nation on this project, “Bringing Hearts and Minds Together: Co-Creating Lifelong Learning Materials for Caregivers of Aboriginal Children.” The project brought together Indigenous and other researchers, students, alumni, ECE staff, and Kainai First Nation elders and community members to “co-create a culturally appropriate and sustainable model of knowledge generation and translation, which in turn will foster culturally relevant practices supporting healthy social/emotional development of Indigenous children.”⁷⁵ The result integrated information from the Brain Story course with Blackfoot language and culture.

ALL MY RELATIONS

Family Centre of Southern Alberta in Lethbridge received a Family and Community Safety Grant from Human Services to provide the Supporting Father Involvement (SFI) program for the Kainai community on the Blood Reserve and off-reserve in Lethbridge. SFI is an evidence-based co-parenting program that promotes positive father involvement. Family Centre collaborated with Kainaiwa Children’s Services Corporation and Opokaa’sin Early Intervention Society to integrate Blackfoot language and culture into the SFI curriculum, creating an adapted curriculum called *All My Relations* for families from Blackfoot communities. *All My Relations* and has been used with families from Kainai First Nation since January 2019.

⁷⁵ Bow Valley College [website](#), “Current Projects.” Accessed April 10, 2020.

THE PARTNERSHIP STORY: INSIGHTS AND LESSONS LEARNED

Overall, AFWI was viewed as a valuable partner in Kainai efforts to build community resilience. Those we spoke with shared that the Brain Story knowledge offered by AFWI through the Brain Story Course and from various tailored presentations generally landed well with the community. Many felt that the Brain Story aligned with traditional Kainai wisdom, and grounding the knowledge in the Kainai context helped with dissemination and understanding. In particular, three of the concepts resonated with Kainai interviewees—serve and return, toxic stress, and intergenerational trauma. These concepts helped to put words to what survivors of residential schools experienced, and how the trauma experienced by Indigenous people in Canada affected and continues to affect Kainai families. Also, experiences from the Kainai Head Start and Kainai High School demonstrated how practitioners adapted their programs to align with the Brain Story knowledge.

SECTION 1. WHAT WORKED? KAINAI PERSPECTIVES ON AFWI AND THE BRAIN STORY

According to interviews and focus groups, AFWI has been well received by leaders of Kainai First Nation. AFWI's sustained commitment has been a key factor in the success of the partnership with Kainai Nation to date. Annette BruisedHead explained, *"I think to have people that are ready and willing to walk the path with you is so important in First Nations, Métis, and Inuit communities. It's so important to know that you're not being judged, that you can work with others, and sometimes when you need to step back that they're still there."*

Kainai interviewees also emphasized several themes: the Brain Story's alignment with traditional wisdom; the relevance of serve and return, toxic stress, and intergenerational trauma; and the importance of resilience.

BRAIN STORY ALIGNMENT WITH TRADITIONAL WISDOM

Participants expressed that interventions recognized 1) that the lessons from the Brain Story resonated with existing community knowledge and wisdom, so should not be regarded as new, and 2) that connection with ancestry, elders, culture, and spirituality are an essential component to healing, particularly for a community whose connections were systematically severed by Canadian policies.

A common sentiment amongst focus group participants and interviewees from Kainai First Nation was that elders held much of the knowledge communicated by the Brain Story already. If anything, the Brain Story felt like a way to reconnect younger people with old wisdom:

"We like to get elders into the center to share their traditional knowledge...because what we were learning, they didn't call it the Brain Story, but they already knew how to raise healthy children...And so we're just putting a name to what the elders already know. So that, for me, is a blessing that we haven't lost those [values, knowledge], and that's what we would like to try and continue to nurture." - Focus Group Participant, Kainai Head Start

Fusing Brain Story concepts with Indigenous ways of being and knowing has been successful in various settings. For instance, the work at Family Centre with the *All My Relations Blackfoot Framework and Curriculum* emphasized the power of integrating Blackfoot concepts of the Medicine Wheel and the Seven Sacred Blackfoot Teachings (Honesty, Humility, Truth, Wisdom, Love, Respect, and Bravery) with the principles of Supporting Father Involvement (SFI). For instance, one interviewee described the importance of elders as supportive relationships (as opposed to just focusing on the mother-child dyad).

Indigenous elder, social worker, and AFWI consultant Kerrie Moore and other program leaders shared specific adaptations that they believed helped the Brain Story science to be more relatable in Indigenous communities:

- **Using stories to communicate the Brain Story knowledge.** This was echoed by the *All My Relations* curriculum, which uses “Napi stories” to convey elements of Brain Story science to the parents in their program. (Napi is a common character in Blackfoot stories.)
- **Using elements of Indigenous circle process and rituals for trainings.** For example, Elder Kerrie Moore begins each of her trainings with smudge⁷⁶ and a prayer. Among other purposes, smudging provides communities with a way to “gain spiritual protection and blessings,” “purify the body and soul”, “bring clarity to the mind,” clean places from “negative energy”, and “restore the physical self.”⁷⁷ Similarly, each module of the *All My Relations* Curriculum module begins with an opening prayer and supper.
- **Rooting the core Brain Story knowledge in identity and history.** Elder Kerrie Moore strongly emphasized the concepts of intergenerational trauma because they help people understand their communities, both looking backward and forward:

“The awareness is healing...when people see that something gets in the way of them being able to really get into the executive functioning skills and they realize that we all come from colonization...so there's a certain amount of trauma that gets passed down intergenerationally through epigenetics. People have an aha moment when they have that awareness. You can't talk about...what we do now until you know why this has happened.” – Elder Kerrie Moore

SERVE AND RETURN, TOXIC STRESS, AND INTERGENERATIONAL TRAUMA RESONATED STRONGLY WITHIN THE KAINAI NATION

When asked which concepts from the Brain Story most impacted their thinking, overwhelmingly participants mentioned serve and return, toxic stress, and intergenerational trauma. (Definitions of these terms can be found in the appendix.) The serve and return and toxic stress concepts helped educators and caregivers to see their importance in children’s lives. Learning about toxic stress and intergenerational trauma created some feelings of guilt or hopelessness among participants; conversely, learning about resilience created hope for the future.

SERVE AND RETURN

In focus groups, teachers described that the serve and return concept re-emphasized the important role that they play in a child’s life. As a result of learning about serve and return, one teacher limited technology use and encouraged human interaction in the school and classroom:

“At the daycare, we had iPads for the last two years.... If they're waiting for the bus, usually we would give them the iPad to alleviate their time waiting. But [instead] they could read stories together or stuff like that. So that was a big part that I changed for those serve and return relationships.”

TOXIC STRESS

The concept of toxic stress resonated with people because it shed light on experiences from their own past. It elicited compassion for and more understanding about their own parents. People also reflected on their own

⁷⁶ “Smudging is a cultural ceremony practised by a wide variety of Indigenous peoples in Canada and other parts of the world. Although practices differ, smudging is used for medicinal and practical purposes as well as for spiritual ceremonies. The practice generally involves prayer and the burning of sacred medicines, such as sweetgrass, cedar, sage and tobacco.” Source: The Canadian Encyclopedia “[Smudging](#)”

⁷⁷ The Canadian Encyclopedia “[Smudging](#)”

children and grandchildren and committed to different behaviors. One person from Kainai Head Start said, *“When I first watched the [AFWI Brain Story] video, one of the main things that stuck out was toxic stress. And it made me reflect on my upbringing, my children's upbringing, and now my grand baby.”*

Because the Brain Story course elicited such self-reflection, several people shared that it might take additional time to finish and that people in Indigenous communities may need additional mental and emotional supports as they go through the process:

“It took me time to go back and continue the Brain Story certification just because of all the triggers...I just felt that it was overwhelming, and I understand why, and I'm not judging myself as harshly. I do have some stress that I'm not completing...but I'm also stepping back and giving myself permission to grieve, or to understand what those triggers are.” – Indigenous Expert

The understanding of toxic stress also helped teachers and administrators better understand what might be going on with children at the school. Many students were dealing with high levels of toxic stress at home, related to stressors like poverty or addiction in the family. In addition, the high rates of suicides and deaths in the community weighed heavily on students.

“I think also being in our community, the levels of toxic stress that all of our students have at home. A lot of children, they don't come to school to learn. They come to school to survive...so when they [children] come here, a lot of times they're not ready, they're not in that mindset to learn. They're only there to survive, and they're in fight or flight.” – Kainai Head Start teacher

INTERGENERATIONAL TRAUMA

The Brain Story helped people understand intergenerational trauma, and also to understand the deep and lasting impacts of residential schools in a different way. Learning about epigenetics critically shifted how some thought about experiences that happened to their parents and grandparents that then had continued impact on themselves and their children. In some cases, understanding intergenerational trauma shifted some of the blame people felt, provided validation for their difficulty, and spurred hope for positive change. (See more about the intergenerational trauma of residential schools in Box 1.)

BOX 1: THE INTERGENERATIONAL TRAUMA OF RESIDENTIAL SCHOOLS

Focus group participants shared that the trauma of residential schools had significant intergenerational impacts, particularly since the schools operated for over one hundred years (officially ending in 1996) and impacted about 150,000 children. Focus group data reflected this impact both on the parents and community, as well as the children sent to residential schools:

“You could imagine generations of us with abandonment issues, trust issues—don't get too close—really being on guard, and again that, ‘I'm not going to go into that area of that memory because it's too painful.’ But it's still there. And we walk around with it.”

Residential school survivors were taken forcibly from their parents. Focus group participants who experienced residential schools recalled strong emotions of loneliness and missing their families, and that there was a need to suppress these painful feelings to survive:

“That was a doggone awful feeling when your parents left. Right now, as soon as I told that story, I just felt that loneliness again. And that's one loneliness I'll never forget. It always stays with me, that time after Sunday Mass when they left...it's so lonely. [This group is] the first time I ever shared that feeling.”

Some people shared the impacts of residential school trauma on the ways that they interact with their own children. One survivor described how through the Brain Story and other work, she started to unlearn that:

“One of my granddaughters was in the hospital, and she said, ‘I hate standing by the window, Grandma, because I'm so lonesome.’ I was sitting in that room with her, and I told her, ‘When I was in residential school, I used to stand by the window, and I used to look out, wondering when my mom would come get me. She never came. So I understand how you feel right now.’ And for my children, I had seven children...I'm not affectionate to them...All my love and affection went to the grandkids.”

Some posited that challenges with alcohol and drugs in the community were a coping mechanism to numb the pain of having children forcibly taken away:

“For a while there, for generations, there were no children at home. So a lot of our people turned to alcohol. What else were they going to do? Because there were no children. They were all over there [at the residential school]. And when the children came home, there was no more connection with the parents.”

The residential schools also separated children from their culture and spirituality. Yet, culture and spirituality provided hope, even when people had to hide their beliefs and practices. Participants shared that Kainai Nation was one of the few tribes who continued to practice their sacred Sun Dance ceremony, and that this connection to spirituality provided hope and sustained them. Culture and spirituality have been a source of resilience, showing the importance of rooting knowledge in rituals, spiritual practices, and culture:

“Maybe we could start putting the traditional ways back in. Then maybe that's where we can strengthen our children...We can break those cycles that are vicious. I think we're going to have to tackle that at some point. We're trying in the school.”

Participants shared that their experiences in residential schools had a significant impact on them directly and indirectly, and reflected on the intergenerational trauma with which they and their students are contending.

THE IMPORTANCE OF RESILIENCE AND HOPE

Though the people of Kainai First Nation have experienced decades of trauma and toxic stress, focus group participants and interviewees found hope in the Brain Story science of resilience. Learning about brain plasticity, and the fact that new synapses are constantly forming gave people hope that despite challenges, if the supports are built and the detrimental factors removed, their communities could thrive. One person commented, *“The beauty about the Brain Story is that even though those synapses have been severed, they can still [form new connections]...There’s still hope.”* Another said, *“It’s good to know the brain has that plasticity, that it repairs itself.”*

Another interviewee talked about the importance of shifting to more positive language, saying that they preferred to emphasize the resilience and strength of the community: *“I kept saying, ‘Let’s not say trauma. Resilience is a lot better.’ I think that’s important for our kids. You’re not just going to give up. You’re going to push through. We’re going to help you. Here’s some skills that we can help you with.”* (See more about resilience in Box 2.)

BOX 2: RESILIENCE IN THE KAINAI COMMUNITY

“Notions of resilience...require systematic rethinking to address the distinctive cultures, geographic and social settings, and histories of adversity of Indigenous peoples...Aboriginal Peoples in Canada have diverse notions of resilience grounded in culturally distinctive concepts of the person that connect people to community and the environment, the importance of collective history, the richness of Aboriginal languages, and traditions, as well as individual and collective agency and activism.”⁷⁸

Interviewees and focus group participants in Kainai First Nation underscored the importance of resilience and found support moving through trauma by connecting to their culture and history. Participants were proud of how their traditional ways of knowing have brought them through adversity both historically and in the present day:

“We’ve faced trauma in the past with disease, famine, starvation, sickness. We’ve faced trauma. But the thing is that we were resilient through that. And that was the [Blackfoot] teachings that got us through.” – Focus Group Participant

Some educators also shared the experience of seeing their students’ increased confidence and sense of self after connecting to their culture at school:

“[Through] all these concepts that are traditional, that are deeply rooted in the community that’s running this school, these kids are finding out who they are.” - Kainai High School Educator

At the Niitsitapi Resiliency conference, students from the Blackfoot Confederacy gathered with elders and other adults in their communities to discuss how to address challenges they faced. Together with their mentors, the students developed a song, which highlights sources of strength and resilience in their own words:

“We have our families. We have our culture. We have our dancing and our song. We have our Mother Earth, and we are Warriors. We are alive and Blackfoot strong.”

⁷⁸ Kirmayer, Dandeneu, Marshall, Phillips, and Williamson. *Rethinking Resilience from Indigenous Perspectives*. DOI 10.1177/070674371105600203

SECTION 2. WHAT CHANGED IN THE EDUCATION SYSTEM? BRAIN STORY-ALIGNED PRACTICE

As a result of understanding the Brain Story knowledge more deeply, both Kainai Head Start and Kainai High School implemented changes to better align practices with the Brain Story. Many students on the Kainai Reserve continue to deal with a multitude of challenges, including lack of access to basic needs, anxiety, lack of trust, and turbulent home environments. Teachers and administrators adopted practices, detailed below, informed by the Brain Story to better support students through these challenges.

SCHOOL ENVIRONMENT

After learning about the Brain Story, teachers and staff felt even more strongly that it was important to have a safe and welcoming environment for students. For instance, an elder often greeted children at the door at Kainai High School to make students comfortable and welcome. Other teachers made their classrooms more inviting by sharing food, tea, or always lending a listening ear:

“They know that they can come and get tea in my classroom. They know if they have a problem, they can come and ask me to help them. And I think that’s what everyone here practices. They practice that awareness that these kids need a safe place, that they’re welcome here, and that we’re there to help them.” – Kainai High School Teacher

Teachers and administrators were intentional about integrating serve and return into their interactions with students and children. For example, at the high school, teachers and administrators brought more intention to greeting children in the hallways, asking about their families, and making connections with their families:

“Having that interaction with students, we’re realizing is really important. So you should never be walking down the hallway and just not smile, not like when I go to Walmart or something. Then I’m not looking at people. But at school, every child should have that smiling, welcoming person of course in the classroom, but in the hallways as well.” – Focus Group Participant

“So I think that...you’re seeing the importance of relationships, building those relationships so that I can trust you. If I don’t have a relationship with you, then I’m probably not going to trust you. And you’re probably not going to have very much success in getting me to do work for you if I don’t have that trust.” – Focus Group Participant

The Brain Story helped illuminate the importance of integrating practices and spaces that help students with emotional regulation. At Kainai High School, administrators and teachers incorporated practices to help children with self-regulation. Examples include morning walks around the school; a dark sensory room where kids can breathe and compose themselves; and permission to leave class anytime to go to the sensory room. There’s a quiet space called Learning Commons where students can work. Additionally, at Kainai High School, there is a tipi room where children may go for a smudge or to speak with an elder.

TEACHER PRACTICE

Teachers emphasized the importance of creating an atmosphere where students do not feel judged. For instance, after learning about the Brain Story science, some teachers described giving more grace to students if they showed up late or missed homework. Teachers also discussed making sure that students understood that it is okay to make a mistake or ask a question if a concept confuses them. According to teachers, this seemed to have created an environment of psychological safety that students found helpful to their learning:

“I really make sure that my students always feel safe in my classroom and that they always feel welcome. When they come in late, I just say, ‘I’m so happy you’re here.’ And I might be the only person that says that to them.” – Kainai High School Teacher

After learning about the Brain Story, teachers also began asking different questions of their students to learn why a child might be acting in a certain way. Focus group participants shared that once they understand what a child's experience was, they approached teaching in a way that took that history into account. For example, one participant mentioned that if a student had not responded well to authority, the teacher might ask themselves what experiences the child may have had with authority in the past, and what about the student's experience had informed their reaction. One teacher said, *"I teach differently now...When you start to understand the trauma that some of our students have gone through and how their brain has developed, it changes how that child sees things."* Focus group participants at the high school also shared that there is a different mindset about what is important in school: *"It's not all linear. It's not all about getting the grades. It's about the experience."*

Additionally, Brain Story knowledge inspired teachers to prioritize students' agency and understanding of their own brains. High school staff described discussing with children more about how their brains develop, including the impact of alcohol, drugs, and stress, and also memory and executive function so that students could make their own decisions about how to handle situations. Teachers described working with kids to explain rationales to them so they could make choices instead of just telling them what to do—even the younger children at Head Start.

Kainai High School and Head Start staff also expressed an increased sense of responsibility as a result of understanding the important role they play in a child's life as a consistent, caring adult. Teachers and administrators took to heart that in some cases, they may be the most stable and consistent relationship in a child's life. This responsibility led many teachers to approach their work with increased intentionality and care:

"Once we started doing this program, it opened a whole new window to these children. It just made you love them more. It was like a really big eye opener about these kids that came into the classroom." – Head Start Teacher

"Especially when the kids are acting out. I'm like...something has to be going on at home. So when they're here, we're always hugging them and they're always jumping all over us. They don't really call us teachers much. It's always like auntie, mom, or grandma. That's one of the things that we're taught is to...show them that you care for them because they don't [always] get it at home." – Head Start Teacher

ROOTING IN CULTURAL PRACTICE

In accordance with the more general lesson, teachers and administrators reinforced the importance of rooting practice changes in culture. As those who experienced residential schools shared, one of the most devastating aspects was the prohibition of Blackfoot culture. As a result, the schools have found ways to integrate the Brain Story knowledge with traditional ways of knowing—for example, using smudge as a calming experience to improve executive function, having "serve and return" experiences in the tipi room, or emphasizing Blackfoot language, culture, prayer, and names to build the foundation of students' resilience within the indigenous context:

"At our school, we opened the day, the beginning of the week with circle time or the smudge and pray for the students, that they have a nice week, that everything goes well for them at the school and at home. And then at the end of the week, same thing. They close the week with smudge and prayers that they have a good weekend at home...because there's a lot of things we don't know happening at home and that maybe powers the student along." – Kainai Elder

These lessons from the experience in Kainai First Nation are consistent with research studies showing that cultural practices can help foster resilience and healing.⁷⁹

⁷⁹ Kirmayer, Dandeneu, Marshall, Phillips, and Williamson. *Rethinking Resilience from Indigenous Perspectives*. DOI 10.1177/070674371105600203

SECTION 3. WHAT WERE THE CHALLENGES?

As described above, the Brain Story knowledge and partnership with AFWI resulted in significant changes on the individual and organizational levels. However, challenges existed within the Kainai First Nation that constrained the efficacy and spread of Brain Story knowledge within the education and early childhood systems, and within the broader community (e.g., among caregivers).

First, teachers and school staff expressed a desire for support with mental health resources for themselves. We heard the emotional toll that teachers experienced, and they requested help attending to their own wellbeing. For example, some specifically noted the need for support processing emotions that arise from interactions with students or dealing with things from their own childhood. Teachers felt little ability to take time off because they wanted to be there for the children:

“You [teachers] absorb so much of the children's stresses and emotions, and it's hard to leave your work at school when there's certain students that you're constantly worried about. You know they're safe when they're with you. Then you send them on the bus back home. You don't know what they're going back to...We struggle a lot with how to deal with that.” - Kainai High School Teacher

“We could have used some professional development, especially the front line staff...because they do take in a lot of the traumas from the little ones and they need an outlet. If they can't [cope], then they start feeling heavy inside with all of that stress.” - Head Start Administrator

Second, teachers described wanting more access to professional development related to the Brain Story's application in practice. The Brain Story helped teachers to understand what might be going on with a child, and they saw the next step as figuring out how to change practices to better support students.

Third, teachers described challenges building trust with the parents of their students. Many parents do not trust people outside of their own family, and teachers described that it was sometimes difficult for them to connect with parents. One Head Start teacher explained: *“Parents do not reach out for the help that [is] given. So we basically have to get in contact with them and...parents don't want anybody coming into their house. And that goes back to residential school. They're afraid.”*

Finally, government and the private sector investments historically in the Kainai Nation have either been less than what was needed or resources have not been impactful; thus additional work with the Brain Story dissemination and application must account for the low-impact environment and complex stresses that children and families face. Teachers at Kainai High School and the Kainai Head Start recognized that children were sometimes lacking access to basic needs at home. Another person mentioned that additional research is needed about the impacts of fentanyl and other opioids on children's brain development, so future efforts can be sensitive to these needs.

SECTION 4. WHAT DOES THE FUTURE HOLD? OPPORTUNITIES FOR CONTINUED SUPPORT

WITHIN KAINAI, THERE IS OPPORTUNITY TO SUPPORT INTEGRATION OF THE BRAIN STORY KNOWLEDGE INTO OTHER SUBSYSTEMS

There is a need to codify, systematize, and scale across institutions within the education sector, as well as in other sub-systems like justice, health, and children's services. For example, AFWI can support deeper partnership with

the Kainai Board of Education. Other systems that impact children have not engaged as deeply to date and represent an opportunity for further work.

AFWI CAN CONTINUE TO USE ITS PLATFORM TO PROMOTE THE IMPORTANCE OF EARLY CHILDHOOD EDUCATION

AFWI can help disseminate information specifically about what happens at Head Start and how it supports the critical early childhood development to Kainai Board of Education and parents to address mistrust and lack of prioritization of Head Start's services. Head Start teachers felt that sometimes parents, professionals who are not in early childhood, and the general public did not understand what Head Start is and the important role that quality early childhood education plays for child development. Teachers expressed the need for the community to recognize their value as many children's first teachers, who are setting children up for the K-12 school system.

AFWI CAN CONSIDER OPPORTUNITIES TO SHARE THE KAINAI EXPERIENCE WITH OTHER INDIGENOUS COMMUNITIES

AFWI can support the exchange of lessons learned between Kainai Nation and other Indigenous communities. For instance, AFWI could support professional development at other schools that serve Indigenous students, such as Holy Spirit Catholic School Division in Lethbridge, or help to facilitate learning communities where schools like Kainai High School can share and learn from other reserve schools. AFWI can also partner with Kainai Board of Education to facilitate further permeation of the Brain Story course and share examples from Kainai High School, including with other high schools, middle schools, and elementary schools in the Blackfoot Confederacy.

In addition, AFWI could consider working with Indigenous partners to create an Indigenous-focused version of the Brain Story certification course or short-form videos that are more culturally aligned and story-driven. Building on the curriculum developed at Family Centre and Kerrie Moore's work, as well as successful practices at the high school and Head Start, AFWI can streamline and consolidate a version of the Brain Story that is more accessible to the general public. In the experience of Family Centre, the translation to Blackfoot language has been effective and critical to the acceptance of the Brain Story knowledge.

TEACHERS, FRONTLINE PROFESSIONALS, AND CHILDREN MAY NEED SUPPORT PROCESSING THEIR OWN TRAUMA

On any airplane ride, passengers are reminded to put on their own oxygen mask before helping others. This same idea was evident when we spoke with education practitioners. Teachers who are dealing with high levels of trauma themselves would benefit from additional emotional resources, and AFWI can consider how to help provide teachers with these emotional supports.

Because Indigenous children are disproportionately exposed to toxic stress and ACEs, AFWI can also facilitate or fund experiences that teach kids about their own brains and help them process trauma. For example, staff at Kainai High School were teaching kids that their brains are still developing and finding ways that students could learn the Brain Story and then teach it to others. AFWI can build on this to support children in many contexts within and outside of the education system to understand their own brains.

THERE MIGHT BE A "GAP GENERATION" THAT HAS NOT YET BEEN REACHED

One thing we noticed and believe warrants more exploration is whether there might be a "gap generation" of current parents that has not yet benefitted widely from the Brain Story knowledge in Kainai First Nation. Admittedly, nearly all of the people we spoke with had some familiarity with the Brain Story knowledge and ranged

in age from their 20s to elders. However, in hearing how residential school survivors described their relationships with their own adult children, today's parents of young children or adolescents were often cited as the group that could benefit most from the Brain Story knowledge. Many people also talked about the devastation this age group (roughly 20s to 40s) has experienced because of the opioid crisis. For this generation, people spoke of the value of the Brain Story knowledge in understanding their own experiences and informing their approach to parenting. It may be worth exploring whether this adult age cohort could be a potential area for deeper focus. Efforts could build on successful work such as the *All My Relations* curriculum, two-generation child-parent interventions, or home instruction for parents of preschool-aged children.

CONCLUSION

The success of the work in Kainai Nation presented significant lessons for how the Brain Story knowledge and aligned practice changes may be applicable to ongoing work with Indigenous communities. Due to the persistence and dedication of strong champions, change agents, and community partners present in the Kainai High School and Head Start, the Brain Story deeply influenced teachers and administrators both personally and professionally. Brain Story knowledge inspired educators to shift the culture, practice, and climate at schools, and the resulting practices may serve to catalyze similar changes in other contexts.

Central to the success of the AFWI partnership is that the community made the process and knowledge their own. As one AFWI staff member shared, *"Kainai does a lot that AFWI is not involved with anymore. In the end, they are the ones that are moving it forward."* The integration of Brain Story science with Blackfoot stories, practices, values, and experiences enhances its resonance and successful application. The acknowledgement and exploration of intergenerational trauma, including the recent history of Residential Schools, helped to clear a path for healing. Our hope is that this case study facilitates deeper understanding of the strengths and opportunities for the Brain Story knowledge in Kainai Nation and motivates sustained deep investment in the health and well-being of Indigenous children, families, and communities across Canada and beyond.

EVALUATION METHODS

REFLECTIVE PRACTICE SESSIONS

FSG facilitated two reflective practice sessions with 15 individuals on the Kainai First Nation reserve in Stand Off, AB. One session included teachers, administrators, and elders who worked at and supported the Kainai Head Start program, and the other included teachers and administrators at Kainai High School. Sessions were designed in consultation with Indigenous elders and members of the Kainai First Nation to be culturally responsive and reflect Indigenous ways of knowing and understanding. For instance, sessions began with a prayer by an elder, tobacco was offered, and discussions were conducted in a circle so all had a chance to share. AFWI staff also provided feedback on session design. Session content focused on stories about participants' experiences with the Brain Story knowledge and how they integrated the knowledge into their work with children and families.

KEY INFORMANT INTERVIEWS

As part of the AFWI developmental evaluation, FSG conducted interviews with 63 stakeholders, including researchers; community leaders; practitioners (e.g., physicians, educators); policy leaders; and funding organizations. The interviews referenced in this case study reflect conversations with a subset of practitioners and community leaders who commented specifically on work with Indigenous communities and/or with Kainai First Nation specifically.

SECONDARY RESEARCH AND DOCUMENT REVIEW

FSG reviewed progress reports conducted on behalf of AFWI; key ministerial policy and strategy documents (e.g., The Miyo Resource); and articles and reports about the work of AFWI and their partners. FSG also reviewed history of Indigenous peoples of Canada, videos documenting work in Kainai Nation, and additional supporting literature.

KEY DEFINITIONS

“Serve and Return” refers to the back and forth exchanges between a child and caregiver that serve as building blocks for early brain development.

“Toxic Stress” occurs when a child is exposed to repeated negative experiences such as abuse, neglect, or violence, and no supportive caregivers are around to buffer the effects (as compared to positive stress and tolerable stress).

“Air Traffic Control” is the metaphor that AFWI uses to explain the concept of executive function, which allows people to plan, focus, and juggle multiple tasks. Executive function skills rely on three types of brain function: self-control, working memory, and mental flexibility.

“Intergenerational Trauma” refers to trauma that began before the current generation and has impacted the mental and emotional well-being and brain development of the current generation. This can occur through behavioral and psychological patterns and also through epigenetic changes.

“Epigenetic changes” are changes to an organism as a result of modification of gene expression rather than changing the genetic code itself.

“Developmental evaluation” is a process that informs and supports innovative and adaptive development in complex dynamic environments.