



**Applied Behaviour Analysis:  
Risk of Harm and Oversight**

**The Health Professions Regulatory Advisory Council  
(HPRAC) Recommendations to the Minister**

**Volume 1**

**Submitted to the Minister of Health and Long-Term Care  
January 31, 2018**





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January 31, 2018

The Honourable Eric Hoskins  
Minister of Health and Long-Term Care  
10<sup>th</sup> Floor, Hepburn Block  
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Dear Minister,

The Health Professions Regulatory Advisory Council (HPRAC) is pleased to present our report on Applied Behaviour Analysis (ABA).

Our approach included evidence gathering based on literature, jurisdictional, and jurisprudence reviews. To meet the timeline outlined in your October 17, 2017, correspondence, HPRAC undertook a comprehensive stakeholder consultation comprising meetings with subject matter experts and stakeholders, site visits, written submissions, and an online survey. In total, over 800 individuals participated in HPRAC's stakeholder consultations.

HPRAC recommends that ABA providers performing a clinical supervisory role be regulated as part of an established health regulatory college governed by the *Regulated Health Professions Act, 1991* (RHPA). Other ABA providers would be accountable to the regulated clinical supervisors. HPRAC relied on its evidence and input from stakeholder consultations to formulate the following advice:

**1. In relation to activities of ABA intervention which present a risk of harm:**

HPRAC established that the following key ABA activities inherently carry a risk of harm:

- Behaviour assessment
- Designing an ABA intervention plan
- Delivering an ABA intervention plan, and
- Monitoring and evaluation

Additional considerations of risk of harm include a lack of competencies to design and deliver intervention plans, competency differential between certified and uncertified providers, and equating certification with competency. Furthermore, there is a risk of harm when ABA intervention is not provided, which affects client outcomes later in life.

**In relation to client populations who may experience risk of harm due to activities of ABA intervention:**

Client populations receive activities of ABA intervention in a variety of settings and are not limited to individuals who are diagnosed with Autism Spectrum Disorder (ASD) alone.

HPRAC's findings affirm that the risk of harm experienced by some clients when receiving ABA intervention varies based on setting, vulnerability, and severity of condition regardless of diagnosis.

**2. In relation to potential oversight options of ABA providers:**

HPRAC acknowledges the SEG report completed for the Ministry of Children and Youth Services (MCYS) for its thorough process in analyzing available oversight mechanisms. HPRAC augmented SEG's findings on oversight mechanisms and identified the following as key oversight options for providers who deliver ABA activities:

- Vetted voluntary provider list
- Mandatory Registry for government funded programs
- Regulation under an existing health regulatory college, and
- Regulation of title and exclusive scope of practice

HPRAC recommends that ABA clinical supervisors be regulated as part of an existing RHPA college.

In formulating its advice, HPRAC made the following observations. While HPRAC's key recommendation focuses on clinical supervisors, it recognizes that front-line providers are integral to the delivery of ABA interventions. These front-line providers enable access to care in several settings, especially in rural, remote, Indigenous and ethno-cultural communities. Regulation of clinical supervisors would ensure proper oversight of ABA intervention plans delivered by most front-line providers while safeguarding access and continuation of care.

Front-line providers, especially those working in private settings, should be held accountable to clinical supervisors and their employers. This is to ensure that they meet general requirements, such as passing police checks, in recognition of the vulnerable client population receiving care.

HPRAC is aware that there is no standard for clinical supervisors overseeing the delivery of ABA activities in Ontario at this time. As such, clinical supervisors who provide oversight will require a transition period in order to meet the knowledge, skills, and judgment as well as competency standards required to join an existing health regulatory college.

Additionally, a mechanism of “grandfathering” existing clinical supervisors is recommended in order to avoid disruption of service delivery by individuals who have “life experience” that qualifies them to provide clinical supervision. This will avoid disruption of services.

HPRAC heard and learned that there is a strong reliance on the Behavior Analyst Certification Board (BACB) certification, even though this is a US based organization. While HPRAC recognizes the stringent standards required to meet BACB certification, it heard from stakeholders that having this certification did not necessarily lead to knowledge and understanding of Ontario needs, especially in the areas of privacy and consent. As such, HPRAC observed the need to develop Ontario-based certification that builds on the BACB certification while taking into account the unique requirements of ABA providers in Ontario.

HPRAC noted that the public would benefit from a comprehensive communication strategy to help them navigate the various ABA programs offered and funded by many different ministries and agencies. Titles of ABA providers vary based on the program and this often leads to confusion as to how, and by whom, ABA is delivered in Ontario. HPRAC observed the need to improve communication on the delivery of ABA, and to provide caregivers and clients with information on what to expect from any ABA intervention.

We look forward to meeting with you to discuss the findings in this report and our recommendations.

Sincerely,

A handwritten signature in cursive script, appearing to read "Thomas Corcoran", written in dark ink on a light background.

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Thomas Corcoran, Chair



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Rex Roman, Vice Chair



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Bob Carman, Member



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Jeanette Dias D'Souza, Member



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Mary Gavel, Member



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Paul Macmillan, Member



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Said Tsouli, Member

# Executive Summary

## Background

On October 17, 2017, the Minister of Health and Long-Term Care (Minister) requested that the Health Professions Regulatory Advisory Council (HPRAC) provide advice on the activities or aspects associated with Applied Behaviour Analysis (ABA) therapy that pose a significant and inherent risk of harm (if any), and whether the risk of harm of this therapy varies by client population (e.g., children or adult). Additionally, if there is a risk of harm, what is the range of options for an approach to oversight that could be considered?

The Minister's request noted that the Ontario government had transformed service delivery and supports for children and youth with Autism Spectrum Disorder (ASD) through the new Ontario Autism Program (OAP). The Ministry of Children and Youth Services (MCYS) had previously contracted a study on Ontario-based certification for ABA providers working with clients with ASD. This was a preliminary step in ensuring appropriate quality and accountability of these services.

## Recommendation

HPRAC's recommendation to the Minister affirms that ABA therapy poses a significant and inherent risk of harm across many client populations. Therefore, HPRAC recommends that ABA providers who perform a clinical supervisory role (referred to throughout this report as "clinical supervisors") be regulated as part of an established health regulatory college, governed by the *Regulated Health Professions Act, 1991* (RHPA). Other ABA providers would be accountable to the regulated clinical supervisors.

## Consultation Process and Findings

HPRAC carried out broad-based stakeholder consultations using several methods, including: meetings with subject matter experts, an online survey, invitation to provide written submissions, and stakeholder meetings carried out in person, via teleconference or through site visits.

In all, over 800 individuals participated in HPRAC's stakeholder consultation process, which was carried out over a three-month period, from November 2017 to early January 2018. Key findings from the stakeholder consultations included:

- Client populations who receive ABA intervention are not limited to individuals diagnosed with ASD
- Risk of harm experienced by clients who receive ABA intervention ranged from moderate to extreme and was determined by a combination of factors which occurred on a continuum: degree of problem behaviour, client characteristics, and quality of ABA procedures

- ABA procedures carried an inherent risk of harm attributed to their physical nature or being improperly applied due to a lack of provider knowledge, skills, or judgment
- ABA intervention plans are delivered through a tiered service delivery model in which certified clinical supervisors, are likely to but not always, oversee the front-line delivery of services by both certified and uncertified ABA providers
- While the Behavior Analyst Certification Board (BACB) certification for ABA providers was acknowledged by most stakeholders, it was noted that this certifying mechanism lacked a consideration of Ontario-specific needs, as well as the resources to provide regulatory oversight
- The majority of respondents supported some form of oversight of ABA providers, especially clinical supervisors who oversee ABA intervention

HPRAC would like to acknowledge the *Certification /Regulation for ABA Practitioners: Final Report*, by SEG Management Consultants Inc., which was commissioned by MCYS. Due to the aggressive timelines in which HPRAC was required to complete its evidence gathering, it was helpful to draw on the SEG report’s analysis of available oversight options. HPRAC’s research consisted of literature, jurisdictional and jurisprudence reviews, which were used to supplement its stakeholder consultations.

## **Risk of Harm**

Based on the evidence reviewed, HPRAC affirms that there is a risk of harm associated with most ABA interventions for clients, therefore oversight is recommended. Several oversight options to regulating providers were examined with a particular focus on clinical supervisors.

### **Each ABA Phase of Intervention Poses a Risk of Harm**

During the course of its evidence gathering and stakeholder consultations, HPRAC established that the following represent the key phases of ABA intervention, each, of which, inherently carry a risk of harm:

- Behaviour assessment
- Designing an ABA intervention plan
- Delivering an ABA intervention plan, and
- Monitoring and evaluation

### **Risk of Harm by Client Population**

HPRAC was asked to determine if the risk of harm associated with ABA varied by population, for example, “child versus adult.” HPRAC did indeed conclude that there was a variation by population but that age was not the only variable to consider. It is important to note that parents and caregivers of clients receiving ABA intervention play an important role in advocating for



and reinforcing learning from ABA intervention, to the extent that they often provide the ABA intervention plan to the client. The following sections present alternative views.

**Setting:** Client populations receive ABA intervention in a variety of settings, such as rural and remote areas. Clients are not limited to individuals who are diagnosed with ASD alone. ABA interventions are funded and delivered by multiple ministries and agencies, including MCYS, classroom sessions funded by the Ministry of Education (EDU), and in community and group homes funded by the Ministry of Community and Social Services (MCSS).

**Vulnerability:** HPRAC's findings affirm that a client's experience of risk of harm when receiving ABA intervention can vary based on vulnerability. Client vulnerability may be due to several factors including: the client's age, poor health, poor or no verbal communication skills or mobility, the absence of an advocate when the family is unable/ unwilling to follow protocol, the client's setting which may present a challenge to service delivery, and the absence of a social support system.

Although age is an element of defining client characteristics and vulnerability, children requiring ABA treatment are a special category. There is a clear window of opportunity to apply ABA interventions at an early age. If a child can be diagnosed/ assessed as benefiting from an ABA intervention before the age of six, there is a reasonable expectation for improved life function; many children will achieve some improvement.

**Severity of condition:** Subject matter experts who were consulted for this referral presented a view that risk of harm may be determined by severity of condition. Severity is determined by a combination of factors which happen on a continuum: degree of problem behaviour, client characteristics (needs and strengths), and the quality of the ABA intervention. If a threshold is exceeded for one or more of these factors, the likelihood for risk of harm to occur increases.

- **Degree of problem behaviour:** A client may experience risk of harm based on problem behaviour when he or she exhibits one or more of the following factors (low to high occurrence) – moderate to severe actions, anti-social to criminal behaviour, actions directed at self and others, as well as inappropriate behaviour.
- **Client characteristics:** Client experience of risk of harm based on client characteristics (needs and strengths) could range from a continuum of high functioning (communication, good medical health, high mobility or moderate actions) to low functioning (non-communicative, poor medical health, immobility, or severe actions).
- **Quality of ABA intervention:** A client's environment may also contribute to their experience of risk of harm. The environment may be optimal (receiving care from a well-trained provider, having a supportive caregiver, and a support plan which is effectively implemented by all involved in the client's care). Or, the client's environment may be sub-optimal (providers may lack the relevant competencies, the caregiver may be uninformed, the support plan may be poorly designed and require multiple, complex steps).

## Oversight Options

HPRAC acknowledges the MCYS-commissioned SEG report's process in the analysis of available oversight mechanisms. HPRAC augmented SEG's findings and identified the following as key oversight options for providers who deliver ABA procedures:

- Vetted voluntary provider list
- Mandatory registry for government funded programs
- Regulation as part of an existing health regulatory college, and
- Regulation of title and exclusive scope of practice

## Recommendation

Because ABA therapy is deemed to pose a significant and inherent risk of harm across many client populations, HPRAC recommends that ABA providers performing a clinical supervisory role be regulated under an established health regulatory college, governed by the *Regulated Health Professions Act, 1991* (RHPA). Other ABA providers would be accountable to the regulated clinical supervisors.

## Observations

As in previous reports, HPRAC submits the following observations that were made during the course of the review but were not explicitly requested by the Minister's referral letter. These observations are presented in this report for the Minister's consideration:

- Front-line providers most of whom are, and will continue to be unregulated, are integral to how ABA procedures are delivered
- Front-line providers must be accountable to clinical supervisors and employers. This is to ensure that they meet general requirements, such as passing police checks, in recognition of the vulnerable client population receiving care
- A transition period is required to allow clinical supervisors to meet requirements
- Grandfathering of currently uncertified, existing clinical supervisors should be considered to ensure continuity of service delivery
- A plan leading to Ontario-based certification should be considered
- Communication to the public is recommended to clarify how, and by whom, ABA is provided in Ontario as well as what clients/care-givers should expect from providers, and
- Informed consent is a prerequisite of any ABA intervention but has only been dealt with at a cursory level in this report. There is a need for consistency and adherence to the several pieces of legislation that define and govern informed consent



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# Chapter 1: Recommendation

On October 17, 2017, the Minister of Health and Long-Term Care (Minister) requested that the Health Professions Regulatory Advisory Council (HPRAC) provide advice on:

- What activities or aspects associated with Applied Behaviour Analysis (ABA) therapy pose a significant and inherent risk of harm (if any), and whether the risk of harm of this therapy varies by client population (e.g., children or adult); and
- If there is a risk of harm, what is the range of options for an approach to oversight that could be considered?

The Minister's request noted that the Ontario government had transformed service delivery and supports for children and youth with Autism Spectrum Disorder (ASD) through the new Ontario Autism Program (OAP). The Ministry of Children and Youth Services (MCYS) had previously contracted a study on Ontario-based certification for ABA providers working with clients with ASD. This was a preliminary step in ensuring appropriate quality and accountability of these services.

The Minister requested that HPRAC provide its advice no later than January 31, 2018.

## 1.1 HPRAC's Decision in Response to the Minister's Request

In response to this request, HPRAC affirms that there is a risk of harm associated with Applied Behaviour Analysis (ABA) intervention across many client populations. As such, HPRAC recommends that ABA providers who are clinical supervisors overseeing a tiered service delivery model be regulated under an existing health regulatory college governed by the *Regulated Health Professions Act, 1991* (RHPA). Other ABA providers would be accountable to the regulated clinical supervisors.

During the course of this referral, HPRAC took into consideration the results of its consultations with stakeholders representing varying opinions through meetings, written submissions and an on-line survey. Additional evidence was gathered from its literature, jurisdictional, and jurisprudence reviews was also evaluated. HPRAC would like to acknowledge the *Certification/Regulation for ABA Practitioners: Final Report* prepared by SEG Management Consultants Inc.<sup>1</sup> The report generally followed HPRAC's guidance document for organizations being assessed for statutory regulation and undertook extensive and broad-based consultations which helped inform HPRAC's work on this referral.

In view of the aggressive timelines in which HPRAC had to work, it was helpful to refer to some aspects of the SEG report to augment HPRAC's findings.

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<sup>1</sup> SEG Management Consultants Inc. (2014). *Certification/Regulation for ABA Practitioners* (Rep.). Toronto, ON: SEG Management Consultants Inc. Retrieved from: <http://www.ontaba.org/pdf/SEG%20FINAL%20REPORT%20Dec%2017%202014.pdf>

It is acknowledged that ABA encompasses several aspects which may be referred to as “therapies, services, treatments, or interventions.” For the purposes of this report, the following are defined as:

- **Behaviour:** refers to a person’s actions that can be seen and heard. Unless specified (e.g. acceptable or unacceptable), it is a neutral term
- **ABA intervention:** refers to the ABA activities that include procedures used to address a client’s concerns and needs, such as reducing unacceptable behaviour and increasing acceptable behavior
- **ABA procedure:** refers to procedures used in intervention plans to directly influence behavior
- **Clinical supervisor:** refers to an ABA provider who oversees one or more providers involved in the delivery of the following ABA activities: assessment, development of intervention plans, implementation of intervention plans, monitoring and evaluation of plans, and approving plans for clients.
- **ABA provider:** refers to both clinical supervisors and front-line providers who are identified to provide ABA intervention to a client
- **Caregiver:** refers to family members and other community members who are involved in the client’s care on a day-to-day basis

It is important to understand that an ABA intervention is not based on “talk therapies.” ABA intervention primarily involves altering the physical environment to influence observable behaviour. This may include the use of physical procedures where the provider uses physical contact with the client to discourage inappropriate, and encourage appropriate, behaviour. This physical contact can range from gently guiding a client toward acceptable behaviour, to physically restraining a client demonstrating violent aggression towards themselves or others. At any point of intervention, a provider may decide to use physical procedures with a client if it is deemed necessary to protect the client and others and promote appropriate behaviours. As such, there is an inherent and potentially significant risk of harm to most clients.

Of note, parents and caregivers of clients receiving ABA intervention play an important role in advocating for, and reinforcing learnings from, ABA intervention to the extent that they often provide the ABA intervention plan to the client.

## **Risk of Harm**

For the purposes of this referral, the term “risk of harm” refers to physical or psychological actions of a health profession which may result in harm to a client. Based on stakeholder consultations and updated research, HPRAC observed that ABA activities are not limited to one

population or setting, such as children and adults with ASD.<sup>2</sup> As such, HPRAC determined there was an inherent and significant risk of harm across many client populations receiving ABA activities in different settings, including rural and remote communities.

### ***Risk of Harm by Population***

HPRAC was asked to determine if the risk of harm associated with ABA varied by population with “child versus adult” presented as an example. HPRAC did indeed conclude that there was a variation by population but that age was not the only variable to consider. The following sections present alternative views.

### ***Risk of Harm by Setting***

Client populations receive ABA intervention in a variety of settings, such as geographical locations in rural and remote areas, and are not limited to individuals who are diagnosed with ASD alone. ABA interventions are funded and delivered by multiple ministries and agencies, including classroom sessions funded by MCYS and the Ministry of Education (EDU) and in community and group homes funded by the Ministry of Community and Social Services (MCSS).

### ***Risk of Harm by Vulnerability***

HPRAC’s findings affirm that clients’ experience of risk of harm when receiving ABA intervention can vary based on vulnerability. Vulnerability may be due to several factors including: the client’s age, poor health, poor or no verbal communication skills or mobility, the absence of an advocate whereby the family is unable/ unwilling to follow protocol, the client’s setting which may present a challenge to service delivery, and the absence of a social support system.

### ***Risk of Harm by Severity of Condition***

In addition to client vulnerability, subject matter experts, who were consulted for this referral, also observed that risk of harm may be determined by severity of condition which can be defined along a continuum:

- **Degree of Problem behaviour:** can include the severity, intensity, frequency of a problem behaviour
- **Client characteristics:** can include mental health, medical conditions, level of functioning, communication skills, independent skills, mobility, very young and elderly

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<sup>2</sup> According to the SEG report, client populations which receive ABA services and are at risk of harm include children and adults with ASD. Other client populations include: individuals with Dual Diagnosis and Acquired Brain Injury. Settings where ABA is provided include: education (teachers, professors, specialists), mental health (children, youth and adult), addictions, child welfare, long-term care – geriatrics, corrections/forensics, organizational behavioural management, sports and health, hospitals (especially for pain management and behavioural paediatrics), and management professionals (e.g., employee performance management).



- **Quality of ABA procedures:** can include the competency of a provider delivering and supervising ABA intervention, quality of the intervention plan, caregiver involvement, and support system

### ***Risk of Harm by Age***

Although age is an element of defining client characteristics and vulnerability, children requiring ABA treatment are a special category. There is a clear window of opportunity to apply ABA interventions at an early age. If a child can be diagnosed/ assessed as benefiting from an ABA intervention before the age of six, there is a reasonable expectation for improved life function; many children will achieve some improvement. The fact that a child's mind and intellectual capacity are developing at an accelerated rate means that the child will learn more skills within the window of opportunity, particularly with intensive intervention. Failure to seize this window of opportunity typically leads to an adolescent and, eventually, an adult with reduced life function. The personal and economic costs to the individual and society are significant.

In spite of the potential benefits, one must take into account that risk of harm to these vulnerable client populations also exists due to the absence of clear direction for ABA providers to obtain consent, follow relevant consent to treatment legislation in Ontario, whereby the provider must understand what constitutes informed consent, and be aware of the legal requirements for consent across different settings in which they practise.

### ***Each Phase of ABA Intervention poses a Risk of Harm***

The risk of harm is also evident across the four major phases of ABA intervention which will be discussed in detail in Chapter 4: What We Learned. These are:

- Behaviour assessment
- Designing an ABA intervention plan
- Delivering an ABA intervention plan, and
- Monitoring and evaluation

Additional considerations of risk of harm include a lack of competencies to design and deliver intervention plans, competency differential between certified and uncertified providers, and equating certification with competency. Furthermore, there is a risk of harm when early ABA intervention is not provided, which affects client outcomes later in life.

HPRAC also acknowledges the power imbalance inherent in providing ABA intervention and recognizes that this may contribute to further abuse, including sexual abuse of some clients.

### **Range of Oversight Mechanisms**

HPRAC acknowledges the work the SEG report completed for MCYS, which, amongst other matters, analyzed available ABA oversight mechanisms. Furthermore, the SEG methodology

generally followed the HPRAC guidance document used by organizations seeking to be regulated as part of the RHPA - including criteria for assessing the need for statutory regulation. Although dated, HPRAC found the processes of consultation, research and analysis to be sound. HPRAC gathered additional, current evidence and conducted stakeholder consultations to augment the understanding of oversight options. The major options for oversight mechanisms, which will be expanded on in Chapter 4: What We Learned, include:

**Vetted voluntary provider list or registry:** ABA providers, in particular uncertified providers, would be captured under a registry. However, elements of the registry would need to address several issues such as accountability, data integrity, certification and training.

**Mandatory registry for government-funded programs:** the requirements for such a registry would be based on a continuum from least to most stringent (simple, enhanced, complex), in terms of accountability, qualifications and maintaining a complaints system.

**Regulation as part of an existing health regulatory college:** Under this option, ABA providers would be regulated as part of an existing health regulatory college willing to host them. This option would also provide title protection and scope of practice in addition to all the mechanics associated with a self-regulated college.

**Regulation of title and scope of practice:** ABA providers would be fully regulated as an independent professional college under this oversight option. An additional protection would include an exclusive scope of practice.

For a detailed analysis of registry models, see page 28, HPRAC report on “*The Health Profession Assistant: Consideration of the Physician Assistant Application for Regulation Report by the Health Professions Regulatory Advisory Council August 2012.*”<sup>3</sup>

## Preferred Model

HPRAC weighed the risk of harm considerations, the current size of the profession, and the Clinical Supervisors’ close relationship with ABA providers against the complexity involved in the different oversight models. As such, HPRAC recommends that ABA providers performing a clinical supervisory role be regulated as part of an existing regulated health college which is governed by the *Regulated Health Professions Act, 1991* (RHPA).

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<sup>3</sup> See *The Health Profession Assistant: Consideration of the Physician Assistant Application for Regulation*. Report by the Health Professions Regulatory Advisory Council (August 2012).” Retrieved from [http://www.hprac.org/en/reports/resources/PA\\_ENG\\_VOL\\_1\\_E\\_FILE-COMPLETEFINALAODAS\\_nosignatures.pdf](http://www.hprac.org/en/reports/resources/PA_ENG_VOL_1_E_FILE-COMPLETEFINALAODAS_nosignatures.pdf)

## 1.2 HPRAC's Rationale for Its Decision

HPRAC's recommendation to the Minister is to regulate, as part of an existing, independent RHPA health regulatory college, ABA providers who provide clinical oversight to individuals who deliver ABA intervention plans and are involved in carrying out ABA behaviour change procedures which carry an inherent risk of harm.

In making its decision, HPRAC took into consideration several factors, including putting the client at the centre of care, protection of the public from risk of harm, certification of providers, and access to services.

### Client at the Centre of Care

Many client populations receiving ABA intervention tend to be the most vulnerable in terms of cognition, ability to consent to treatment, and available supports they may have to maximize ABA intervention benefits. HPRAC took these elements into consideration when making its recommendation.

### Protection of the Public from Risk of Harm

Significant risk of harm has been identified with providing ABA intervention to some clients. To minimize risk of harm to the public, clinical supervisors of individuals who deliver ABA interventions should meet standards which are clearly defined under regulation, such as having the necessary knowledge, skills and judgement to meet practice requirements and be permitted to use a regulated title.

HPRAC heard from the majority of stakeholders on the subject of protection of client populations from risk of harm. Stakeholders' stated preference is to regulate the providers who provide clinical oversight of ABA intervention, rather than the providers who deliver the ABA intervention. Stakeholders supported hiring clinical supervisors with specific qualifications, such as a Master's degree or the Board Certified Behavior Analyst (BCBA) certification.<sup>4</sup>

### Certification

Currently, the only form of ABA certification is offered through an organization in the United States – the Behavior Analyst Certification Board (BACB).<sup>5</sup> While this certification is recognized throughout the United States and Canada (including Ontario) and is a requirement for some ABA positions, there is recognition that it does not address certain Ontario-specific requirements. For instance, HPRAC heard from several stakeholders that BACB certification requirements do not consider Ontario jurisprudence. Additionally, BACB lacks the resources as well as the legislative ability to enforce compliance of its members. However, BACB

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<sup>4</sup> Behavior Analyst Certification Board. (2018). Board certified behavior analysts. Retrieved from <https://www.bacb.com/bcba/>

<sup>5</sup> Behavior Analyst Certification Board. (2018). About the BACB. Retrieved from <https://www.bacb.com/about/>

certification has been acknowledged as a starting point on which to build for an Ontario-specific requirement in the future.

## **Access to ABA Intervention**

In most instances, ABA intervention is provided in a tiered manner with clinical supervisors overseeing providers who directly provide services to clients and caregivers. HPRAC heard from several stakeholders that clinical supervisors play a vital role in ensuring that ABA intervention plans are well developed to meet the needs of the clients and allow other caregivers such as family members to provide the ABA intervention procedures effectively.

HPRAC recognizes that clinical supervisors must meet a high standard of knowledge, skills, and judgment to oversee front-line providers and caregivers. HPRAC also noted that ABA interventions are offered in an array of settings which rely heavily on front-line providers including community organizations as well as rural and remote areas. Although clinical supervisors are integral to providing ABA interventions, access is enabled by front-line providers – many of whom are not yet certified.

## **Ensuring Continuation of ABA Intervention**

If the majority of individuals who deliver ABA intervention were regulated, they would be required by law to meet minimum requirements of skill, knowledge, and judgment. Such stringent conditions would likely affect staffing levels and lead to service disruption for clients receiving ABA intervention. To minimize disruption of ABA service delivery, HPRAC supports ABA providers with extensive experience to be grandfathered.

HPRAC's key recommendation to regulate only the ABA providers who are responsible for clinical oversight was made to minimize disruption of ABA service delivery within Ontario.

# Chapter 2: Background

## 2.1 Minister's Referral Question

The Minister asked HPRAC to provide advice on:

- What activities or aspects associated with ABA therapy pose a significant and inherent risk of harm (if any), and whether the risk of harm of this therapy varies by client population (e.g., children and adult); and
- If there is a risk of harm, what is the range of options for an approach to oversight that could be considered?

The Minister's request noted that the Ontario government had transformed service delivery and supports for children and youth with Autism Spectrum Disorder through the new Ontario Autism Program. MCYS had previously contracted a study on Ontario-based certification for ABA providers working with clients with ASD as a preliminary step in ensuring appropriate quality and accountability of these services.

## 2.2 What is ABA?

Applied Behaviour Analysis (ABA) falls under a broader category referred to as behaviour analysis. Behaviour analysis is a natural science that aims to understand the observed behaviour of individuals in a structured and quantified manner and apply this understanding in a variety of settings (e.g., home; hospitals; schools). Behaviour analysis comprises two areas: Experimental Analysis of Behaviour (EAB) and Applied Behaviour Analysis (ABA).<sup>6</sup>

EAB is the science that identified behaviour principles and the process used in ABA intervention.<sup>7</sup> ABA is the process of systematically applying interventions based upon the principles of behaviour to improve socially significant behaviours to a meaningful degree and to demonstrate that the interventions employed are responsible for the improvement in behaviour.<sup>8</sup>

More specifically, ABA involves the measurement, direct observation, and analysis of environmental variables such as antecedents and consequences that influence behaviour, to help in the development of new adaptive behaviours and reduce problem behaviour. ABA is based on the understanding that an individual's behaviour is determined by past and current environmental events in conjunction with organic variables such as their genetic endowment and physiological

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<sup>6</sup> American Psychological Association - Division 25. (2017). About behavior analysis. Retrieved from <http://apadivisions.org/division-25/about/index.aspx> ; Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). Applied behavior analysis (2nd ed.). Upper Saddle River, NJ: Pearson - Merrill Prentice Hall.

<sup>7</sup> Ibid.

<sup>8</sup> Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1(1), 91-97.

variables.<sup>9</sup> Once these environmental variables are identified, they may be modified, altered, or removed to increase a desirable behaviour or reduce a problem behaviour.

### **ABA Intervention**

For the purposes of this report, ABA intervention refers to a broad range of activities which include ABA procedures used to address a client's concerns and needs, such as reducing problem behaviour and increasing desirable behaviour.

Phases of ABA Intervention:

ABA has recognized and established standards of practice for activities across the key phases of intervention outlined below.<sup>10</sup> The activities utilized by providers during ABA intervention can be grouped into the following phases:<sup>11</sup>

- **Conducting a behaviour assessment:** A target behaviour is selected, measured, and assessed based on the intervention goals (reduce problem behaviour and increase a desirable behaviour).
- **Designing an intervention plan:** An intervention plan is developed based on assessment results that may include a combination of behaviour change procedures.
- **Implementing an intervention plan:** An intervention plan is implemented directly to a client by an ABA provider and, in some cases, a caregiver.
- **Monitoring and evaluating the intervention plan:** Client data is collected and monitored before and throughout the intervention to allow adjustments to the plan.

Individualized Approach to ABA Intervention:

When providing ABA intervention, ABA providers follow an individualized approach including activities, such as (but not limited to):

- selecting data collection and measurement methods
- selecting assessment methods
- selecting behaviour change procedures, and

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<sup>9</sup> Behavior Analyst Certification Board. (2014). Applied behavior analysis treatment of autism spectrum disorder: Practice guidelines for healthcare funders and managers (Rep.). Retrieved from [https://www.bacb.com/wp-content/uploads/2017/09/ABA\\_Guidelines\\_for\\_ASD.pdf](https://www.bacb.com/wp-content/uploads/2017/09/ABA_Guidelines_for_ASD.pdf)

<sup>10</sup> Behavior Analyst Certification Board. (2018). Professional and ethical compliance code. Retrieved from <https://www.bacb.com/ethics/ethics-code/> ; Association for Behavior Analysis International. (1989). Statement on the right to effective behavioral treatment. Retrieved from <https://www.abainternational.org/about-us/policies-and-positions/right-to-effective-behavioral-treatment,-1989.aspx> ; Cooper et al. (2007).; Vollmer, T. R., Hagopian, L. P., Bailey, J. S., Dorsey, M. F., Hanley, G. P., Lennox, D., & Spreat, S. (2011). The association for behavior analysis international position statement on restraint and seclusion. *The Behavior Analyst*, 34(1), 103-110.

<sup>11</sup> Behavior Analyst Certification Board. (2018). About behavior analysis. Retrieved from <https://www.bacb.com/about-behavior-analysis/> ; Cooper et al. (2007).

- determining how to deliver the intervention plan

Selections are based on a combination of client characteristics (strengths and needs), setting, best available evidence, and the judgment of the provider.<sup>12</sup>

Best practice requires that ABA providers select behaviour change procedures that are supported by research and are data-driven.<sup>13</sup> The individualized approach continues throughout intervention. Decisions about modifying or discontinuing the intervention plan are based on the responses of the client.

### ***How is ABA Intervention delivered?***

Most ABA intervention plans involve a tiered service delivery model in which more than one provider is involved in delivering ABA procedures.<sup>14</sup>

This “tiered service delivery” model is likely, but not always, comprised of a BACB certified ABA clinical supervisor overseeing the delivery of ABA procedures by front-line providers who may, or may not, be BACB certified. In some instances the clinical supervisor may have significant life experience but not be BACB certified. The clinical supervisor should approve all intervention plans prior to implementation. In some instances, the clinical supervisor will be directly involved in an intervention.

An ABA intervention plan can be delivered directly to a client by one or a combination of the following formats:<sup>15</sup>

- One on one (Provider works directly with client)
- Group (Provider works with multiple clients)
- Mediator model (The caregiver is trained by the provider to implement the intervention plan with the client)<sup>16</sup>

## **2.3 ABA Providers**

ABA providers are trained to deliver procedures identified within the research field of Behaviour Analysis (BA) to establish and enhance socially important, functional, and independent living skills.<sup>17</sup> In other words, ABA providers help clients by reducing undesirable behaviours and increasing desirable behaviours. In order to build service delivery capacity, ABA providers

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<sup>12</sup> Slocum, T. A., Detrich, R., Wilczynski, S. M., Spencer, T. D., Lewis, T., & Wolfe, K. (2014). The evidence-based practice of applied behavior analysis. *The Behavior Analyst, 37*(1), 41-56.

<sup>13</sup> Slocum et al. (2014).

<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Feldman, M. A., Condillac, R. A., Tough, S., Hunt, S., & Griffiths, D. (2002). Effectiveness of community positive behavioral intervention for persons with developmental disabilities and severe behavior disorders. *Behavior Therapy, 33*(3), 377-398.

<sup>17</sup> SEG Management Consultants Inc. (2014).

teach caregivers behaviour change procedures that can be used to support the client on a daily basis.

In Ontario, ABA providers work in both ministry funded programs and private arrangements. Currently, there is no estimation of ABA providers in Ontario. However, the number of certified providers can be determined using the BACB registry of certificates: as of January 16, 2018, there were 834 ABA certified providers in Ontario. Additionally, the Ontario Association for Behaviour Analysis (ONTABA) maintains a membership list that includes 850 providers and 213 student members.<sup>18</sup>

In Ontario, clients and their caregivers may receive ABA services from private providers who may be employed by an agency or practise independently. At this time, the only source of information on some private providers (e.g., ASD- specific providers) is the ABACUS list.<sup>19</sup>

### **Clinical Supervisors**

ABA services rely heavily on clinical supervision to support the effective and ethical practices of ABA providers, shape and maintain the skills of future ABA providers (potentially future clinical supervisors), facilitate the delivery of high-quality behavioural intervention and services, and to ensure protection of clients.<sup>20</sup>

Clinical supervisors provide clinical direction and supervision on ABA activities that include (but are not limited to): the behaviour assessment, designing intervention plans, implementing intervention plans, and monitoring and evaluating the plans. In addition, when required (i.e., to demonstrate a procedure to a front-line provider), the clinical supervisor may be actively involved in the delivery of the ABA intervention directly with a client and caregiver.<sup>21</sup> Additional activities of clinical supervisors may include (but are not limited to):<sup>22</sup>

- Summarizing and analyzing data
- Securing informed consent from the client or caregiver
- Evaluating client progress towards intervention goals
- Supervising implementation of the intervention plan
- Adjusting the intervention plan based on data
- Monitoring treatment integrity
- Training front-line providers and caregivers to deliver the intervention plan
- Evaluating risk management and crisis management
- Overseeing the ethical decision-making of front-line providers

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<sup>18</sup> Ontario Association for Behaviour Analysis (ONTABA). (2018). Retrieved from: <http://www.ontaba.org/#&panel1->

<sup>19</sup> ABACUS Registry. (2018). Retrieved from: <https://www.abacuslist.ca/>

<sup>20</sup> LeBlanc, L. A., Raetz, P. B., Sellers, T. P., & Carr, J. E. (2016). A proposed model for selecting measurement procedures for the assessment and treatment of problem behavior. *Behavior Analysis in Practice*, 9(1), 77-83.

<sup>21</sup> BACB - Applied Behavior Analysis Treatment of Autism Spectrum Disorder. (2014). Retrieved from [https://www.bacb.com/wp-content/uploads/2017/09/ABA\\_Guidelines\\_for\\_ASD.pdf](https://www.bacb.com/wp-content/uploads/2017/09/ABA_Guidelines_for_ASD.pdf)

<sup>22</sup> Leblanc et al. (2016).



- Keeping abreast of current research in ABA in order to effectively support the front-line provider
- Ensuring satisfactory implementation of the intervention plan, and
- Developing and overseeing the transition or discharge plan

Clinical supervisors should monitor intervention plans on an ongoing basis. This monitoring should be more frequent for new providers, when a new client is assigned, when a client has challenging behaviours, or complex intervention plans are involved.

### *Front-line Providers*

Front-line providers are responsible for delivering ABA intervention directly to a client or caregiver. A client may have one or more front-line providers involved in his or her care depending on the complexity of client needs, the behavioural services being delivered, provider competencies, and frequency of supervision delivered by the clinical supervisor. Activities of a front-line provider may include (but are not limited to):

- Conducting behaviour assessments
- Designing intervention plans
- Securing approval of intervention plan from the clinical supervisor
- Securing informed consent from the client or caregiver
- Delivering intervention plans directly to the client
- Providing solutions when a client is not progressing with intervention
- Conducting treatment integrity on caregiver implementation of plans
- Collecting and analyzing data on the behaviour targeted in the intervention plan
- Training caregivers to deliver the plan, and
- Developing discharge and transition plans

Additional roles and activities of front-line providers may vary according to several factors that include (but are not limited to): client characteristics, setting characteristics, front-line provider competency and training, ABA intervention being offered, and the frequency of supervision delivered by the clinical supervisor.

Table 1 lists some of the titles, though not exhaustive, that ABA providers may use within an organization, agency or their own business.<sup>23</sup>

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<sup>23</sup> SEG Management Consultants Inc. (2014).

**Table 1: Examples of ABA Provider Titles**

Examples of titles used by Clinical Supervisors	Examples of titles used by Front-line Providers
<ul style="list-style-type: none"> <li>• Clinical Director</li> <li>• Director</li> <li>• Executive Director</li> <li>• Chief Executive Officer</li> <li>• Behaviour Psychologist</li> <li>• Psychologist</li> <li>• Clinician-in-Charge</li> <li>• Program Coordinator</li> <li>• Program Director</li> <li>• Clinical Supervisor</li> <li>• Clinical Manager</li> <li>• Behaviour Analyst</li> <li>• ABA Expert</li> <li>• Senior Therapist</li> </ul>	<ul style="list-style-type: none"> <li>• Applied Behaviour Analyst</li> <li>• Behaviour Modifier</li> <li>• Behaviour Counsellor</li> <li>• Behaviour Specialist</li> <li>• Behaviour Therapist</li> <li>• Behaviour Consultant</li> <li>• Behaviour Analyst</li> <li>• Behaviour Trainer</li> <li>• Behaviour Intervener</li> <li>• Behaviour Technician</li> </ul>

## Training, Education and Certification for ABA Providers

An important component of providing effective and ethical ABA intervention is to ensure that those who supervise and deliver interventions receive the proper training and education. ABA education is provided in universities and colleges around the world, although the majority of them are in the United States and Canada.<sup>24</sup>

In the United States, over 240 academic institutions provide education and training in ABA. In Ontario, 14 college and university programs provide education in Applied Behaviour Analysis.<sup>25</sup> Currently, two universities in Ontario (Brock University and the University of Western Ontario), provide ABA education and training at the graduate level with a course sequence which is approved by the BACB. Students in these programs are then eligible to write the BACB certification exam. One university and five colleges have course sequences approved by the BACB for students interested in becoming certified. The different certifications available from the BACB are explored below.

## Behavior Analysis Certification Board (BACB) Accreditation

BACB credentials are recognized by ABA professional associations and ABA experts as an indicator of qualification.<sup>26</sup> Basic competencies in ABA, and the education and training required

<sup>24</sup> Behavior Analyst Certification Board. (2018). Verified Course Sequence (VCS) Directory. Retrieved from: <http://info.bacb.com/o.php?page=100358>

<sup>25</sup> SEG Management Consultants Inc. (2014).

<sup>26</sup> Association for Professional Behavior Analysis. (2013). *ABAI autism special interest group consumer guidelines* (Rep.). Retrieved from <http://www.asatonline.org/pdf/sig.pdf>; Ontario Scientific Expert Taskforce for the Treatment

have been defined by the behaviour-analytic community, are reflected in the requirements of the BACB.<sup>27</sup>

The BACB certification was introduced in 1998, with the goals of providing consumers with a basic credential that identified a qualified behaviour analysis practitioner, and increasing the quality of behaviour analysis services available to the consumer.<sup>28</sup> Based in the United States, the BACB provides varying levels of certification based on education, training and competencies. The examinations cover a task list of ABA principles, procedures, and ethical guidelines in the delivery of ABA. The BACB sets out expectations for maintaining certification (e.g., continuing education credits) and operates a complaints mechanism for BACB certified providers.<sup>29</sup> As of January 16, 2018 the BACB estimates that approximately 834 individuals in Ontario have some form of certification.<sup>30</sup>

The BACB provides certifications at four levels, each with their own criteria that a person must meet prior to being certified:

**Board Certified Behavior Analyst –Doctorate (BCBA-D) and Master’s (BCBA):** Both levels require identical guidelines for certification such as supervised hours and field work, but differ in some aspects such as the level of education. For supervised hours, a BCBA-D and BCBA must include: 1,500 hours of experience with a one-week supervisory period and have at least one contract during this period. Or, a candidate could have 750 hours of experience with a one-week supervisory period per month and have at least two contracts during the supervisory period per month. If a practicum option is not exercised, a supervised independent field work experience requires the completion of 1,500 experience hours with a two-week supervisory period.

Providers with a BCBA-D and a BCBA receive education, training, and demonstrate competency across ABA activities and phases (e.g., assessment, designing intervention plans, implementing plans, monitoring and evaluation). In addition, training is also provided to identify and plan for side effects of punishment, reinforcement, and extinction based behaviour change procedures; how to implement intervention plans; and supervision skills to oversee the delivery of ABA. According to the BACB, these providers can practise independently, but within their scope of competency.<sup>31</sup>

**Board Certified Assistant Behavior Analyst (BCaBA):** A candidate is required to have a Bachelor’s degree from an accredited program and either 1,000 hours of experience with 5% of

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of Autism Spectrum Disorders (OSETT-ASD). (2017). *Evidence-based practices for individuals with autism spectrum disorder*. Retrieved from <http://www.ontaba.org/pdf/ONTABA%20OSETT-ASD%20REPORT%20WEB.pdf>

<sup>27</sup> Johnston, J. M., Foxx, R. M., Jacobson, J. W., Green, G., & Mulick, J. A. (2006). Positive behavior support and applied behavior analysis. *The Behavior Analyst, 29*(1), 51-74.

<sup>28</sup> Shook, G. L., & Favell, J. E. (2008). The Behavior Analyst Certification Board and the profession of behavior analysis. *Behavior Analysis in Practice, 1*(1), 44-48.

<sup>29</sup> Behavior Analyst Certification Board. (2018). Maintaining BCBA Certification. Retrieved from <https://www.bacb.com/maintain/maintaining-bcba/>

<sup>30</sup> Ibid.

<sup>31</sup> AppliedBehaviorAnalysisEdu.org. (2018). Step-by-step instructions on earning the Board Certified Behavior Analyst (BCBA) Certification. Retrieved from <https://www.appliedbehavioranalysisedu.org/bcba-certification/#complete-experience-requirements>

the total number of hours supervised per month; or 500 hours of experience with a one-week supervisory period and have at least 10% of the hours supervised per month. After the first 1,000 hours, mandatory supervision decreases to 2% per month.<sup>32</sup>

Similar to the BCBA-D and BCBA certification, the BCaBA requires education, training, and demonstrated competency across ABA activities and phases (e.g., assessment, designing intervention plans, implementing plans, monitoring and evaluation); and competency and training on identifying and planning for side effects of punishment based, reinforcement based and extinction based behaviour change procedures. A BCaBA level provider may not practise independently, but must be supervised by someone certified at the BCBA/BCBA-D level.<sup>33</sup>

**Registered Behavior Technician (RBT):** A candidate requires a high school diploma, must complete a 40-hour training program, and have 5% of their hours supervised by a designated BCBA-D. An RBT level provider may not practise independently, but must be supervised by someone certified at the BCaBA/BCBA/BCBA-D level.<sup>34</sup>

Aside from the BACB, there are no certification boards in Canada, or worldwide, that provide a more comprehensive framework for overseeing the education, training, and competency of providers to deliver ABA.

## 2.4 Risk of Harm

ABA providers engage in several activities which may pose a risk of harm. When properly trained providers deliver ABA intervention to children, for instance, the risk of harm to the client is evident but manageable. With adolescent or adult clients, the risk of harm to the client escalates significantly. Extreme self-harm can escalate to violent harm to others as well. Risk of harm to the client associated with ABA can occur during each of the four phases of ABA intervention:

- **ABA assessment:** There is an inherent risk in selecting appropriate assessment methods and analyzing the results. This is particularly true when the method involves creating situations which trigger the undesired behaviour in order to confirm the client's issue and determine its cause (Functional Analysis).
- **Designing an ABA intervention plan:** There is an inherent risk in designing intervention plans. Selecting the wrong behaviour change procedure may not only be ineffective but exacerbate the client's inappropriate behaviour. If the inappropriate behaviour includes self-harm, the risk of harm to the client can easily escalate.

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<sup>32</sup> Behavior Analyst Certification Board. (2016). *Standards for supervision of BCaBAs*. Retrieved from <https://www.bacb.com/wp-content/uploads/2017/09/161216-standards-for-supervision-of-BCaBAs.pdf>

<sup>33</sup> Behavior Analyst Certification Board. (2018). Board Certified Assistant Behavior Analyst. Retrieved from <https://www.bacb.com/bcaba/>

<sup>34</sup> Behavior Analyst Certification Board. (2017). *Registered Behavior Technician (RBT) competency assessment*. Retrieved from <https://www.bacb.com/wp-content/uploads/171130-RBT-competency-assessment-english.pdf>

- **Delivering an ABA intervention plan:** There is inherent risk in how an intervention plan is delivered to a client or caregiver. Negative implications such as an increase in problem behaviour may result if an ABA provider does not deliver the plan as written, or misses steps due to lack of competency.
- **Monitoring and evaluation:** ABA providers rely on making decisions such as introducing, modifying, and discontinuing intervention plans based on analyzing client data. Most intervention plans require adjustment based on early feedback. Ignoring or failing to interpret the feedback necessary to make adjustments could lead to negative implications that include extreme undesirable behaviour.

### **ABA Assessment**

According to ABA providers, Functional Analysis is considered the “gold standard” of ABA assessment methods. This method involves triggering a client’s problem behaviour every time the procedure is applied in order to help confirm the root cause of inappropriate behaviour.<sup>35</sup> Research has identified a risk of harm to either the provider or client, due to an increase of the client’s challenging behaviour<sup>36</sup> and unnecessary exposure to functional analysis across experimental conditions.<sup>37</sup> Issues associated with Functional Analysis are:

- Client refusal to participate
- Reinforcement of the challenging behaviour in the client
- Physical harm to client or provider when clients are allowed to engage in the challenging behaviour during the analysis, and
- The inability to apply procedures which were induced in a clinical research situation to real world situations could result in clients failing to acquire desired skills or behaviours<sup>38</sup>

Further findings revealed that the risk of harm persists even when taking precautions or following appropriate steps and is a major reason why practitioners may choose not to use this assessment method. Increased competencies may mitigate these risks.<sup>39</sup>

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<sup>35</sup> Beavers, G.A., Iwata, B.A., & Lerman, D.C. (2013). Thirty years of research on the functional analysis of problem behavior. *Journal of Applied Behavior Analysis*, 46(1), 1-21.

<sup>36</sup> Hanley G.P. (2012) Functional assessment of problem behavior: Dispelling myths, overcoming implementation obstacles, and developing new lore. *Behavior Analysis in Practice*, 5(1), 54-72.; Kahng, S., Hausman, N.L., Fisher, A.B., Donaldson, J.M., Cox, J.R., Lugo, M., & Wiskow, K. M. (2015) The safety of functional analyses of self-injurious behavior. *Journal of Applied Behavior Analysis*, 48(1), 107-114.; Wiskirchen, R.R., Deochand, N., & Peterson, S.M. (2017). Functional analysis: A need for clinical decision support tools to weigh risks and benefits. *Behavior Analysis: Research and Practice*, 17(4), 325-333.

<sup>37</sup> Wiskirchen et al. (2017)

<sup>38</sup> Matson, J. L., & Minshawi, N. F. (2007). Functional assessment of challenging behavior: Toward a strategy for applied settings. *Research in Developmental Disabilities*, 28(4), 353-361.

<sup>39</sup> Hanley, G.P. (2012); Kahng et al. (2015); Roscoe, et al. (2015). A statewide survey assessing practitioners' use and perceived utility of functional assessment. *Journal of Applied Behavior Analysis*, 48(4), 830-844.

## **Designing an ABA Intervention Plan**

Designing an ABA intervention plan requires the provider to select one or more behaviour change procedures which, when used alone or in combination, will reduce a problem behaviour or teach a skill. Potential risks of harm during this phase include:<sup>40</sup>

- Uncertainty as to how the client will respond to behaviour change procedures
- Inadequate use of current research and evidence
- Inappropriate assessment procedures utilized
- Lack of knowledge or familiarity of proper steps and procedures
- Inadequate planning for potential side effects
- Improper ethical practices
- Inadequate determination and use of measurement procedures
- Not determining when to move from least intrusive to most intrusive behaviour change procedures, or
- Applying ineffective and non-evidence based procedures

Key behaviour change procedures which carry a risk of harm include punishment, extinction, and reinforcement.

**Punishment based procedures:** These procedures include a process by which a negative consequence follows an inappropriate behaviour. The negative consequence decreases the future frequency of that inappropriate behaviour. The risk of harm due to the use of punishment procedures includes:

- Increase in challenging behaviour (“punishment elicited aggression”)<sup>41</sup>
- Intervention misapplication due to limited training<sup>42</sup>
- Exacerbation of negative behaviours due to intervention misapplication,<sup>43</sup> and

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<sup>40</sup> Iwata, B. A., Pace, G. M., Cowdery, G. E., & Miltenberger, R. G. (1994). What makes extinction work: An analysis of procedural form and function. *Journal of Applied Behavior Analysis*, 27(1), 131-144; Johnston et al. (2006); Slocum et al. (2014); Vollmer et al. (2011); Vollmer, T.R. (2002). Punishment happens: Some comments on Lerman and Vorndran's review. *Journal of Applied Behavior Analysis*, 35(4), 469-473.; Leblanc et al. (2016); Mayton, M. R., Carter, S. L., Zhang, J., & Wheeler, J. J. (2014). Intrusiveness of behavioral treatments for children with autism and developmental disabilities: An initial investigation. *Education and Training in Autism and Developmental Disabilities*, 92-101.; Mayton, M. R., Carter, S. L., & Wheeler, J. J. (2014). Intrusiveness of behavioral treatments for adults with intellectual disability. *Research in Developmental Disabilities*, 35(1), 54-61.; Slocum et al. (2014); Smith, T. (2013). What is evidence-based behavior analysis? *The Behavior Analyst*, 36(1), 7–33.

<sup>41</sup> Lerman, D. C., & Vorndran, C. M. (2002). On the status of knowledge for using punishment: Implications for treating behavior disorders. *Journal of Applied Behavior Analysis*, 35(4), 431-464.

<sup>42</sup> Scheuermann, B., Peterson, R., Ryan, J. B., & Billingsley, G. (2016). Professional practice and ethical issues related to physical restraint and seclusion in schools. *Journal of Disability Policy Studies*, 27(2), 86-95.; Vollmer et al. (2011).

<sup>43</sup> Minshawi, N. F., Hurwitz, S., Fodstad, J. C., Biebl, S., Morriss, D. H., & McDougle, C. J. (2014). The association between self-injurious behaviors and autism spectrum disorders. *Psychology Research and Behavior Management*,

- Use of physical restraint may lead to injury or death <sup>44</sup>

**Extinction based procedures:** Extinction involves a process in which reinforcement of a problem behaviour is not provided in order to decrease or eliminate the negative (or problem) behaviours. For example, if a client is swearing at his caregivers to get attention (e.g. caregivers often say “Stop that”). Having the caregivers NOT provide any attention after he swears is an example of using extinction. Risk of harm associated with extinction based procedures includes:<sup>45</sup>

- Physical harm to provider or client due to “extinction bursts” where the problem behaviour may intensify, occur more often and for a longer period of time, and
- Increase in other types of problem behaviours. For example, the problem behaviour initially targeted for intervention may have been aggression. With extinction, the client may, in addition to aggression, start to hit themselves

**Reinforcement based procedures:** These procedures involve a process in which a pleasant consequence (e.g., item; edible; activity; social attention) is provided to the client immediately following a desirable behaviour, which increases the likelihood that the desirable behaviour will continue to occur. If the desirable behaviour continues to occur, then the item provided immediately after the behaviour is defined as a “reinforcer.” Reinforcement based procedures carry the following risks of harm:<sup>46</sup>

- Can produce negative emotional side effects, similar to extinction when an individual fails to meet the criterion for reinforcement (e.g., problem behaviour can occur)
- Incidental reinforcement of problem behaviour
- Reducing or delaying reinforcement procedures can evoke problem behaviour, and

7, 125-136.; Williams, D. E. (2010). Reducing and eliminating restraint of people with developmental disabilities and severe behavior disorders: An overview of recent research. *Research in Developmental Disabilities, 31*(6), 1142-1148.

<sup>44</sup> Scheuermann et al. (2016); Williams, D.E. (2010)

<sup>45</sup> Ward, S., Parker, A., & Perdikaris, A. (2017). Task as reinforcer: A reactive alternative to traditional forms of escape extinction. *Behavior Analysis in Practice, 10*(1), 22-34.; Burt, J. L., & Pennington, R. C. (2017). A teacher's guide to using extinction in school setting. *Hammill Institute on Disabilities, 53*(2), 107-113.; Lerman, D. C., Iwata, B. A., & Wallace, M. D. (1999). Side effects of extinction: Prevalence of bursting and aggression during the treatment of self-injurious behavior. *Journal of Applied Behavior Analysis, 32*(1), 1-8.; Lerman, D. C., & Iwata, B. A. (1995). Prevalence of the extinction burst and its attenuation during treatment. *Journal of Applied Behavior Analysis, 28*(1), 93-94.

<sup>46</sup> Fuhrman, A. M., Fisher, W. W., & Greer, B. D. (2016). A preliminary investigation on improving functional communication training by mitigating resurgence of destructive behavior. *Journal of Applied Behavior Analysis, 49*(4), 884-899.; Greer, B. D., Fisher, W. W., Saini, V., Owen, T. M., & Jones, J. K. (2016). Functional communication training during reinforcement schedule thinning: An analysis of 25 applications. *Journal of Applied Behavior Analysis, 49*(1), 105-121.; Hagopian, L. P., Kuhn, S. A. C., Long, E. S., & Rush, K. S. (2005). Schedule thinning following communication training: Using competing stimuli to enhance tolerance to decrements in reinforcer density. *Journal of Applied Behavior Analysis, 38*(2), 177-193.; Minshawi et al. (2014).; Perone, M. (2003). Negative effects of positive reinforcement. *The Behavior Analyst, 26*(1), 1-14.; Vollmer, T.R (2002); Vollmer, T. R., Ringdahl, J. E., Roane, H. S., & Marcus, B. A. (1997). Negative side effects of noncontingent reinforcement. *Journal of Applied Behavior Analysis, 30*(1), 161-164.

- Reinforcement can be severely abused or misused

ABA behaviour change procedures can be very intense and intrusive in nature. The impact of such procedures may be different based on whether they were applied in a clinical situation or in real-world contexts. For instance, if a client is taught certain skills, such as communication and social skills, these should be adaptable to other general situation(s) in which the client lives or works. Failure to apply these ABA procedures to situations that mirror a client's environment may ultimately result in the client failing to acquire desirable behaviours.

Behaviour change procedures, such as restraints (e.g., physical restraints, mechanical devices that restrain individuals), which are used to gain control over dangerous behaviours (e.g., self-injurious behaviour) may result in a number of harmful consequences to the client. This may include denial of rights to protection and dignity, injury or death, improper use of restraints due to minimal provider training, dependency on restraints, and initiation of other self-injurious behaviours.<sup>47</sup>

### ***Delivering an ABA Intervention Plan***

During this phase, the intervention plan is delivered through selected procedures directly to the client by the provider, parent, or other caregiver. General identified risks of harm associated with delivering an ABA intervention plan include:

- Lack of consistency in implementing the intervention plan, especially when one or more individuals are involved in delivery
- Lack of competencies and training to properly deliver the plan to the client, as laid out in the ABA intervention plan, and
- Lack of clinical oversight to ensure ABA procedures are implemented as designed and any problems that arise during implementation are resolved

### ***Monitoring and Evaluation***

Monitoring and evaluation of ABA intervention is an iterative process. However, it carries a risk of harm if not done properly and if the client is not responding positively, based on the data collected. Other factors that may lead to risk of harm include:

- Competence in evaluating client progress
- Misinterpretation of client data, and
- Competence, by the ABA provider and clinical supervisor, in monitoring the implementation of the intervention or in determining whether monitoring is necessary

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<sup>47</sup> Ontario Association for Behaviour Analysis. (2015). Response to restraint events and police involvement in community group homes (Rep.). Toronto, ON. Retrieved from <http://www.ontaba.org/pdf/ONTABA%20Media%20Response%20to%20Restraint%20and%20Seclusion%20Events%20July%2013%202015.pdf>



It is important to note that there are several settings where ABA may be used. If a client can be diagnosed as needing an ABA intervention at an early age (under six years), the likelihood of achieving behavioural improvement are significantly higher than if not treated until adolescence or adulthood.<sup>48</sup> It is very important that teaching assistants and residential staff have adequate specialized training and oversight. Reasons why an increased risk of harm may occur in an education institution include:

**Training of other front-line providers:** Teaching assistants and residential staff often have inadequate specialized training, inadequate oversight by qualified ABA clinical supervisors, and inadequate experience to deliver ABA interventions, which may initiate or escalate challenging behaviours and hinder a client's educational and social progress.<sup>49</sup>

**Maintenance of treatment integrity:** The consistency of interventions may differ depending on a teacher's classroom preferences, ultimately causing a negative impact on a client's acquisition of positive skills and behaviours.<sup>50</sup>

**Cultural relativism:** The notion that each situation is dependent on context is also a factor when considering the dissemination of ABA best practices. Specifically, the notion that ABA is an unscientific or non-evidence based practice in some situations could lead to a misunderstanding of how ABA is applied and even its effectiveness relative to other therapies in bringing about behavioural change.<sup>51</sup>

## 2.5 Regulating ABA and Oversight Mechanisms

HRPAC explored several oversight mechanisms through its literature, jurisdictional, and jurisprudence reviews. Stakeholder input on oversight mechanisms through various methods were also taken into consideration.

HRPAC research noted five potential approaches to oversight that originate from the United States, given that it is at the forefront of ABA regulation. These approaches were used to gain a better understanding of how ABA is currently governed. However, it was noted that some

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<sup>48</sup> Perry, A., Cummings, A., Geier, J. D., Freeman, N. L., Hughes, S., Managhan, T., & Williams, J. (2011). Predictors of outcome for children receiving intensive behavioral intervention in a large, community-based program. *Research in Autism Spectrum Disorders*, 5(1), 592-603.

<sup>49</sup> Cook, J. E., Subramaniam, S., Brunson, L. Y., Larson, N. A., Poe, S. G., & Peter, C. C. S. (2015). Global measures of treatment integrity may mask important errors in discrete-trial training. *Behavior Analysis in Practice*, 8(1), 37-47.; Rispoli, M., Neely, L., Lang, R., & Ganz, J. (2011). Training paraprofessionals to implement interventions for people with autism spectrum disorders: A systematic review. *Developmental Neurorehabilitation*, 14(6), 378-388.; Mason, R. A., Schnitz, A. G., Wills, H. P., Rosenbloom, R., Kamps, D. M., & Bast, D. (2017). Impact of a teacher-as-coach model: Improving paraprofessionals fidelity of implementation of discrete trial training for students with moderate-to-severe developmental disabilities. *Journal of Autism and Developmental Disorders*, 47(6), 1696-1707.

<sup>50</sup> Minshawi, N. F. (2008). Behavioral assessment and treatment of self-injurious behavior in autism. *Child and Adolescent Psychiatric Clinics of North America*, 17(4), 875-886.

<sup>51</sup> Keenan, M., Dillenburger, K., Röttgers, H. R., Dounavi, K., Jónsdóttir, S. L., Moderato, P., & Martin, N. (2015). Autism and ABA: the gulf between North America and Europe. *Review Journal of Autism and Developmental Disorders*, 2(2), 167-183.

approaches would not be applicable in Ontario. The most common oversight mechanisms used in the US include:

- Online registries similar to what has been developed by Autism Ontario<sup>52</sup> and the BACB, with the ultimate mandate to provide an official list of certified ABA professionals; membership organizations to help advance the interests of the ABA profession<sup>53</sup>
- Certification, education and organizational accreditation through educational and training programs, peer-reviewed processes, guidelines, and codes similar to what is practised by the BACB, and incident reporting systems and disciplinary actions to raise the stature of the profession,<sup>54</sup>
- A governance model which includes government bodies that encompass licensing departments<sup>55</sup> and professional non-profit associations<sup>56</sup> (i.e., the BACB)
- Title protection and scope of practices pertaining to ABA,<sup>57</sup> and
- Licensure which is mandated by state laws to establish a publically funded government agency or a self-funding regulatory entity

HPRAC heard directly from several stakeholders regarding the current lack of oversight mechanisms for ABA providers. There was also consensus within the written submissions that there can be an inherent risk of harm associated with ABA intervention and that oversight of ABA providers, to some extent, was necessary. Although the remaining stakeholders did not formally state whether the ABA providers should be regulated autonomously or as part of an existing college, they did say that some form of oversight is required, in addition to the establishment of a minimum standard for education and training. HPRAC noted the following oversight mechanisms

#### **Oversight mechanisms:**

1. Vetted voluntary provider list
2. Mandatory registry for government funded programs
3. Regulation under an existing health regulatory college, and
4. Regulation of title and exclusive scope of practice

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<sup>52</sup> SEG Management Consultants Inc. (2014).

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.; Association for Behavior Analysis International. (2017). Identifying applied behavior analysis interventions (Rep.). Retrieved from <https://www.bacb.com/wp-content/uploads/APBA-2017-White-Paper-Identifying-ABA-Interventions1.pdf>; AppliedBehaviorAnalysisEdu.org. (2018). ABA certification through the Behavior Analyst Certification Board (BACB). Retrieved from <https://www.appliedbehavioranalysisedu.org/bacb-certification-overview/>; Leaf, J. B., Leaf, R., McEachin, J., Taubman, M., Smith, T., Harris, S. L., & Volkmar, F. R. (2017). Concerns about the registered behavior technician™ in relation to effective autism intervention. *Behavior Analysis in Practice*, 10(2), 1-10.

<sup>55</sup> AppliedBehaviorAnalysisEdu.org. (2018). Applied behavior analyst licensing laws and practice requirements by state. Retrieved from <https://www.appliedbehavioranalysisedu.org/state-by-state-guide-to-aba-licensing/>

<sup>56</sup> Kazemi, E., & Shapiro, M. (2013). A Review of board standards across behavioral health professions: Where does the BCBA credential stand? *Behavior Analysis in Practice*, 6(2), 18-29

<sup>57</sup> SEG Management Consultants Inc. (2014).

## 2.6 ABA in Ontario

Several ministries fund ABA programs, to provide ABA interventions to clients. These include the Ministry of Children and Youth Services (MCYS), the Ministry of Education (EDU), the Ministry of Community and Social Services (MCSS), and the Ministry of Health and Long-Term Care (MOHLTC). Funding is based on population and setting. For instance, children up to 18 years of age with ASD receive funding from MCYS and EDU. However, after 18 years of age, MCSS funded programs may be the most appropriate. The different program requirements can be a challenge for parents and caregivers resulting in a service gap, especially when ABA interventions are discontinued abruptly. In addition, ABA interventions may be applied by providers working privately, funded by families and caregivers.

### Ministry of Child and Youth Services (MCYS)

MCYS funds agencies to deliver ABA interventions to children and youth diagnosed with Autism Spectrum Disorder through the Ontario Autism Program.<sup>58</sup> The OAP delivers a continuum of evidence-based behavioural services, including ABA for children and youth with ASD up to the age of 18 and their families, based on their needs and strengths across all developmental stages, as well as family services, supports, and training.<sup>59</sup>

Families, caregivers and clients have a choice on how they apply MCYS funding to ABA intervention in the OAP:

- **Direct Service Option (DSO):** Children receive services at one of Ontario's nine lead autism service providers.
- **Direct Funding Option (DFO):** Parents receive funding directly to arrange for services from a private service provider.

In the OAP, requirements for clinical supervisors include: Board Certified Behavior Analyst (BCBA), Board Certified Behavior Analyst –Doctoral (BCBA-D), and Clinical Psychologist or Psychological Associate registered with the College of Psychologists of Ontario with documented expertise in ABA.<sup>60</sup>

MCYS funds agencies to enable school boards and educators to support the learning needs of students with ASD through the School Support Program and the Connections for Students initiative. These school-based initiatives include a particular focus on building the school system's capacity to incorporate ABA-based teaching practices for students with ASD.<sup>61</sup>

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<sup>58</sup> Ministry of Children and Youth Services. (2018). Programs and services for children with autism. Retrieved from <http://www.children.gov.on.ca/htdocs/English/specialneeds/autism/programs.aspx>

<sup>59</sup> Ministry of Children and Youth Services. (2018). Programs and services for children with autism.

<sup>60</sup> Ministry of Children and Youth Services. (2018). Section 5.4: Clinical staffing requirements. Retrieved from <http://www.children.gov.on.ca/htdocs/English/professionals/specialneeds/autism/oap-guidelines/section5a.aspx>

<sup>61</sup> SEG Management Consultants Inc. (2014).

## Ministry of Community and Social Services (MCSS)

MCSS funds a number of services that provide ABA intervention to clients primarily with a diagnosis of developmental disability who are 18 years and over. The *Services and Supports to Promote the Social Inclusion of Persons with Developmental Disabilities Act, 2008* has a regulation that sets out the requirements for the provision of ABA services and includes the BCBA qualification for providers who can approve behaviour support plans that include intrusive behaviour intervention strategies. Specific requirements with respect to behaviour intervention are contained in O. Reg. 299/10.<sup>62</sup>

The Community Networks of Specialized Care (CNSC) are an Ontario network of specialized services and professionals that treat and support adults with developmental disabilities and mental health needs or challenging behaviours (i.e., dual diagnosis), in the communities where they live.<sup>63</sup> The Networks bring together people from a variety of sectors including developmental services, health, research, education and justice in a common goal of improving the coordination, access and quality of services for these individuals with complex needs.<sup>64</sup> The CNSC developed a set of Consensus Guidelines to help families, caregivers and agencies in the daily care, support and treatment of adults with both a developmental disability and challenging behaviours.<sup>65</sup> The guidelines include the use of ABA activities for the assessment and intervention of problem behaviour (e.g., functional assessment) and include the BCBA qualification for those providers conducting a functional assessment.

## Ministry of Education (EDU)

In May 2007, the Ministry of Education issued Policy/Program Memorandum No. 140 (PPM 140) “to provide direction to school boards to support their use of applied behaviour analysis (ABA) as an effective instructional approach in the education of many students with autism spectrum disorders (ASD)” and to establish “... a policy framework to support incorporation of ABA methods into school boards’ practices.” Implementation of PPM 140 began with the 2007-08 school year.<sup>66</sup>

School boards must offer students with ASD special education programs and services, including, where appropriate, special education programs using ABA methods. School board staff must plan for the transition between various activities and settings involving students with ASD.<sup>67</sup>

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<sup>62</sup> Ibid.

<sup>63</sup> Community Networks of Specialized Care. (n.d.). About us. Retrieved from <http://www.community-networks.ca/about-us/>

<sup>64</sup> SEG Management Consultants Inc. (2014).

<sup>65</sup> Community Networks of Specialized Care. (n.d.). Complex behaviours. Retrieved from <http://www.community-networks.ca/services/care-support-and-treatment/>

<sup>66</sup> Ministry of Education. (2007). *Incorporating methods of applied behaviour analysis (ABA) into programs for students with autism spectrum disorder (ASD)* (Rep.). Retrieved from <http://www.edu.gov.on.ca/extra/eng/ppm/140.pdf>

<sup>67</sup> Ibid.

## EDU and MCYS

EDU and MCYS are partnering on a one-year Pilot to Improve School-Based Supports for Students with Autism Spectrum Disorder (ASD). Investments include:<sup>68</sup>

- **Targeted Education Assistant (EA) Training:** This approach will explore a targeted 40-hour online training module for EAs designed by Board Certified Behavior Analysts (BCBA) and based on the Behavior Analyst Certification Board (BACB) Registered Behavior Technician (RBT) task list.
- **Dedicated Space for Autism Services:** This approach will explore the provision of dedicated space on school sites in a select number of schools for external ABA practitioners to provide direct service to students with ASD.
- **Participating Boards** have been provided with funding to hire an additional BCBA to support teachers and EAs to improve supports for students with ASD.

## Ministry of Health and Long-Term Care (MOHLTC)

MOHLTC funds programs, such as forensic mental health, that deliver behaviour therapy that includes ABA intervention. In 2012-14, MOHLTC funded 10 hospitals across Ontario, including the Centre for Addiction and Mental Health (CAMH), to hire behaviour therapists to support clients who have committed a crime and have mental health needs. The purpose of this funding was to address bed space, reduce the amount of time clients were in the hospital, increase clinical support, and improve the quality of care. Clients with developmental disabilities are included within the description of clients in these settings, and are recipients of behaviour therapy that includes ABA intervention.

## 2.7 HPRAC's Approach to Referrals

HPRAC undertook several activities that informed its deliberations and final recommendations to the Minister. The process involved evidence gathering from the following avenues: stakeholder consultations which involved in-person meetings, written submissions and an online survey which encompassed both closed and open-ended questions. Additional research was garnered from literature, jurisprudence, and jurisdictional reviews. HPRAC also recognizes the process undertaken by the MCYS commissioned SEG report<sup>69</sup> pertaining to its research and analysis on certification/ regulation of ABA providers in Ontario.

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<sup>68</sup> Ministry of Education. (2017). Supporting students with autism spectrum disorder in schools. Retrieved from <http://www.edu.gov.on.ca/eng/general/elemsec/speced/autismpilot.html>

<sup>69</sup> MCYS contracted SEG Management Consultants (SEG) to assess the viability of creating an Ontario-based certification process for ABA providers working with clients with ASD or others who benefit from ABA-based procedures. Advice was also sought on whether or not there should be a regulatory body established for Ontario ABA providers.

## **Evidence Gathering**

HPRAC relied on the existing and current research gathered from its literature, jurisdictional, and jurisprudence reviews, which will be expanded on in Volume 2, to address the following:

- Which activities or aspects of ABA intervention pose a risk of harm to clients?
- Which client groups receiving ABA activities are more at risk of harm than others?
- Are some settings where ABA is provided more high risk than others?
- Which oversight mechanisms should be applied to ABA providers?

### ***Literature Review***

HPRAC commissioned an initial literature review from the Research, Analysis and Evaluation Branch (RAEB) of the Ministry of Health and Long-Term Care. Specifically, two literature reviews were conducted; one which pertained to the risk of harm to client populations, and the other which addressed oversight mechanisms. The literature review conducted by RAEB regarding oversight mechanisms found that because of the growing body of knowledge about autism and client protection issues, there is a higher demand for oversight of the profession. However, due to factors such as financial necessities, it may take time to implement these mechanisms.

The literature review on the risk of harm of ABA activities found an association between risk of harm and ABA-based interventions, particularly those involving the use of restraints and those being implemented by inexperienced providers. HPRAC identified additional research gaps and supplemented findings of the RAEB for the following:

- Risk of harm associated with designing ABA intervention plans
- Risk of harm associated with ABA behaviour change procedures, especially punishment, extinction, and reinforcement based procedures
- Risk of harm associated with missed ABA intervention
- Populations receiving ABA intervention, and
- ABA provider training and competencies

### ***Jurisdictional Review***

The jurisdictional review examined how governments approached regulation of ABA providers in the following jurisdictions: Canada, United States, European countries, both English and non-English speaking countries, as well as Australia and New Zealand. These jurisdictions were reviewed for:

- Definition of ABA
- Regulatory mechanism applied to ABA providers, if any

- Funding of ABA services, if any
- Training, certification and titles used

### ***Jurisprudence Review***

HPRAC commissioned an independent law firm to conduct its jurisprudence review which explored three topics:

- Whether there were legal cases involving harm resulting from ABA therapy
- The impact of the provision, or lack thereof, of ABA intervention on the client and others, and
- Qualifications and oversight of ABA practitioners

Some cases that were retrieved related to more than one topic.

### **Consultation Process**

HPRAC carried out broad-based stakeholder consultations using several methods, including meetings with subject matter experts, an online survey, invitation to provide written submissions, and stakeholder meetings carried out in person, via teleconference or through site visits. In all, over 800 individuals participated in HPRAC's stakeholder consultation process, which was carried out over a three-month period, from November 2017 to early January 2018. Table 2 provides a summary of the consultation approaches undertaken.

#### ***Meetings with Subject Matter Experts***

HPRAC engaged subject matter experts<sup>70</sup> early on in the consultation process to get a better understanding of how ABA services are delivered in Ontario, the major systemic issues, and to get additional insight on the risk of harm, as well as oversight mechanisms to be considered. See Table 2 for list of Subject Matter Experts.

#### ***Stakeholder Meetings and Consultations***

HPRAC met with a number of stakeholders in person and via teleconference. Stakeholders were asked several questions dealing with key themes: ABA delivery, risk of harm and oversight mechanisms. See Table 2 for a list of stakeholders.

#### ***Online Survey***

HPRAC identified the need to reach individuals who may not be able to participate in the stakeholder process. An online survey with 18 closed and open-ended questions was developed based on the key themes of risk of harm, ABA service delivery and oversight mechanisms. The survey was open from November 27 to December 8, 2017, on SurveyMonkey via the HPRAC

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<sup>70</sup> Dr. Rosemary Condillac, Brock University, Dr. Jim Carr, Behavior Analyst Certification Board (BACB), and Dr. Adrienne Perry, York University

website, and was sent out to providers, family support groups, professional associations, health regulatory colleges, academic institutions, advocacy groups and individuals. Results of the online survey were also used as a part of the consultation process. By the close of the consultations, a total of 736 completed surveys were received from participants.

It is important to note that the information gathered during HPRAC’s consultation is intended to crystallize broad themes as well as highlight unanticipated “outlier” issues. The data were not expected to indicate support for, or opposition to, a particular topic. As a result, respondents self-select to participate in the consultation process and, in so doing, present their own particular views and concerns on the subject matter.

**Written Submissions**

As of January 8, 2018, there were 10 responses to HPRAC’s requests for written submissions. Of the 10 stakeholders that submitted their responses, three are from regulatory colleges, six are associations and one is an independent ABA expert. HPRAC’s analysis of stakeholder submissions revealed common themes identifying that there is a risk of harm associated with ABA as providers often deal with members of the population that are vulnerable. See Table 2 for a list of submissions HPRAC received for this referral.

**Table 2: Summary of Consultation Methods and Participating Stakeholders**

Method	Approach	Timeline	Stakeholders
Meetings	In-person or teleconference meetings	November 2017- January 2018	<ul style="list-style-type: none"> <li>• College of Psychologists of Ontario (CPO)</li> <li>• Ontario Association of Speech-Language Pathologists and Audiologists (OSLA)</li> <li>• Behavior Analyst Certification Board (BACB)</li> <li>• Lakeridge Community Support Services</li> <li>• Autism Ontario</li> <li>• Surrey Place Centre</li> <li>• South Asian Autism Awareness Centre</li> <li>• Child and Community Resource Centre</li> <li>• Christian Horizons</li> <li>• Mackenzie Health (Centre for Behaviour Health Science (CBHS))</li> <li>• Centre for Addiction and Mental Health</li> <li>• Public, patients and clients that engage in/receive ABA interventions</li> <li>• Subject Matter Experts               <ul style="list-style-type: none"> <li>• Dr. Adrienne Perry</li> <li>• Dr. Rosemary Condillac</li> <li>• Dr. James Carr</li> </ul> </li> <li>• Ontario Association for Behaviour Analysis (ONTABA)</li> <li>• ASD Clinical Expert Committee</li> </ul>



Method	Approach	Timeline	Stakeholders
			<ul style="list-style-type: none"> <li>• Ministry of Education (EDU)</li> <li>• Ministry of Community and Social Services (MCSS)</li> <li>• Ministry of Children and Youth Services (MCYS)</li> <li>• Ministry of Health and Long-Term Care (MOHLTC)</li> </ul>
<b>Written submissions</b>	Open-ended questions sent to selected stakeholders	November 20 – December 19, 2017	<ul style="list-style-type: none"> <li>• College of Occupational Therapists of Ontario (COTO)</li> <li>• College of Psychologists of Ontario (CPO)</li> <li>• Ontario College of Social Workers and Social Service Workers (OCSWSSW)</li> <li>• The Ontario Association of Speech-Language Pathologists and Audiologists (OSLA)</li> <li>• Regional Autism Providers of Ontario (RAPON)</li> <li>• Registered Nurses Association of Ontario (RNAO)</li> <li>• Ontario Association for Behaviour Analysis (ONTABA)</li> <li>• Ontario Society of Occupational Therapists (OSOT)</li> <li>• Ontario Association for Developmental Disabilities (OADD)</li> <li>• Dr. Adrienne Perry, Department of Psychology, York University</li> </ul>
<b>Online survey on HPRAC website</b>	Survey of closed and open-ended questions	November 20 – December 15, 2017	<ul style="list-style-type: none"> <li>• Accessible by the public via SurveyMonkey</li> </ul>

## Chapter 3: What We Heard

For all referrals, HPRAC engages in broad-based consultations that seek stakeholder input to help in its analysis when making recommendations to the Minister. HPRAC took into consideration the relevant public concerns and questions, as well as examined all perspectives on ABA providers and interventionist practices. HPRAC used a multi-pronged approach to elicit input from key stakeholders and the public. As a result, over 800 individuals were reached using the following consultation methods: stakeholder meetings (in-person, teleconference, and site visits), written submissions and online survey.

HPRAC understands that responses to surveys are self-selecting and results usually confirm broad issues which are already identified. However, surveys are useful in revealing important issues that may not have been identified in other forms on stakeholder consultations.

### 3.1 Stakeholder Consultations

HPRAC met with a number of stakeholders over a three-month period in person and via teleconference. Stakeholders were asked several questions dealing with key themes: ABA delivery, risk of harm and oversight mechanisms. The following key principles were applied to the consultation process:

- Inclusion of interested stakeholders and members of the public at a level of involvement that reflects their needs and interests.
- Flexibility in responding to unanticipated issues and stakeholder input throughout the referral period.
- An expectation that the consultation process will crystallize broad themes as well as highlight unanticipated issues. The data *should not* be interpreted as empirical evidence of, or opposition to, a particular position. Respondents self-select to participate in the consultation process and may not be representative of a larger group.
- A commitment to incorporating issues, concerns, comments and perspectives into the recommendation-making process.
- Ensuring that all consultation material is available in both official languages and in accessible formats, where applicable and upon request.

#### Access to ABA Intervention: Cultural Barriers

During HPRAC's stakeholder consultations, a common theme that emerged was the potential risk of harm that may occur due to language and cultural barriers. The South Asian Autism Awareness Centre (SAAAC) emphasized that teaching immigrants in the community about ABA becomes a challenge. SAAAC noted that this can occur as parents or caregivers do not always understand the terminology associated with ABA. In doing so, parents or caregivers may not appreciate the severity or importance of the treatment. According to SAAAC, many immigrants have difficulty paying for additional ABA hours beyond the minimum available through public

funding, especially if these are provided by a BACB certified provider. This was cited as one of SAAAC's biggest obstacles in providing appropriate ABA intervention to families, ultimately increasing the risk of harm as intervention to the child cannot occur in a timely manner.

## **Access to ABA Intervention: Indigenous and Rural Communities in Northern Ontario**

Due to their geographical location, certain rural communities in Northern Ontario face unique hardships in receiving ABA intervention. In addition to catchment areas that are hard to reach geographically, the team at Surrey Place Centre, tasked with providing ABA services to individuals in need, also face different obstacles, including:

- Linguistic and cultural barriers
- Lack of qualified individuals to work with Indigenous peoples
- Some geographic areas are fly-in only, making them harder to access
- Harsh weather conditions
- Sporadic Internet connection, and
- Lack of mediators

These factors all contribute to a risk of harm that is associated with those living in rural and remote communities, making it more difficult for clients to access timely ABA intervention. Due to the reasons listed above, many ABA services are provided to individuals via teleconference using the Ontario Telemedicine Network (OTN).

Through this medium, Behaviour Analysts at the Surrey Place Centre perform interviews with the client and the provider in the rural community. Providers at Surrey Place Centre noted that, because of the nature of videoconferencing, the retrieval of client information is more difficult. Services are provided less often, due to travel constraints and the distance from the client's home to the nursing station (where services are provided), the wait to reschedule appointments is longer, and the need to have an intermediary and a coordinator present at the sessions. All these factors contribute to increased risk of harm from not being able to access ABA intervention in a timely manner.

While HPRAC recognizes that remote Indigenous communities do not receive the same breadth of services as clients in urban centres, it can only comment on what it heard from an Ontario funded group providing ABA intervention to these communities. HPRAC did not have enough time to look into which level of government is responsible for funding ABA intervention in these communities.

Of note, many members of Indigenous communities are accustomed to dealing with family matters on their own. This has the potential for families to deal with family members with behavioural issues on their own – potentially missing the critical window of remedial opportunity when the family member (who has a condition that may require or benefit from ABA intervention) is young. When this untreated young person grows into adolescence and adulthood, he or she may lack the skills required for independent living which, HPRAC heard, may result in frustration and risk of self-harm and harm to others.

## Lack of Knowledge of Ontario Jurisprudence

A subject matter expert reiterated that certification and oversight are necessary due to the nature of the profession. The subject matter expert argues that this issue is exacerbated because of the lack of understanding (by unregulated ABA providers) of Ontario jurisprudence. This includes providers understanding guidelines of consent to treatment based on several factors, including capacity to consent. Private ABA providers may not be familiar with the Ontario legislation (and may not be complying with it) due to lack of knowledge and training.

The subject matter expert also stressed the importance of consent (to an ABA intervention) and that consent is contingent on several factors including the setting where ABA is provided (e.g., classrooms) which is another factor ABA providers must be aware of in order to mitigate the risk of harm. Clients receiving ABA intervention, regardless of age, diagnosis, or function level, are at risk of having their privacy and consent rights violated by a provider who is unfamiliar with or not following Ontario jurisprudence.

Specifically, ABA supervisors and providers should be educated to understand the legal tests for whether an individual has the capacity to consent to treatment; this affects whether consent will be sought from the client or from the client's substitute decision-maker (often a parent). The risk of harm is especially evident when the provider is fully aware of:

- Specific Ontario-based legislation regarding consent to treatment and consent to the collection, use and disclosure of personal health information
- When to obtain informed consent. For instance, obtaining informed consent is required by law before implementing procedures within an intervention plan. Consent to the collection of personal information/ personal health information is required by law prior to videotaping the client for assessment purposes (e.g., using technology to videotape a client engaging in problem behavior during the behaviour assessment phase)
- The steps to follow to ensure that a client or caregiver understands the associated risks of an intervention plan

## 3.2 Written Submissions

As of January 8, 2018, HPRAC received 10 responses to the request for written submissions. Of the 10 stakeholders that submitted their responses, three were regulatory colleges,<sup>71</sup> six are associations and one is an independent expert in the field of ABA. The most often mentioned theme was the risk of harm associated with ABA interventions due to client vulnerability (e.g., physical disability or low cognition).

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<sup>71</sup> The College of Occupational Therapists of Ontario (COTO), the College of Psychologists of Ontario (CPO) and the Ontario College of Social Workers and Social Service Workers (OCSWSSW).

More specifically, a client or caregiver may not understand the risks associated with procedures used in their ABA intervention plan, if they have not been given an opportunity to give an informed consent to ABA intervention. Clients receiving health care treatment in Ontario are required to receive rights information as part of the informed consent process. This information is given by the health practitioner who proposed a given treatment.

Clients or caregivers who have not been advised of the risks and benefits of a proposed treatment may not be empowered to stop an ABA provider from using an intrusive procedure that the client or caregiver finds unacceptable. In such a case, the client who cannot consent on his or her own, is vulnerable and dependent on both the substitute decision maker and ABA provider to ensure that the intervention plan is both effective and ethical. Similarly, clients who do have capacity to consent but who have not been advised of their rights, or given an opportunity to provide an informed consent to treatment, may lack the tools necessary to protect themselves from harmful or ineffective interventions.

Common themes from the written submissions include:

- The need for minimum standards for knowledge, skills and judgment required to practise ABA
- There is a risk of harm associated with ABA, and
- Oversight is required for ABA providers

In addition, CPO emphasized the need for regulation and noted that it was prepared to undertake the regulatory process within its governance structure. CPO understands that ABA is not primarily a “talk-based therapy”; however, it recognizes ABA as one of several interventions (such as psychotherapy), and therefore, CPO would be a logical choice for regulator of ABA providers. Such oversight would fit within the college’s public protection mandate, and would provide a feasible solution to oversight as emphasized by the respective stakeholders. This approach was reinforced by Dr. Adrienne Perry, an expert in the field of ABA. In contrast to being regulated through an existing college, ONTABA advocates for autonomous self-regulation of ABA providers, as regulation under the CPO, in their view, would not ensure an adequate/appropriate level of protection to the public.

The common concerns which arose from the written submissions include:

**Regulatory colleges:** All three regulatory colleges reiterated that there was a risk of harm when ABA is delivered, and oversight of ABA providers was necessary. Specific input included:

- OCSWSSW believes professional self-regulation is an acceptable method of oversight
- CPO is prepared to take on the regulatory process within its governance structure, and
- CPO believes a transition period would be necessary

**Associations:**<sup>72</sup> All six advocacy and professional associations believed that there was a risk of harm within ABA and that oversight was necessary. Specific concerns include:

- The need for improved collaboration among program providers/organizations (OSLA)
- The need for a transition period (RAPON)
- Different titles that are used by ABA providers in Ontario. As indicated in Table 2 (Examples of ABA Provider Titles), there are a variety of titles used in Ontario for both providers who supervise or deliver ABA intervention (ONTABA)
- Delivery of ABA intervention is best carried out as a part of an inter-disciplinary team (OSOT), and
- The need for an oversight mechanism that would be similar to a regulated college (OADD) (i.e., CPO, College of Physicians and Surgeons of Ontario (CPSO))

**Subject matter experts:** While there was agreement on several issues, including the risk of harm inherent in ABA intervention, Dr. Perry indicated that oversight was necessary and recommended to minimize risk and for public protection. More specifically, this oversight should include voluntary certification, a registry, title protection, act and regulation/licensure within RHPA.

The submissions from CPO and ONTABA are summarized below.

## CPO

The CPO expressed that regulation and oversight were important in addressing public safety and quality assurance. The CPO is an integral stakeholder in this process. When asked about the risk of harm to clients, CPO noted that harm can result from the improper application or misapplication of applied behaviour analysis treatment and from the omission of such treatment when it is warranted. It is important to outline that the college is aware that ABA is generally provided to vulnerable individuals, further highlighting the potential for harm. CPO submitted that it would be prepared to regulate ABA providers within its existing frameworks but also identified areas requiring further develop.

The college noted that there were areas that required further review, including: requirements for registration, need for title protection, the BACB certification process, consideration as to whether all providers within the ABA process require regulation, and the development of appropriate standards of practice.

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<sup>72</sup> Ontario Association of Speech-Language Pathologists and Audiologists (OSLA), Regional Autism Providers of Ontario (RAPON), Registered Nurses Association of Ontario (RNAO), Ontario Association for Behaviour Analysis (ONTABA), Ontario Society of Occupational Therapists (OSOT), and Ontario Association for Developmental Disabilities (OADD).

The college outlined the requirement for a planned transition period. This would mitigate the potential impact of regulation on the clients, service providers and employees across many sectors and help ensure continuity of service to clients.

## **ONTABA**

ONTABA cited several factors that could negatively impact clients, including:

- Providers who lack knowledge, judgement, skills, and competencies in behavioural analytical principles
- Failure to deliver the appropriate procedure
- Lack of accountability mechanisms to apply Ontario-specific legislation related to the delivery of health care services and ABA intervention, and
- Even with acceptable training, competent ABA providers may still continue to pose a risk of harm to clients when delivering ABA intervention

ONTABA believed that only those with the appropriate training, experience and competencies should be permitted to provide ABA. This training should be similar to (or the same as) what is outlined by the BACB. To help identify the various titles used by ABA providers in Ontario, ONTABA provided the following list:

- Rehabilitation counsellor
- ABA facilitator
- Community consultant
- Transition coordinator
- ASD consultant
- Educational assistant
- Behaviour consultant
- Behaviour interventionist
- Behaviour support specialist
- Behaviour therapist
- Rehabilitation service worker
- Early interventionist
- Behaviour analyst
- Behavioural technician
- Adolescent care worker, and
- Developmental worker

ONTABA supported autonomous self-regulation of ABA providers as a mechanism of public protection. ONTABA believed that alternative regulation as part of existing colleges or lesser degrees of regulation (e.g., program policy, registry) would not ensure the appropriate level of public protection needed. ONTABA asserted that regulation should be applied universally across sectors to ensure that protection is in place for all recipients of ABA services.

### **3.3. Survey Results**

#### **Methodology**

The majority of responses received for the stakeholder consultations were completed via the online survey. HPRAC's website was the main communication vehicle for this portion of stakeholder consultation. The survey was open from November 27 to December 8, 2017. It was sent out to providers, family associations, professional associations, health regulated hospitals, academic institutions, advocacy groups and other service recipients. By the close of the survey, which included 18 closed and open-ended questions, 736 respondents had completed it.

It is important to note that the information gathered is intended to crystallize broad themes as well as highlight unanticipated "outlier" issues. The data was not expected to indicate support for, or opposition to, a particular topic. By definition, respondents self-select to participate in the consultation process and, in so doing, present their own particular views and concerns on the subject matter. HPRAC reviewed the responses to identify recurrent themes as well as unanticipated issues.

#### **General Findings**

The survey results reinforced findings from HPRAC's meetings with stakeholders and written submissions. The summary below provides details on the survey results in the areas of ABA delivery (client populations and settings), risk of harm, and potential oversight mechanisms. Some questions allowed respondents to select more than one response. Results presented may add up to more than 100% since more than one selection was made.

Both ABA supervisors and front-line providers were found to hold BACB certification while other professionals made up almost half of responders (40%). The survey results revealed that ABA is provided to a variety of client populations, most commonly to individuals diagnosed with ASD and developmental disabilities. In terms of age, individuals 18 years of age and younger were found to receive ABA intervention the most, and across multiple settings, including: home (76%) and school environments (62%). The survey also revealed that a high proportion of providers, both certified and uncertified, engage in ABA activities that include conducting assignments and designing intervention plans with caregivers. Furthermore, the survey revealed that approximately half of the individuals receiving ABA intervention, such as training on ABA procedures, include family members and group home staff that may supplement provision of ABA intervention delivered by ABA providers. The survey also found that respondents supported the implementation of standard qualifications for both providers who deliver (92%) and supervise (91%) ABA intervention as a means to reduce the risk of harm associated with the provision of ABA intervention. The survey also revealed that 80% of respondents supported the creation of a quality assurance approach as a means to lead to safe and effective ABA (80%).

Findings of the survey also outlined potential risks of harm associated with ABA (74%), however, its responses varied by client population with almost half of respondents saying "yes" (i.e. there is a risk of harm) (44%) and others saying "no" (31%). Respondents indicated that



they were in favour of an oversight option, endorsing regulation and legislation with title protection and a defined scope of practice for ABA providers (82%) followed by the registry (59%). A high percentage of respondents also indicated that both providers who supervise and deliver ABA should fall under this oversight (71%).

## **Client Populations**

When ABA providers were asked the age of clients they clinically supervised or to whom they delivered ABA intervention, 81% answered that their clients were between the ages of 7-18 years old, followed by 76% stating that their client base was 6 years of age or under. Thirty one percent and 26 % of ABA providers supervised and/or delivered ABA intervention to clients who were 26-50 years and 51+ years old, respectively.

ABA providers and family members of clients that received ABA interventions were asked to indicate in which settings the services were provided. Most, 76%, stated that the main setting in which ABA was provided was a family home, followed by 62% in schools, 51% in a clinic, 50% in a community setting (e.g., park, library), and 30% indicating a group home.

## **Qualifications of ABA Clinical Supervisors**

Respondents overwhelmingly agreed that standardized qualifications for providers who clinically “supervise” ABA intervention would ultimately increase the safety and effectiveness of the ABA provided, with a total of 91% answering “yes” (with 2% answering “no” and 7% selecting “undecided”). Due to the amount of options that were presented, those that received responses above 50% were analyzed. The options for standardizing qualifications with the most positive feedback from stakeholders were, in order of preference:

1. Demonstrated competency in delivering ABA intervention (71%)
2. Experience with client population (70%)
3. Possession of a Master’s degree (69%)
4. Education in Applied Behaviour Analysis (67%)
5. A demonstrated competency in supervising the delivery of ABA intervention (66%)
6. A certification with the BACB (61%) and training on how to supervise providers delivering ABA intervention (61%)
7. Receiving “in-field” training in delivering ABA intervention (57%) and, 8.having 5+ years of experience in delivering ABA intervention (53%).

## **Qualifications of ABA Providers**

Respondents were asked if they believed that standard qualifications for providers “delivering” ABA intervention would increase the safety and effectiveness of intervention. An overwhelming majority (92%) agreed with the implementation of standardized qualifications for front-line ABA providers. For respondents that selected option “yes,” they were then asked what they believe are the best qualifications for delivery. The respondents identified the following standard qualifications for ABA providers:

1. Demonstrated competency in delivering ABA intervention (73%)
2. Education in ABA (73%)
3. Receiving “in the field” training in delivering ABA intervention (69%)
4. Experience with the client population (61%)
5. An undergraduate degree in ABA (54%), and
6. Other (12%)”

## **Quality Assurance Approach**

A total of 723 respondents were asked if there should be a quality assurance approach to ensure that quality and effective ABA intervention is provided to clients and their caregivers. A majority of individuals responded “yes” (80%), 2% responded “no” and 17% were undecided. For those that selected option “yes,” respondents were asked how they envisioned effective methodologies for quality assurance. Among the 53% of respondents that answered the question, they recommended: review mechanisms, continuing education, regulatory body, peer review, and College of Psychologists.

## **Activities and Aspects that Pose Risk of Harm**

A total of 719 respondents were asked if there were activities or aspects of ABA interventions that posed a risk of harm to clients. Seventy four per cent (74% ) of respondents said “yes,” 8% said “no,” and 18% were undecided. For those that chose “yes,” they were asked to describe the activities or aspects of ABA intervention that posed the risk and the nature of those risk(s). The 67% who responded to this portion of the survey indicated the following risks:

- Lack of collaboration
- Risk of harm due to not collecting a precise measurement of behaviour
- Any ABA activity can cause harm
- Specific ABA procedures posing a risk of harm were identified as reinforcement, prompting, extinction, functional analysis, punishment, restraints, aversive techniques, procedures for feeding disorders and challenging behaviours; not collecting data and not using data during intervention and monitoring
- Practising beyond a provider’s level of competence (i.e., medical, communication disorders)
- Incompetent providers or providers that lack training and education in ABA
- Omission/commission issues (i.e., not determining “function” for behaviour for plan) and reinforcing a problem behaviour by not knowing
- Clients with aggression, self-injurious behaviours
- Choosing the wrong goals for intervention or not basing the intervention on the appropriate child developmental sequence
- Using inappropriate procedures when teaching skills and when reducing problem behaviours
- Implementation of procedures without treatment integrity and supervision by a

qualified professional

- Risk of harm by providers not respecting clients' rights about consent, privacy, confidentiality
- Decision making about treatment during the e intervention plan design phase
- Lack of planning for generalization of learned skills to new environments, and
- Failing to provide effective treatment to children with autism during the "critical window of development" could lead to long term negative impact on that child's development, including delayed progress and lack of generalization of learned skills to other environments.

For those who selected "yes" in the aforementioned question, respondents were then asked whether they believed the risk of harm varied by client population. Forty four per cent (44%) said "yes," 31% stated "no" and 24% were undecided. Of the 44% who selected "yes" as their response, 39%, went on to state how these risks actually vary by client populations. Common responses included:

- Intensity/frequency of client's challenging behaviour
- Size of client (tall/strong)
- Clients that are unable to communicate to express consent
- Clients who are unable to communicate to express displeasure with treatment, or who are unable to advocate for themselves.
- Cognitive deficit of client which may hamper the client's ability to understand different treatment choices.
- Age of the client:
  - an older and stronger client poses a greater risk of harm to caregivers than a young child
  - Children are more at risk of harm from lack of effective treatment which can have long-term implications on their quality of life
- Mental health needs of the client

## **Formal Complaints Processes for ABA Clients**

Respondents were asked if there should be a formal process for ABA clients and service recipients to lay complaints against ABA providers for poor quality of service, incompetence or unprofessional conduct. A substantial majority of the 723 respondents (91%) said "yes," with 2% stating "no" and 8% undecided. For those that chose yes, they were then asked how they envisioned this process. The 66% that answered this sub-question ultimately stated that ABA providers should be a regulated profession, with BACB certification, with review of providers accomplished either by the ministry or through the College of Psychologists of Ontario.

## Oversight Options

Respondents were asked what oversight options would ensure that safe and effective ABA intervention is provided. Eighty two per cent (82%) believed that regulation and legislation with title protection and a defined scope of practice would provide the most sufficient protection from risk of harm. Fifty nine per cent (59%) advocated for a registry of ABA providers, 56% argued for voluntary membership with an Ontario association of ABA providers and 48% outlined their preference for an Ontario-specific ABA certification. Respondents were then asked which ABA providers would be included in the oversight mechanism they chose in the previous question. The majority (71%) of respondents indicated that both providers and supervisors should be subject to an oversight mechanism. Fifty five per cent (55%) stated that providers should have certification from the BACB, while 47% advocated for BACB certification and regulatory oversight for providers. Forty one per cent (41%) argued that supervisors should be included in an oversight mechanism, and 31% indicated that providers should also be included in an oversight mechanism.

## Chapter 4: What We Learned

HPRAC's evidence consisting of literature, jurisdiction and jurisprudence reviews, and stakeholder consultations, affirms that ABA intervention poses a significant and inherent risk of harm across some client populations. HPRAC defines risk of harm as referring to actions where a substantial risk of physical or psychological harm to the public may result from ABA intervention.

On October 17, 2017 the Minister of Health and Long-Term Care requested that HPRAC provide advice on:

- What activities or aspects associated with ABA therapy pose a significant and inherent risk of harm (if any), and whether the risk of harm of this therapy varies by client population (e.g., children and adult); and
- If there is a risk of harm, what is the range of options for an approach to oversight that could be considered?

HPRAC recommends that ABA providers who are clinical supervisors be regulated under an existing health regulatory college governed by the *Regulated Health Professions Act, 1991* (RHPA). It is HPRAC's opinion that this type of regulatory oversight will provide the highest degree of public protection and safety.

Below are some definitions of terms used in the following section:

- **Behaviour:** refers to a person's actions that can be seen and heard. Unless specified (e.g. acceptable or unacceptable), it is a neutral term
- **ABA intervention:** refers to the ABA activities that include procedures used to address a client's concerns and needs, such as reducing unacceptable behaviour and increasing acceptable behavior
- **ABA procedure:** refers to procedures used in intervention plans to directly influence behavior
- **Clinical supervisor:** refers to an ABA provider who oversees one or more providers involved in the delivery of the following ABA activities: assessment, development of intervention plans, implementation of intervention plans, monitoring and evaluation of plans, and approving plans for clients.
- **ABA provider:** refers to both clinical supervisors and front-line providers who are identified to provide ABA intervention to a client
- **Caregiver:** refers to family members and other community members who are involved in the client's care on a day-to-day basis

## Limitations

HPRAC identified limitations to its evidence gathering. A limitation included the availability of recent peer reviewed articles that demonstrate risk of harm of ABA activities. However, as reported by ABA researchers, a publication bias exists in ABA literature, where studies with favorable results are more likely to be reported than are studies with null findings.<sup>73</sup> In addition, as noted by Vollmer (2002), ABA researchers may be less inclined to research and publish intrusive procedures, such as punishment, than positive based procedures, such as reinforcement.

Similarly, ABA subject matter experts interviewed during this referral indicated that for several behaviour change procedures (i.e., extinction, punishment, reinforcement), research demonstrating the risks of harm primarily occurred in the 2000's and earlier, and since then ABA researchers may be less inclined to replicate and publish similar results. Rather, contemporary researchers are focusing on investigating methods to mitigate risks identified in these original articles. In addition, the ABA experts indicated that the best source of evidence of risk of harm of ABA intervention would come from incident reports from settings where ABA intervention is provided, such as group homes. This suggests that current research is not focusing explicitly on the risks of harm associated with ABA intervention.

HPRAC acknowledges that it had an aggressive timeline in which to complete the referral, and therefore may have not included all sources in its research. However, the evidence it gathered and stakeholder input it received, demonstrate a risk of harm based on variable client characteristics including but not limited to the degree of client vulnerability.

### 4.1 Risk of Harm of Activities of ABA Intervention

The 2006 *New Directions* report notes that the RHPA (1991) harm clause (Section 30): *prohibits individuals, other than regulated health providers acting within their scope of practice, from treating or advising someone about their health in circumstances where it is reasonably foreseeable that serious physical harm may result.* Originally, the purpose of the harm clause within the RHPA was to prohibit either lay persons or providers acting outside their scope of practice from performing potentially harmful activities related to a person's physical (and psychological) health.<sup>74</sup>

ABA risk of harm is evident based on client population and key ABA procedures (conducting an assessment, planning and delivering an ABA intervention plan, and monitoring and evaluation). Additionally, provider competency of clinical supervisors and "missed" ABA intervention pose a risk of harm. HPRAC recognizes that its evidence points to the risks of harm of major ABA activities and may not have included an extensive or exhaustive list of all ABA activities. In depth descriptions of these major ABA risks of harm are provided below.

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<sup>73</sup> Sham, E., & Smith, T. (2014). Publication bias in studies of an applied behavior-analytic intervention: An initial analysis. *Journal of Applied Behavior Analysis*, 47(3), 663-678.

<sup>74</sup> Health Professions Regulatory Advisory Council. (2006). Regulation of health professions in Ontario: New directions (Rep.). Retrieved from [http://www.hprac.org/en/reports/resources/New\\_Directions\\_April\\_2006\\_EN.pdf](http://www.hprac.org/en/reports/resources/New_Directions_April_2006_EN.pdf)

## Results from Evidence Gathering

The literature review is a summary of information and evidence related to activities and aspects of ABA intervention that may pose a risk of harm to clients. HPRAC contracted the Ministry's Research, Analysis and Evaluation Branch (RAEB) to research the risk of harm associated with activities and aspects of ABA procedures. The RAEB also examined the existing oversight options of ABA providers. After reviewing the RAEB findings, HPRAC identified research gaps, which it examined further in order to address them. Articles included in the review were obtained from peer reviewed journals starting from the 1980s to 2017. Because of the narrow timeline to complete this referral and a literature review, the results included below may not reflect all the available articles relevant to the topic of risk of harm of ABA intervention.

## Summary of Findings

In the course of its evidence gathering, HPRAC identified the following themes:

### *Risk of Harm Inherent in ABA Intervention*

- An inherent and substantial risk of harm to clients can occur at any of the phases of ABA intervention. These phases or activities include (but are not limited to): behaviour assessment, designing ABA intervention plans, implementing ABA intervention plans, and monitoring and evaluating plans.
- ABA behaviour change procedures fall along a continuum of least to most intrusive. These intrusive procedures may require the provider or caregiver to use physical assistance or physical intervention with a client in response to teaching a skill or to intervene when the client is engaging in problem behaviour. The risk of harm in this scenario is associated with the amount of force used by the provider or caregiver, which may lead to physically injuring the client.
- Several procedures used by ABA providers during the assessment or intervention plan phases have both an inherent and substantial risk of harm and side effects that can include physical injury to a client. The assessment procedure that poses a risk of harm is referred to as a functional analysis, and the behaviour change procedures in intervention plans that pose a risk include punishment based, extinction based and reinforcement based procedures. These risks may be mitigated when appropriate safeguards, planning, precautions and oversight are provided.

### *Client Population*

- **Setting:** Risk of harm to client populations exists due to the absence of clear direction for ABA providers to obtain consent, follow relevant consent to treatment legislation in Ontario, understand what constitutes informed consent, and be aware of the legal requirements for consent across different settings in which they practise.
- **Vulnerability:** Clients of ABA intervention have diverse levels of functioning.

Depending on a client's level of functioning, he or she may lack the competency to provide informed consent at the moment it is required for the implementation of an intervention plan. Under the Health Care Consent Act, all capable individuals, including children (or, if incapable, their substitute decision-makers) have the legal right to be informed of all the implications of a health-care related treatment plan including any associated benefits and risks of, and alternatives various ABA behaviour change procedures.

- **Severity of condition:** Based on the available research, and on input from stakeholders and subject matter experts, a conclusion that can be drawn is that the risk of harm associated with ABA intervention is likely based not on one factor (e.g., age or diagnosis of client), but rather on a combination of client-related factors including problem behaviours, the client's strengths and needs, and the environmental supports available to the client.

### ***Risk of Harm Due to Provider Competencies***

The literature review further revealed:

Risk of harm to a client can result from the lack of competency of providers who deliver and those who clinically supervise ABA intervention. A consistent theme observed in the literature review was the importance placed on the role of a clinical supervisor in the ethical and effective delivery of ABA intervention. Clinical supervision characteristics, such as (i) qualifications, (ii) competency, (iii) nature of supervision (i.e., intensity) and, (iv) responsibility of training providers to deliver ABA intervention plans, were reported by several authors as essential in the mitigation of risks associated with ABA activities.

### **Risk of Harm of ABA Intervention**

HPRAC's literature review below expands on the risk of harm inherent in the activities across the phases of ABA intervention:

Conducting a behaviour assessment: A target behaviour is selected and measured; assessment methods are based on the goal of intervention (reduce problem behaviour or increase a desirable behaviour)

Designing an intervention plan: An intervention plan is developed using a combination of behaviour change procedures

Implementing an intervention plan: An intervention plan is implemented directly to a client by an ABA provider or a caregiver

Monitoring and evaluating the intervention plan: Client data is collected and monitored before and throughout the intervention



## Conducting Behaviour Assessments

Prior to developing an ABA intervention plan, a behaviour assessment is conducted by the ABA provider in collaboration with the client and caregiver to identify goals for intervention, measure the target behaviour, and identify contextual variables that influence the behaviour. Although there are behaviour assessments for improving skill deficits, the focus below is on behaviour assessment when the target of intervention is reducing problem behaviour. Please note, that the exclusion of behaviour assessments for skill development in this section does not reflect a lack of risk of harm for these assessments. For example, an accurate assessment is a critical prerequisite to a meaningful intervention.<sup>75</sup>

The focus on problem behaviour assessment in the following section is as a result of the aggressive timelines in which HPRAC had to complete this referral. Notwithstanding time constraints, the prevalence of available research and input from stakeholders indicated a greater risk associated with behaviour assessments to reduce problem behavior than assessments for skill acquisition.

### **Assessment for Problem Behaviour**

The assessment of problem behaviour involves identifying the function or cause of the problem behavior. This type of assessment is referred to as a **functional behaviour assessment**. A functional behavior assessment includes several methods such as indirect (e.g. interview), direct (e.g. observing the behavior), experimental (e.g. functional analysis).<sup>76</sup> Researchers have demonstrated that intervention plans based on function (observable behaviour), produce positive outcomes to reducing client problem behaviours.<sup>77</sup>

In addition, there is a potential risk of harm in the decision making on what type of assessment method is chosen to determine the function of the problem behaviour. Choosing inappropriate assessment procedures negatively impacts the outcome of intervention.<sup>78</sup> More specifically, it was noted by ABA researchers that some methods (e.g. functional analysis) may yield a more accurate and reliable conclusion to the cause of the problem behaviours than other methods (e.g. questionnaire).

An experimental analysis procedure referred to as a Functional Analysis involves the systematic manipulation of different environmental variables to assess the effect on a client's problem behaviour (e.g., aggression, self-injurious behaviour).<sup>79</sup> In this procedure, providers trigger the problem behaviour to assess the function of that problem behaviour. This procedure is

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<sup>75</sup> Persicke, A., Bishop, M. R., Coffman, C. M., Najdowski, A. C., Tarbox, J., Chi, K., & Ranick, J. (2014). Evaluation of the concurrent validity of a skills assessment for autism treatment. *Research in Autism Spectrum Disorders*, 8(3), 281-285.

<sup>76</sup> Rooker, G. W., DeLeon, I. G., Borrero, C. S., Frank-Crawford, M. A., & Roscoe, E. M. (2015). Reducing ambiguity in the functional assessment of problem behavior. *Behavioral Interventions*, 30(1), 1-35.

<sup>77</sup> Ingram, K., Lewis-Palmer, T., & Sugai, G. (2005). Function-based intervention planning: Comparing the effectiveness of FBA function-based and non-function-based intervention plans. *Journal of Positive Behavior Interventions*, 7(4), 224-236.; Walker, V. L., Chung, Y. C., & Bonnet, L. K. (2017). Function-based intervention in inclusive school settings: A meta-analysis. *Journal of Positive Behavior Interventions*, 1098300717718350.

<sup>78</sup> Iwata et al. (1994).

<sup>79</sup> Hanley, G.P. (2012)

considered the “gold standard” of ABA assessment methods and has been demonstrated to be effective in identifying the function served by the problem behaviour which, in turn, promotes the creation of effective intervention plans and ultimately, positive outcomes.<sup>80</sup>

Although the risk of injury may be mitigated, the presence of this risk is a reason why practitioners may choose not to use this assessment method. Increased provider competencies, the use of modified functional analysis, and other strategies may mitigate these risks to clients.<sup>81</sup>

## Designing ABA Intervention Plans

ABA intervention plans for either reducing problem behaviour or promoting skill acquisition are developed by the ABA provider based on the results from the behaviour assessment. As noted by Smith (2013), in practice, ABA providers often include several behaviour change procedures in an intervention plan. It is recommended that behaviour change procedures included in an intervention plan are chosen by the provider based on the integration of:<sup>82</sup>

- Best available evidence
- Clinical expertise and
- Client values and context

Authors have noted that using these factors minimizes the risk of harm associated with selecting behaviour change procedures and designing intervention plans.<sup>83</sup> However, as several authors have noted, there is a gap between research and what is being implemented in practice.<sup>84</sup> For example, as Schreck and Mazur (2008) found in a survey of ABA providers (BCBA), a small proportion of those surveyed were not utilizing evidence-based procedures in their intervention plans.

As noted by stakeholders, the implications of not using the best available evidence in the intervention plan can have a negative impact on a client’s skills development or exacerbate problem behaviour.

In addition, there is uncertainty that occurs when applying a behaviour change procedure identified in the literature as evidence-based to a client in their setting.<sup>85</sup> As noted by Smith (2013), the majority of ABA literature focuses on interventions delivered in tightly controlled environments, such as specialized ABA classrooms, and so these research results may not be generalizable to other settings. Furthermore, provider uncertainty of the effectiveness of an

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<sup>80</sup> Beavers et al. (2013); Rooker, G. W., Jessel, J., Kurtz, P. F., & Hagopian, L. P. (2013). Functional communication training with and without alternative reinforcement and punishment: An analysis of 58 applications. *Journal of Applied Behavior Analysis*, 46(4), 708-722.

<sup>81</sup> Hanley, G.P. (2012); Kahng et al. (2015); Roscoe et al. (2015); Wiskirchen et al. (2017).

<sup>82</sup> Slocum et al. (2014)

<sup>83</sup> Ibid.; Wilczynski S.M. (2012). Risk and strategic decision-making in developing evidence-based practice guidelines. *Education and Treatment of Children*. 35:291–311.

<sup>84</sup> Mayton et al. (2014); Slocum et al. (2014)

<sup>85</sup> Slocum et al. (2014); Smith (2013)

intervention plan may be due to applying a combination of behavior change procedures that have not been evaluated as a whole in research.<sup>86</sup>

ABA ethical best practices require that providers to progress from the least to most intrusive procedures while balancing the client's right to the most effective treatment.<sup>87</sup> For example, to ensure the safety of the client or caregivers, a provider may expedite progressing by forgoing less intrusive procedures initially, in order to use the most effective procedures to intervene with problem behaviour. The provider has to rely on their clinical judgment to move from the least intrusive to more intrusive procedures.<sup>88</sup> As a result, there is a potential risk of harm in the decision making on when to use intrusive procedures.

Overall, ABA interventions may involve the use of intrusive behaviour change procedures that require clearly written ABA intervention plans, guidelines, and regular monitoring and review by a well-trained ABA provider.<sup>89</sup> Ultimately, the effectiveness of ABA intervention depends not only on client vulnerability, but also on the skill and judgment of the ABA providers who supervise and implement the intervention plan.

### ***ABA Behaviour Change Procedures***

ABA intervention plans are comprised of a combination of behaviour change procedures that are selected to meet the goals identified in the client's intervention plan.<sup>90</sup> The following ABA behaviour change procedures range from most to least intrusive:

- Punishment
- Extinction, and
- Reinforcement

Descriptions of these procedures are included below. Within this range is the use of physical assistance such as physical guidance<sup>91</sup> or physical intervention which is dependent on the client and setting characteristics. For example, physical guidance (e.g., hand-over-hand guidance) is often included in an intervention plan for increasing self-feeding behavior in clients with feeding difficulties.<sup>92</sup> Furthermore, each section below highlights the impact of provider competency in mitigating risks associated with each procedure.

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<sup>86</sup> Slocum et al. (2014)

<sup>87</sup> Vollmer et al. (2011)

<sup>88</sup> Mayton et al. (2014)

<sup>89</sup> Ibid.

<sup>90</sup> Slocum et al. (2014)

<sup>91</sup> Wilder, D. A., Myers, K., Fischetti, A., Leon, Y., Nicholson, K., & Allison, J. (2012). An analysis of modifications to the three-step guided compliance procedure necessary to achieve compliance among preschool children. *Journal of Applied Behavior Analysis*, 45(1), 121-130.

<sup>92</sup> Volkert, V. M., Piazza, C. C., & Ray-Price, R. (2016). Further manipulations in response effort or magnitude of an aversive consequence to increase self-feeding in children with feeding disorders. *Behavior Analysis in Practice*, 9(2), 103-113.

## Punishment Based Procedures

Punishment based procedures may be included in interventions plans to reduce problem behaviour exhibited by clients<sup>93</sup>. Punishment occurs when a stimulus (e.g., something someone says) or an event (e.g., being removed from a room) follows a behaviour and decreases the likelihood that the behaviour will occur again. Punishment based procedures can include response blocking, reprimands, physical guidance, response cost (e.g. taking away a client's personal item in response to a behavior), time out from positive reinforcement, seclusion, restraints<sup>94</sup> and the use of an unpleasant or noxious item.

An example of an unpleasant event applied as a punishment, is using a mild and brief electrical stimulation for clients with long-standing, severe, and unmanageable self-injurious behavior.<sup>95</sup> Response blocking is a procedure in which a provider physically intervenes as soon as a client begins to exhibit a problem behaviour to prevent completion of that problem behaviour.<sup>96</sup> For example, response blocking is used with clients who engage in Pica (e.g., eating inedible objects such as paint chips, human feces) to prevent the client from placing the items in their mouths.<sup>97</sup> Punishment based procedures fall on the most intrusive end of the available ABA behaviour change procedures, with some procedures requiring the provider or caregiver to deliver physical intervention to a client in response to problem behaviour.<sup>98</sup>

Punishment based procedures have identified inherent side effects that can lead to a risk of harm to the clients such as:

- “Punishment elicited aggression” where a client may start to engage in aggressive behaviours as a result of a punishment procedure<sup>99</sup>
- Negative emotional side effects
- Short-lived punishment effects, and
- When the abuse potential of punishment presents too great a risk when it is applied<sup>100</sup>

These side effects may be further exacerbated due to:

- Misapplication of steps
- Exclusion of steps

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<sup>93</sup> Minshawi et al. (2014); Menon, K., Baburaj, R., & Bernard, S. (2012). Use of restraint for the management of challenging behaviour in children with intellectual disabilities. *Advances in Mental Health and Intellectual Disabilities*, 6(2), 62-75.

<sup>94</sup> Mayton et al. (2014); Vollmer (2002)

<sup>95</sup> Linscheid, T. R., Iwata, B. A., Ricketts, R. W., Williams, D. E., & Griffin, J. C. (1990). Clinical evaluation of the self-injurious behavior inhibiting system (sibis). *Journal of Applied Behavior Analysis*, 23(1), 53-78.

<sup>96</sup> Cooper et al. (2007)

<sup>97</sup> Saini, V., Greer, B. D., Fisher, W. W., Lichtblau, K. R., DeSouza, A. A., & Mitteer, D. R. (2016). Individual and combined effects of noncontingent reinforcement and response blocking on automatically reinforced problem behavior. *Journal of Applied Behavior Analysis*, 49(3), 693-698.

<sup>98</sup> Mayton et al. (2014)

<sup>99</sup> Hagopian, L. P., & Adelinis, J. D. (2001). Response blocking with and without redirection for the treatment of pica. *Journal of Applied Behavior Analysis*, 34(4), 527-530.

<sup>100</sup> Minshawi et al. (2014); Lerman, D. C., & Vorndran, C. M. (2002). On the status of knowledge for using punishment: Implications for treating behavior disorders. *Journal of Applied Behavior Analysis*, 35(4), 431-464.; Vollmer (2002)

- Limited provider training
- Inadequate planning for side effects
- Misapplication of results from a functional behaviour assessment, and
- Inadequate supervision<sup>101</sup>

For some punishment-based procedures such as the use of physical restraints, the misapplication or lack of competency in the design and implementation of ABA interventions may lead to client injury or death.<sup>102</sup> Mitigation of risks associated with the use of restraints includes:

- Trained and competent providers to deliver the restraints
- Supervision by a certified behaviour analyst or a similarly trained professional, and
- Continuous monitoring of punishment-based procedures using reliable and valid data collection<sup>103</sup>

### *Extinction Based Procedures*

Extinction based procedures are included as part of an intervention plan to reduce problem behaviour exhibited by clients. Extinction happens when problem behaviour occurs, and the item or event that was increasing or maintaining the problem behaviour (the “reinforcer”) is not provided to the client. The theory is that not providing the reinforcer of the problem behavior, will eventually lead to a decrease in the occurrence of the problem behaviour. However, this can also create increased risks.

The following example was provided by a stakeholder: Providers assessed a client, who was hitting the walls in his house using a closed fist. Through the assessment, providers were able to determine that the client was hitting the walls of his house to receive attention from his caregivers. Extinction, in this example, would be teaching providers not to provide attention when the client is hitting the walls. However, by withholding the attention, the client began hitting the wall harder with his fist making large holes, and is also hitting his head using his right hand. This increase in intensity of behaviour is referred to as an extinction burst. This example and studies have highlighted the following side effects identified with extinction based procedures:<sup>104</sup>

- Physical harm to a client due to “extinction bursts.” There is an initial increase in the intensity, frequency, and duration of the problem behaviour which is followed by a steady decrease in the problem behaviour.
- Increased aggression and other problem behaviours, and
- Spontaneous recovery of a previous extinguished behaviour

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<sup>101</sup> Scheuermann et al. (2015), Minshawi et al. (2014); Vollmer et al. (2011); Williams (2010)

<sup>102</sup> Scheuermann et al. (2015); Williams (2010)

<sup>103</sup> Vollmer et al. (2011); Williams (2009)

<sup>104</sup> Tereshko, L., & Sottolano, D. (2017). The effects of an escape extinction procedure using protective equipment on self-injurious behavior. *Behavioral Interventions*, 32(2), 152-159.; Ward et al. (2017)

Though, researchers have identified methods to plan for and mitigate the risks of these side effects,<sup>105</sup> there is a potential of injury to clients even with the use of mitigation methods.<sup>106</sup>

### *Reinforcement Based Procedures*

Reinforcement based procedures are included as part of an intervention plan to increase the desirable behaviours of clients. Reinforcement occurs when an individual's behaviour (desirable or problematic) is followed by an item or event that increases the likelihood of that behaviour occurring again in the future.<sup>107</sup> Researchers have noted the following inherent risks of reinforcement based procedures:<sup>108</sup>

- Reinforcement procedures can produce negative emotional side effects, similar to extinction when an individual fails to meet the criterion for reinforcement.<sup>109</sup>
- Fading and delaying reinforcement can evoke problem behaviour<sup>110</sup>,
- Reinforcement can be severely abused or misused.<sup>111</sup>
- A reinforcement based procedure referred to as non-contingent reinforcement (NCR) is used to reduce problem behaviour. Studies utilizing NCR demonstrate the inherent risk of this procedure which is the incidental reinforcement of problem behaviour also referred to as “adventitious reinforcement”.<sup>112,113</sup>

In addition, an inherent risk in these behaviour change procedures is that punishment based procedures may inadvertently function as reinforcement and reinforcement procedures inadvertently functioning as a punishment based procedure.<sup>114</sup> In applied settings, an ABA provider may choose what they believe to be a punishment based procedure only to find that the procedure is increasing the behaviour they would like to decrease, concluding that the procedure is in fact reinforcement based procedure. For an individual, that is exhibiting problem behaviour, this would further escalate his or her problem behaviours, putting him or herself at risk. Vollmer (2002) noted that failure to study the components of intervention plans to determine whether they

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<sup>105</sup> Ward et al. (2017); Burt et al. (2017); Tereshko et al. (2017)

<sup>106</sup> Tereshko et al. (2017); Lerman et al. (1999); Lerman et al. (1995)

<sup>107</sup> DeLeon, I. G., Williams, D., Gregory, M. K., & Hagopian, L. P. (2005). Unexamined potential effects of the noncontingent delivery of reinforcers. *European Journal of Behavior Analysis*, 6(1), 57-69.

<sup>108</sup> Minshawi et al. (2014); Perone(2003); Vollmer (2002)

<sup>109</sup> Vollmer (2002)

<sup>110</sup> Fuhrman et al. (2016); Greer et al. (2016); Hagopian et al. (2005) ;Ritter, W. A., Barnard-Brak, L., Richman, D. M., & Grubb, L. M. (2017). The influence of function, topography, and setting on noncontingent reinforcement effect sizes for reduction in problem behavior: A meta-analysis of single-case experimental design data. *Journal of Behavioral Education*, 1-22.

<sup>111</sup> Vollmer (2002)

<sup>112</sup> Deleon et al.(2005); Vollmer et al. (1997)

<sup>113</sup> More specifically, a reinforcer (function for the problem behaviour) is provided to a client on an ongoing basis, “non-contingent” on any behaviour. By providing the reinforcer on an ongoing basis, a client may be less likely to engage in problem behaviour in order to receive the reinforcer (e.g., attention from caregivers).

<sup>114</sup> Vollmer et al. (2002)

sometimes inadvertently function as intended is irresponsible, and emphasizes the importance of competent providers and ongoing monitoring during implementation of the ABA intervention.

## Implementing ABA Intervention Plans

ABA intervention plans can be implemented directly to a client by ABA providers,<sup>115</sup> and caregivers.<sup>116</sup> Providers train caregivers to implement intervention plans directly to clients using procedures such as behaviour skills training.<sup>117</sup> Studies have found that positive client outcomes are associated with the degree of how consistent and correctly ABA interventions are implemented.<sup>118</sup> For example, the success of intervention plans to reduce problem behaviour depends on the extent to which procedures are implemented as planned.<sup>119</sup>

The correspondence between an intervention plan and the execution of that plan is referred to as the measure of treatment integrity.<sup>120</sup> The term treatment integrity describes the precision with which interventions are implemented.<sup>121</sup> Treatment integrity errors include errors of omission, which occur when providers implementing intervention plans do not provide the appropriate response when a specific event occurs (e.g. failed to provide a reinforcer immediately following an appropriate behavior).<sup>122</sup> Treatment integrity errors also include errors of commission, which occur when providers implementing intervention plans provide a response at an inappropriate time (e.g., provided a reinforcer to a client immediately following problem behaviour).<sup>123</sup> Cook et al. (2015) noted that treatment integrity is an important measure for the following reasons:

- It upholds the ethical right of clients to receive the intervention to which they consented

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<sup>115</sup> Perry, A., Cummings, A., Geier, J. D., Freeman, N. L., Hughes, S., Managhan, T., & Williams, J. (2011). Predictors of outcome for children receiving intensive behavioral intervention in a large, community-based program. *Research in Autism Spectrum Disorders*, 5(1), 592-603.

<sup>116</sup> Fettig, A., & Barton, E. E. (2014). Parent implementation of function-based intervention to reduce children's challenging behavior: A literature review. *Topics in Early Childhood Special Education*, 34(1), 49-61.; Loughrey, T. O., Contreras, B. P., Majdalany, L. M., Rudy, N., Sinn, S., Teague, P., & Harvey, A. C. (2014). Caregivers as interventionists and trainers: Teaching mands to children with developmental disabilities. *The Analysis of Verbal Behavior*, 30(2), 128-140; Mason et al., (2017); Rispoli, M., Neely, L., Lang, R., & Ganz, J. (2011). Training paraprofessionals to implement interventions for people with autism spectrum disorders: A systematic review. *Developmental Neurorehabilitation*, 14(6), 378-388.

<sup>117</sup> Parsons, M. B., Rollyson, J. H., & Reid, D. H. (2013). Teaching practitioners to conduct behavioral skills training: a pyramidal approach for training multiple human service staff. *Behavior Analysis in Practice*, 6(2), 4-16.

<sup>118</sup> Cook et al. (2015); Carroll, R. A., Kodak, T., & Fisher, W. W. (2013). An evaluation of programmed treatment-integrity errors during discrete-trial instruction. *Journal of Applied Behavior Analysis*, 46(2), 379-394.; Vollmer et al. (2008)

<sup>119</sup> Pinkelman, S. E., & Horner, R. H. (2016). Improving implementation of function-based interventions: Self-monitoring, data collection, and data review. *Journal of Positive Behavior Interventions*, 19(4), 228-238.

<sup>120</sup> Cook et al., (2015)

<sup>121</sup> Peterson, L., Homer, A. L., & Wonderlich, S. A. (1982). The integrity of independent variables in behavior analysis. *Journal of Applied Behavior Analysis*, 15(4), 477-492

<sup>122</sup> Fryling, M. J., Wallace, M. D., & Yassine, J. N. (2012). Impact of treatment integrity on intervention effectiveness. *Journal of Applied Behavior Analysis*, 45(2), 449-453.; Vollmer, T. R., Sloman, K. N., & Pipkin, C. S. P. (2008). Practical implications of data reliability and treatment integrity monitoring. *Behavior Analysis in Practice*, 1(2), 4-11.

<sup>123</sup> Ibid.

- Increases the extent to which individuals can be confident that the intended procedures produced the desired behaviour change

The research noted that the following risks of harm may occur when treatment integrity is not upheld as a result of intentional or unintentional divergence from a treatment plan:<sup>124</sup>

- The positive outcomes demonstrated in research situations may not be maintained when programs are modified in the classroom, which may result in clients failing to acquire desired skills.
- Negative effects on skill acquisition procedures and behaviour reduction procedures may occur, which may result in clients failing to acquire targeted skills; requiring more extensive training to acquire those skills or decrease problem behaviour.
- False-negative intervention outcomes and inaccurate conclusions about the effectiveness of an intervention may occur
- Increasing the likelihood of clients becoming dependent on caregivers while limiting independence to perform tasks
- Evoking and escalating problem behaviours
- The inhibiting of educational and social progress

Treatment integrity may be compromised when non-ABA practitioners implement the intervention. Several US studies noted that teachers may modify evidence-based ABA protocols for use in the classroom by adapting them to fit their own teaching preferences and the perceived needs of their students, which may negatively impact clients' acquisition of positive skills and behaviours. Several studies indicate methods to help mitigate the risks associated with treatment integrity not being upheld, including:

- ABA providers should receive ongoing clinical supervision from Board Certified Behaviour Analyst (BCBA) providers or equivalent.<sup>125</sup>
- Clinical supervisors should conduct regular checks of treatment integrity on all components of an intervention and individualize feedback to trainees' specific integrity lapses.<sup>126</sup>
- Treatment integrity measures should be used to provide an objective, and quantifiable

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<sup>124</sup> Fryling et al. (2012); (Rispoli et al. (2011); Suhrheinrich, J., Stahmer, A. C., Reed, S., Schreibman, L., Reisinger, E., & Mandell, D. (2013). Implementation challenges in translating pivotal response training into community settings. *Journal of Autism and Developmental Disorders*, 43(12), 2970-2976.; Mason et al. (2017); Cook et al. (2015); Carroll, R. A., Kodak, T., & Fisher, W. W. (2013). An evaluation of programmed treatment-integrity errors during discrete-trial instruction. *Journal of Applied Behavior Analysis*, 46(2), 379-394.

<sup>125</sup> Vollmer et al. (2011)

<sup>126</sup> Cook et al. (2015)



metric of provider or caregiver performance in delivering the intervention; these measures can subsequently be used as a basis for further training or support.<sup>127</sup>

- Provide increased provider training to deliver the intervention<sup>128</sup> by using Behaviour Skills Training Packages. These training packages may include written instructions, video modeling, rehearsal, and feedback and can be used by clinical supervisors to train novice providers or by ABA providers who train caregivers to implement ABA interventions with high integrity across different programs and settings.<sup>129</sup>

## Monitoring and Evaluation

Monitoring and evaluation include activities that occur throughout all phases of ABA intervention. Central to an ABA intervention plan is the selection and measurement of a target behaviour(s) during the behaviour assessment phase. Decisions such as whether to intervene, modify, or discontinue intervention are dependent on observable data collection.<sup>130</sup> There is a potential risk of harm when deciding what measure(s) to use based on the target behaviour. Client negative outcomes can occur when selecting the wrong data collection method<sup>131</sup> or collecting inaccurate data.<sup>132</sup>

Vollmer et al. (2008) noted that data collected that is inaccurate is potentially dangerous because decisions are made based on the data reported are reasonably accurate, and based on the assumption that the prescribed procedures were conducted as specified. According to Vollmer et al. (2008), these life-changing decisions can include decisions on residential placements, the use of intrusive behaviour change procedures, changes or lack thereof in psychotropic medication (any drug prescribed to stabilize or improve mood, mental status or behavior<sup>133</sup>), or labour intensive staffing.

This risk is mitigated with increased competency and training in selecting measurement methods; however, an inherent risk exists in selecting the wrong method.<sup>134</sup> Implications of not selecting the appropriate method include:

- Sufficient information is not provided about the behaviour to allow a meaningful evaluation of the effects of a given intervention. For example, if the concern with a problem behaviour is the number of times in a day it occurs, collecting information

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<sup>127</sup> Cook et al. (2015); Vollmer et al. (2011)

<sup>128</sup> Ibid.

<sup>129</sup> Cook et al. (2015); Parsons et al. (2013)

<sup>130</sup> Leblanc et al. (2016); Vollmer et al. (2008)

<sup>131</sup> Wirth, O., Slaven, J., & Taylor, M. A. (2014). Interval sampling methods and measurement error: A computer simulation. *Journal of Applied Behavior Analysis*, 47(1), 83-100.

<sup>132</sup> Vollmer et al. (2008)

<sup>133</sup> Evans R, Frid P. "Implementing the International Panel Guidelines on the Use of Psychotropic Medications" in Psychotropic Medications and Developmental Disabilities: The International Consensus Handbook. Child and Parent Resource Institute Committee Report, August 2002.

<sup>134</sup> Leblanc et al. (2016)

about the frequency of the behavior is more appropriate than collecting information about how long the behaviour lasts.<sup>135</sup>

- Inaccurate and incomplete information about the behaviour is measured. For example, the use direct measurement provides more accurate information as it helps to identify what is triggering the behaviour compared to indirect behaviour measurement which relies on a caregiver to remember the behaviour trigger.<sup>136</sup>

Since ABA intervention involves a data-driven process, critical skills for ABA providers is the accurate visual inspection and interpretation of single-case data and graphs; selection of data collection methods and execution of data collection.<sup>137</sup> ABA providers use visual inspection or visual analysis of graphs to determine the need for intervention, modify or discontinue intervention.<sup>138</sup> During the visual inspection, a provider analyzes the graph, most often a line graph, to look at the variability, trend and level of the data path of both the baseline and intervention data.<sup>139</sup> Some researchers have suggested that there is a subjective element to the visual inspection of graphs and risks which can be associated with misinterpreting outcomes.<sup>140</sup> This risk increases if providers are not competent or are poorly trained in the interpretation of graphs.<sup>141</sup>

In addition, there is a potential risk of harm in the evaluation of outcomes of a functional analysis. When a functional analysis is completed, data from the assessment is graphed and interpreted by visual inspection to examine response patterns within and across conditions to determine the function(s) of the problem behaviour.<sup>142</sup> As described above, behaviour change procedures are selected based on the interpretation of the results of the functional analysis. A misinterpretation of the graph can lead to selecting inappropriate procedures. Hagopian et al. (1997) found that the interpretation of functional analysis data by the provider may be less reliable than is generally assumed.

However, studies demonstrate that with training, providers can develop the competency to visually inspect graphs for monitoring intervention plans and graphs for functional analysis.<sup>143</sup>

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<sup>135</sup> Cooper et al. (2007)

<sup>136</sup> Ibid.

<sup>137</sup> Fisher, W. W., Kelley, M. E., & Lomas, J. E. (2003). Visual aids and structured criteria for improving visual inspection and interpretation of single-case designs. *Journal of Applied Behavior Analysis*, 36(3), 387-406.

<sup>138</sup> Maffei-Almodovar, L., Feliciano, G., Fienup, D. M., & Sturmey, P. (2017). The use of behavioral skills training to teach graph analysis to community based teachers. *Behavior Analysis in Practice*, 10(4), 355-362.

<sup>139</sup> Ibid.

<sup>140</sup> Fisher et al. (2003)

<sup>141</sup> Maffei-Almodovar et al. (2017)

<sup>142</sup> Hagopian et al. (1997)

<sup>143</sup> Maffei-Almodovar et al.(2017); Fisher et al. (2003); Hagopian et al. (1997)

## 4.2 Other Risks of Harm

### Client Population

HPRAC found that the risk of harm from ABA intervention varies with a client's vulnerability. This may be due to several factors, including: the client's age, poor health, poor or no verbal communication skills or mobility, the absence of an advocate, a client's family is unable or unwilling to follow protocol, the client's setting (which may present a challenge to service delivery), and the absence of a social support system. Similarly, clients with developmental disabilities have been described as a vulnerable population due to the risk of exploitation; this population is also vulnerable due to its perceived inability to provide informed consent to intervention.<sup>144</sup>

In addition to client vulnerability, subject matter experts who were consulted for this referral also pointed to the risk of harm due to the severity of the client's condition. Severity may be determined by a combination of factors including: degree of problem behaviour, client characteristics (needs and strengths), and the quality of ABA intervention. If a threshold is exceeded for one or more of these factors, the likelihood for risk of harm to occur increases. These factors are expanded on below:

Degree of Problem behaviour: A client may experience risk of harm based on problem behaviour when he or she exhibits one or more of the following factors (low to high occurrence) – moderate to severe actions, anti-social to criminal behaviour, actions directed at self and/or and others, as well as inappropriate behaviour.

Client characteristics (strengths and needs): experience of risk of harm based on client characteristics (needs and strengths) could range from a continuum of high functioning (communication, good medical health, high mobility or moderate actions) to low functioning (non-communicative, poor medical health, immobility, or severe actions).

Quality of ABA intervention: A client's environment may also contribute to their experience of risk of harm. The environment may be optimal (receiving care from a well-trained provider, having a supportive caregiver, and a support plan which is effectively implemented by all involved in the client's care). Or, the client's environment may be sub-optimal (providers may lack the relevant competencies, the caregiver may be uninformed, the support plan may be poorly designed and require multiple, complex steps).

These are suggested factors an ABA provider uses to measure the severity of a client's condition. If any of the factors exceeds the threshold of "reasonably acceptable behaviour" (for illustration purposes shown as a red triangle in Appendix D), then the client and provider are entering into a

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<sup>144</sup> Goldsmith, L., Skirton, H., & Webb, C. (2008). Informed consent to healthcare interventions in people with learning disabilities—an integrative review. *Journal of Advanced Nursing*, 64(6), 549-563.; Wark, S., MacPhail, C., McKay, K., & Müller, A. (2017). Informed consent in a vulnerable population group: supporting individuals aging with intellectual disability to participate in developing their own health and support programs. *Australian Health Review*, 41(4), 436-442.

zone that represents “risk of harm” that would warrant regulation. This also implies that, below this threshold, there is minimal risk of harm and regulation would not be warranted.

It would be intellectually convenient to think of a client proceeding along all three of these factors at a consistent rate and passing through an obvious threshold that would constitute a “risk of harm” situation. This is not the case. Individuals will most definitely proceed at different rates along the continuum. Therefore, HPRAC deems that if the client is assessed as being beyond the threshold of “acceptability” of any one of these three factors, then a “risk of harm” situation exists that should be overseen by some form of regulatory regime.

Although children are included in the definition of client population by virtue of vulnerability, HPRAC also recognizes that there is a clear window of opportunity, from an age standpoint, to apply ABA interventions. In many instances, if a child can be diagnosed or assessed as benefiting from an ABA intervention before the age of six, the prognosis for reasonable life function is positive. The fact that a child’s mind and intellectual capacity are developing at an accelerated rate means that the child will learn more skills within this window of opportunity, particularly with intensive ABA intervention. Failure to seize this window of opportunity typically leads to an adolescent and, eventually, an adult with reduced life function such as less independence or fewer social skills to participate in society. The personal and economic costs to the individual and society arising from missing this window of opportunity can be significant.

### *Informed Consent*

Characteristics that have been identified to increase a client’s vulnerability to risk of harm from ABA intervention include client level of functioning and cognitive capacity.<sup>145</sup> These vulnerabilities may impact a client’s autonomy; decrease the client’s ability to provide informed consent; and increase their dependency on others for help. As noted by Gilbert et al. (2017), the dependency on others for help can result in a deprivation of the client’s fundamental rights, or a risk that others will end up making decisions against the interests of the client.

Furthermore, best practice guidelines for clients with developmental disabilities and who exhibit challenging behaviour recommend that it should never be assumed that an adult with a developmental disability or dual diagnosis is unable to make their own decisions and choices, such as consenting to or receiving ABA intervention.<sup>146</sup> It is recommended that when a provider is seeking a client’s consent to intervention, the provider should allow time and provide support for the client to make their decision properly and understand the consequences of their intervention choices.<sup>147</sup> In addition, clients have the right to stop procedures that involve intrusive measures at any time. A caregiver acting on behalf of the client has the right to witness

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<sup>145</sup>Gilbert, T., Bosquet, A., Thomas-Antérion, C., Bonnefoy, M., & Le Saux, O. (2017). Assessing capacity to consent for research in cognitively impaired older patients. *Clinical Interventions in Aging*, 12, 1553.; Morris, C. D., Niederbuhl, J. M., & Mahr, J. M. (1993). Determining the capability of individuals with mental retardation to give informed consent. *American Journal of Mental Retardation: AJMR*, 98(2), 263-272.

<sup>146</sup> Community Networks of Specialized Care. (n.d.) Care, Support and Treatment of people with Developmental Disability and Challenging Behaviours. Retrieved from: <http://www.community-networks.ca/wp-content/uploads/2015/07/CNSC-O-Consensus-Guidelines-EN-F-08-19-16.pdf>

<sup>147</sup> Ibid.

and stop intervention plans involving intrusive procedures.<sup>148</sup> Therefore, the provider involved with the client has an integral role in ensuring that appropriate steps are taken both ethically and legally to allow for informed consent to be given by the client or by the client's substitute decision maker and to empower the client to request cessation of intervention.<sup>149</sup>

Risk of harm to client populations exists due to the absence of clear direction and understanding by ABA providers of the legal requirement to: obtain informed consent prior to providing intervention and the legal requirements for consent across different settings in which they practise. Further, the right to privacy could also be violated because providers may not be aware of legislation which covers the collection, use, and disclosure of personal information and personal health information, especially as it relates to confidentiality.

Stakeholders, including subject matter experts, raised concerns regarding ABA providers who, in the absence of any form of oversight, may not be familiar with or may not be aware of or complying with consent, capacity to consent, and privacy and confidentiality legislation, or guidelines. As a result, all clients receiving ABA intervention regardless of age, diagnosis, or level of functioning may be at risk of having their rights violated by an ABA provider.

For example, the Community Networks of Specialized Care, (2017) recommended that providers, along with caregivers who support clients with developmental disabilities with challenging behaviours should be familiar with several legislative acts and regulations in Ontario, namely:

- *Mental Health Act*<sup>150</sup>
- *Health Care Consent Act*<sup>151</sup>
- *Substitute Decisions Act*<sup>152</sup>
- *Personal Health Information Protection Act (PHIPA)*<sup>153</sup>
- *Personal Information Protection and Electronic Documents Act (PIPEDA)*<sup>154</sup>
- *Criminal Code of Canada (Part XXI)*<sup>155</sup>
- *Services and Supports to Promote the Social Inclusion of Persons with Developmental Disabilities Act*, and<sup>156</sup>

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<sup>148</sup> Ibid.

<sup>149</sup> Wark, S., MacPhail, C., McKay, K., & Müller, A. (2017). Informed consent in a vulnerable population group: supporting individuals aging with intellectual disability to participate in developing their own health and support programs. *Australian Health Review*, 41(4), 436-442.

<sup>150</sup> See the *Mental Health Act, R.S.O. 1990*. (2018). Retrieved from <https://www.ontario.ca/laws/statute/90m07>

<sup>151</sup> See the *Health Care Consent Act, 1996*. (2018). Retrieved from <https://www.ontario.ca/laws/statute/96h02>

<sup>152</sup> See the *Substitute Decisions Act, 1992*. (2018). Retrieved from <https://www.ontario.ca/laws/statute/92s30?search=Substitute+Decision+Act>

<sup>153</sup> See the *Personal Health Information Protection Act, 2004*. (2018). Retrieved from <https://www.ontario.ca/laws/statute/04p03?search=Personal+Health+Information+Protection+Act>

<sup>154</sup> See the *Personal Information Protection and Electronic Documents Act, 2000*. (2018). Retrieved <http://laws-lois.justice.gc.ca/eng/acts/P-8.6/>

<sup>155</sup> See *Criminal Code of Canada, 1985 Part XXI*. (2018). Retrieved from <http://laws-lois.justice.gc.ca/eng/acts/C-46/>

<sup>156</sup> See the *Services and Supports to Promote the Social Inclusion of Persons with Developmental Disabilities Act, 2008*, The Guide to the Regulation on Quality Assurance Measures, and specifically O. Reg. 299/10

- The Guide to the Regulation on Quality Assurance Measures, and specifically O. Reg. 299/10<sup>157</sup>

## Provider Competency: Clinical Supervisors

Findings from several studies note the importance of qualified clinical supervisors overseeing ABA activities.<sup>158</sup> Similarly, several ABA professional associations such as the Association for Behavior Analysis International (ABAI), Behavior Analyst Certification Board (BACB) and expert panels such as the Ontario Scientific Expert Taskforce for the Treatment of Autism Spectrum Disorders (OSETT-ASD), all have echoed that clinical supervision is an integral part of the effective and ethical delivery of ABA intervention. In a study conducted by Dixon et al. (2016), variables such as clinical supervisor characteristics were compared to client outcomes of a community based program for children with Autism Spectrum Disorder. The results reveal:

- Quality of care for the patient is less optimal with uncertified clinical supervisors
- Clinical supervision by certified providers led to better client outcomes (mastery of learning objectives and other intervention gains) compared to uncertified providers
- A clinical supervisor's years of experience had a significant effect on the mastery of learning objectives

Overall, the aforementioned studies and statements from professional ABA associations highlight the importance of qualified and competent clinical supervision in the delivery of ABA intervention.

### ***Clinical Supervisors Practising Outside of Competency***

ABA has grown substantially as a discipline over the past 10 years<sup>159</sup> with increased demand. As a result, researchers have noted an increase of individuals seeking ABA education, training and certification with the BACB.<sup>160,161</sup> Additionally, a shortage of trained providers able to implement quality ABA programs worldwide<sup>162</sup> has resulted in incompetent providers implementing and supervising ABA-based programs<sup>163</sup>, and created a misconception about the

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<sup>157</sup> The Guide to the Regulation on Quality Assurance Measures, and specifically O. Reg. 299/10

<sup>158</sup> Dixon, D. R., Linstead, E., Granpeesheh, D., Novack, M. N., French, R., Stevens, E., & Powell, A. (2016). An evaluation of the impact of supervision intensity, supervisor qualifications, and caseload on outcomes in the treatment of autism spectrum disorder. *Behavior Analysis in Practice*, 9(4), 339-348.; Cook et al., 2015; Vollmer et al. (2011)

<sup>159</sup> Leaf et al. (2017); Dorsey, M. F., Weinberg, M., Zane, T., & Guidi, M. M. (2009). The case for licensure of applied behavior analysts. *Behavior Analysis in Practice*, 2(1), 53-58.

<sup>160</sup> Dixon, M. R., Reed, D. D., Smith, T., Belisle, J., & Jackson, R. E. (2015). Research rankings of behavior analytic graduate training programs and their faculty. *Behavior Analysis in Practice*, 8(1), 7-15.

<sup>161</sup> Schreck, K. A. and Mazur, A. (2008), Behavior analyst use of and beliefs in treatments for people with autism. *Behavioral Interventions*, 23: 201-212. doi:10.1002/bin.264

<sup>162</sup> Hughes, J. C., & Shook, G. L. (2007). Training and certification of behaviour analysts in Europe: Past, present, and future challenges. *European Journal of Behavior Analysis*, 8(2), 239-249.

<sup>163</sup> Ibid.

field of ABA.<sup>164</sup> Similarly, Schreck and Mazur (2008) found in a survey of 469 BCBA's that a small proportion of those surveyed were not utilizing ABA procedures in their practice; rather, they were using procedures without empirical evidence of their effectiveness.

As key stakeholder(s) indicated in consultations with HPRAC, the growth in ABA demand may have contributed to some ABA providers practising outside of their training and competencies. It is recommended that an ABA provider's clinical, teaching, and research activities be restricted to the individual's level of competence in those activities or topics.<sup>165</sup> As noted earlier in this report, the field of behaviour analysis relies heavily on clinical supervision to oversee the effective and ethical practice of ABA providers; to shape and maintain the skills of future ABA providers (potentially future clinical supervisors); to facilitate the delivery of high-quality ABA; and protect clients.<sup>166</sup>

Clinical supervisory practices have implications on both current and future ABA providers (future clinical supervisors) and clients.<sup>167</sup> As noted by Sellers et al. (2016), as front-line providers move into clinical supervision roles, there is a strong possibility that they will engage in the behaviour modeled for them by past clinical supervisors. This has a potential to create a cycle of either ethical and appropriate behaviour or unethical and inappropriate or harmful behaviour.<sup>168</sup>

It is recommended that clinical supervisors provide oversight of ABA activities to client populations for which they were trained and within their competencies.<sup>169</sup> If the competency is lacking, it is recommended that the clinical supervisor make a referral, decline supervision, or pursue knowledge and skills that will allow them to develop the competency to supervise within a new setting or for a new client population.<sup>170</sup> There is an inherent and increased risk of harm to clients when clinical supervisors work in an area that is not commensurate with their competencies, experience and training.<sup>171</sup> A concern raised by key stakeholders during this referral, and which is supported by ABA researchers, is that when an ABA provider demonstrates competency working with a client population, it should not be assumed that they have competency with another group (e.g., working with children with ASD).<sup>172</sup>

For instance, Sellers et al. (2016) points out that when a clinical supervisor's competency, training and experience is exclusively with adolescents, the clinical supervisor may not

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<sup>164</sup> Keenan et al. (2015)

<sup>165</sup> Behavior Analyst Certification Board. (2018). Professional and ethical compliance code. Retrieved from <https://www.bacb.com/ethics/ethics-code/>

<sup>166</sup> Leblanc et al.(2016); Turner, L. B., Fischer, A. J., & Luiselli, J. K. (2016). Towards a competency-based, ethical, and socially valid approach to the supervision of applied behavior analytic trainees. *Behavior Analysis in Practice*, 9(4), 287-298.

<sup>167</sup> Sellers, T. P., Alai-Rosales, S., & MacDonald, R. P. F. (2016). Taking full responsibility: The ethics of supervision in behavior analytic practice. *Behavior Analysis in Practice*, 9(4), 299–308. Retrieved from <http://doi.org/10.1007/s40617-016-0144-x>

<sup>168</sup> Ibid.

<sup>169</sup> Behavior Analyst Certification Board. (2018). Professional and ethical compliance code. Retrieved from <https://www.bacb.com/ethics/ethics-code/>

<sup>170</sup> Ibid.; Sellers et al. (2016)

<sup>171</sup> Sellers et al. (2016)

<sup>172</sup> Ibid.

immediately have the ability to provide effective supervision to front-line providers delivering ABA intervention to very young clients or older clients who may be residing in long-term care homes. The non-transferability of skills can be attributed to several factors including the difference across the clients' lifespan (e.g., goals, behaviours, stakeholders, physiologies, procedures, settings), that will affect the outcomes of intervention and must be considered when designing an ABA intervention plan. Additional areas of competency, which a clinical supervisor must demonstrate, include understanding, experience and training dealing with a specific age group client diagnosis and even cultural conditions.

Leaf et al. (2017)<sup>173</sup> noted that even a front-line provider such as a Registered Behavior Technician (RBT), when trained in one area and with a distinct client population, should not be expected to deliver ABA beyond their area of experience, training, and competency. Leaf et al. (2017) point out that gaining ABA certification (e.g., BCBA) should not be equated to having the experience, training, and competency to work with different client populations and settings, which include rural and remote geographical locations.<sup>174</sup>

### **“Missed” ABA intervention**

Both stakeholders and researchers have indicated that when ABA intervention is not provided or is provided by incompetent providers, clients are at risk of not receiving effective ABA intervention. This risk includes imminent physical risk of harm if a client is engaging in problem behaviour that is harming themselves or others.<sup>175</sup> The absence of effective intervention can lead to persistence of challenging behaviours which can negatively affect the quality of life for the client.<sup>176</sup>

In addition, a significant risk of harm both physically and psychologically exists when effective ABA intervention is not provided to children with Autism Spectrum Disorder within a clinical “developmental window.” The absence of effective ABA intervention during the window of opportunity can lead to reductions positive client outcomes and development trajectories, and have future negative implications on the client's quality of life.<sup>177</sup>

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<sup>173</sup> Leaf et al. (2017)

<sup>174</sup> Ibid.

<sup>175</sup> Walker et al., (2017); Ingram et al. (2005)

<sup>176</sup> Richards, C., Moss, J., Nelson, L., & Oliver, C. (2016). Persistence of self-injurious behaviour in autism spectrum disorder over 3 years: A prospective cohort study of risk markers. *Journal of Neurodevelopmental Disorders*, 8(1), 1-12.; Murphy, G. H., Beadle-Brown, J., Wing, L., Gould, J., Shah, A., & Holmes, N. (2005). Chronicity of challenging behaviours in people with severe intellectual disabilities and autism: A total population sample. *Journal of Autism and Developmental Disorders*, 35(4), 405-418.

<sup>177</sup> Koegel, L. K., Koegel, R. L., Ashbaugh, K., & Bradshaw, J. (2014). The importance of early identification and intervention for children with or at risk for autism spectrum disorders. *International Journal of Speech-Language Pathology*, 16(1), 50-56.; Perry et al. (2011)



## 4.3 Jurisprudence Review

HPRAC contracted an independent legal firm to conduct a jurisprudence review on legal cases involving ABA. Ontario cases and cases considered by and appealed to the Supreme Court of Canada were identified. The three topics covered in the jurisprudence review were:

- Are there any legal cases that demonstrate that harm was caused to clients in the process of, or as a result of, ABA?
- Are there any legal cases related to the lack of provision of ABA services, and as a result, impact on the clients or others?
- Are there any legal cases or decisions that specifically reference oversight of ABA practitioners (legislation/regulation, registry, self-regulation through a professional college or an association, etc.)?

### Summary of Findings

The jurisprudence review did not find any legal cases evidencing harm associated with the provision of ABA intervention. However, key findings from the jurisprudence review include:

- There is case law indicating that a child who is not benefitting from ABA may be discharged from the program. In one case the court found that a child with autism who did not benefit from ABA/IBI was lawfully discharged from the program and that such a discharge did not amount to harm [Ceretti v. Hamilton Health Sciences, 2010]. The expert in that case noted that if ABA is not working for a particular child, other therapies should be tried. There was no evidence in the Ceretti case that ABA was harmful to the client.
- In the case law reviewed, there is judicial recognition of the plight of families with children diagnosed with autism and the evidence-based beneficial effect of providing early IBI [Auton, Wynberg – trial level decisions]. However, this recognition did not translate into decisions requiring provinces to fund ABA/IBI [Auton v. BC (Supreme Court of Canada 2004); Wynberg v. Ontario (Supreme Court of Canada, 2007)].
- Many trial level decisions decided pending the outcome of Auton and Wynberg found a risk of harm to clients who had begun receiving ABA/IBI but who, due to lack of funding or age-related barriers, could not continue to receive ABA. In these cases, orders for temporary funding were granted on the basis that irreparable harm would occur to children who previously benefitted from ABA treatment but who might be prevented from continuing to benefit. It is important to note that the majority of these decisions ordered the provision of continued ABA therapy only until the appeal level decisions (including appeals to the Supreme Court of Canada) were released.

## 4.4 Jurisdictional Review

HPRAC carried out a jurisdictional review to assess which ABA oversight options were most appropriate for Ontario. The examination of other jurisdictional models of oversight was used to determine which key elements could be reproduced in Ontario to develop a model which would have the greatest impact on public protection and safety as it relates to the risks associated with activities and aspects of ABA activities. HPRAC recognizes the recommendations made by the SEG report (2014); specifically, that oversight models reviewed for this referral range from least regulation to full regulation that includes title protection, scope of practice, and both quality assurance and a complaints mechanism.

An analysis was conducted to determine what types (if any) of oversight options are available for ABA providers in the following jurisdictions: Canada, United States and outside of North America.

### Summary of Findings

In the course of its review of other jurisdictions, HPRAC found these overarching themes:

- Certification with the US based Behaviour Analyst Certification Board (BACB) is the most prevalent oversight option utilized both locally and internationally. The BACB offers several mechanisms such as identified education and training for providers, ongoing professional development expectations and a complaints mechanism. Concerns have been identified by providers and stakeholders about the limitations on relying only on this certification, including: (i) the complaints mechanism's response and authority it has across jurisdictions, (ii) the absence of Ontario-specific jurisprudence education, and (iii) the misperception that certification equates to competency to practise across client populations.
- In Canada, the majority of provinces do not have explicit oversight mechanisms for ABA providers. Provinces such as Manitoba and British Columbia have, or are in the process of developing, a regulatory body to provide oversight to ABA providers. In some provinces, employers and programs specifically identify that providers hold a BACB certification.
- In the United States, over half of the states have passed legislation to license ABA providers. Forty-four states have passed legislation that insurance companies cover ABA procedures for individuals with ASD. The majority of these states include having a BCBA as a minimum requirement for providers.
- Licensure or full regulation of ABA providers is regarded as the option that would have the most impact on public protection and safety, compared to other options.

## **Canada**

The majority of Canadian jurisdictions do not regulate ABA (Quebec, Alberta, Saskatchewan, Prince Edward Island, Nova Scotia and New Brunswick). ABA intervention for children with autism is supported and funded by most provincial governments; however, service delivery varies. Some provinces require parents/caregivers to use the direct payment option, whereby services are purchased from private providers using public funds (British Columbia, Alberta, Manitoba and Quebec). Key highlights from the jurisdictional review on Canada include:

- **British Columbia** is exploring regulation of ABA providers; it currently operates the Registry of Autism Service Providers (RASP).
- **Alberta** requires parents to submit a treatment/learning plan which considers services other than ABA, such as speech therapy, for the direct payment option.

In Canada, requirements for education and training differ depending on whether services are government funded:

- **Alberta:** BACB certification is recommended for individuals providing ABA intervention under the Family Support for Children with Disabilities program.
- **Manitoba:** A government-funded agency has autism consultants with either a Master's degree or a PhD who lead teams and manage interventions. The Department of Family Services and Labour funds ABA and IBI (Intensive Behaviour Intervention) services offered through a third party.
- **PEI:** Special Autism Education Coordinators must be BACB certified; IBI Autism Specialists must have a Master's degree.
- **New Brunswick:** The government requires a team model where members are certified through New Brunswick's Clinical Supervisor or Autism Support worker programs. A team includes one clinical supervisor (Master's degree in speech-language pathology, psychology, social work or education and has BACB certification), and two behaviour consultants working with a team of over 10 behaviour interventionists.

## **United States**

Many states have or are moving towards implementing licensing laws amid a growing need for qualified ABA providers, driven largely by a growing body of knowledge about ASD and insurance companies demanding that the profession be regulated. At present, approximately 30 US states have instituted some form of regulation/licensure. There are 44 states in the US, in addition to the District of Columbia and the US Virgin Islands, which have passed legislation that mandate insurance coverage of ABA activities, the majority of which specify BACB certification as a requirement .

In particular, a 2017 report by the Behavior Analyst Leadership Council (BALC) summarized the existing licensure approaches across the US as follows:<sup>178</sup>

**Full legislated licensure:** 25 US states have enacted licensure of behaviour analysis: Alabama, Alaska, Arizona, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, Missouri, Nevada, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Virginia, West Virginia, Washington, and Wisconsin.

**Introduced licensure bills:** Seven states have introduced licensure bills: California, Florida, Illinois, Michigan, Minnesota, North Carolina, and Texas.

**Plan to initiate new legislative actions in 2017/18:** Indiana, Iowa, and Nebraska.<sup>179</sup>

#### Legislative Language:

In 2012, the BACB developed a Model Act for Licensing and Regulating Behavior Analysts to assist regulatory bodies. The model provides the legislative language that states often draw from when creating their own licensing laws. It outlines standards and suggested qualifications for behaviour analysts that state legislators can use when developing their own legislation around regulation.

The 2017 BALC report noted that each of the 25 states with licensure laws, as well as the other states in the process of seeking licensure, specifically references the BACB standards and credentials

#### Population and Settings:

The 2017 BALC report noted that, with the exception of New York, the 25 licensure laws encompass the practice of behaviour analysis across settings and populations. The New York legislation is specific to provision of services only for people with autism; however, efforts are underway to modify this legislation to encompass the full range of populations who can benefit from behaviour analysis services. No further information was identified

#### Licensing Requirements:

In general, some combination of a degree and a specified number of classroom hours in specific behaviour analysis studies would qualify a candidate for licensing. Many states, particularly those that have closely adopted the BACB Model Act, require a BCBA certification which can be obtained in one of three ways. In nearly every state, even those that do not require the BCBA, a Master's degree is the standard minimum qualification required to become a licensed behaviour analyst.

### ***International***

- Czech Republic was the first country in Europe to pass a law establishing behaviour analyst as a new nonmedical health profession (Law passed the Senate at the end of

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<sup>178</sup> Behavior Analyst Leadership Council. (2018). Retrieved from: <http://www.balcllc.org/>

<sup>179</sup> Pino, (2017): AppliedBehaviorAnalysisEdu.org. (2017). ABA Certification Through the Behavior Analyst Certification Board (BACB). ). Retrieved from <https://www.appliedbehavioranalysisedu.org/bacb-certification-overview>:

June 2017).

- UK local Authorities partner with non-government funded agencies which provide BA after extensive assessment; however, BA is not regulated nor are titles protected.
- Australia's Department of Health does not recognize BA as an ASD viable therapy but other recognized providers are funded.
- ABA intervention is sporadically provided across European Countries (UK, Ireland, Germany, Greece, The Netherlands, Spain, Sweden).
- No country provides a regulatory mechanism for the delivery of ABA.

## 4.5 Analysis of Oversight Options

Based on the options provided and reviewed, HPRAC recommends that the oversight of ABA intervention include regulation as part of an existing health regulatory college. The regulatory body would include all elements of regulation such as title protection, scope of practice, and mechanisms for quality assurance and complaints. College membership should include providers who provide clinical oversight and are responsible for ABA activities such as conducting assessments, developing and implementing intervention plans, and monitoring and evaluation and who would be regulated under the college. HPRAC concludes that this type of oversight has the potential for the highest degree of impact for clients related to reduction of risk of harm, improved consumer knowledge/choice, quality of service, universality and enforceability.

### Oversight Options

Most of the identified information on oversight mechanisms for regulating professionals that deliver ABA was from the United States. The most common oversight mechanisms identified in the literature included:

**Governance Bodies:** Two types of governance bodies were identified: 1) government bodies, which include state licensing departments that determine licensing requirements; and 2) professional non-profit associations, such as the US-based Behavior Analyst Certification Board (BACB).

**Licensure:** This is mandated by state laws to establish a publicly funded governmental agency or a self-regulating and self-funding regulatory entity to carry out regulatory responsibilities (e.g., defining scope of practice, ethical/disciplinary standards).<sup>180</sup> According to the identified literature, the advantages of establishing a licensing and oversight system for ABA professionals include:

- Defining the scope of ABA practice<sup>181</sup>

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<sup>180</sup> As of 2017, 25 US states use licensure of behaviour analysis, seven have introduced licensure bills, and three plan to initiate new legislative actions.

- Strengthening the professional stature of ABA professionals<sup>182</sup>
- Enhancing ABA professionals' collaborative relationships with other professions in the health care delivery system while not impeding on the scope of practices or other activities of other professions<sup>183</sup>
- Enhancing the education and training required of ABA professionals, particularly if licensure is directly contingent upon requirements to successfully pass an exam<sup>184</sup>
- Attracting qualified ABA professionals to practise in areas where there are licensing requirements<sup>185</sup>
- Securing payment and reimbursement from third-party insurance companies for services provided by ABA professionals<sup>186</sup>
- Increasing consumer protection so that only licensed and adequately trained ABA professionals can provide services defined within the law as the scope of practice<sup>187</sup>
- Having a licensing board to maintain standards and to act as arbitrator and authority to conduct investigations into claims of professional misconduct or misrepresentation<sup>188</sup>
- Achieving cost-savings for the health care system<sup>189</sup>

**Title Protection:** Title protection provides a consistent title by which to identify ABA providers. This would remove existing confusion among the ten or more different title's used currently by ABA providers. Title protection would also prevent unregulated ABA providers from using the title as there would be offenses for doing so. Title protection will increase consistency in titles used by ABA providers. Title protection will also improve public protection because consumers will begin to recognize whether their ABA provider is regulated.

### **Scope of Practice:**

In the United States the BACB scope of practice criteria is used within various state licensing schemes, includes: the design, implementation, and evaluation of instructional and environmental modifications to produce socially significant improvement in human behaviour. The term would include all of the following:

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<sup>181</sup> Dorsey et al., (2009); Pino, R. (2017). Report to the general assembly: Scope of practice review committee report on behavior analysts (Rep.). Hartford, CT.

<sup>182</sup> SEG Management Consultants Inc. (2014); Dorsey et al.(2009)

<sup>183</sup> Pino R. (2017)

<sup>184</sup> Ibid.

<sup>185</sup> Senate Fiscal Agency. (2016). *Applied Behavior Analysis: Licensure - Bill Analysis* (State of Michigan, USA, Senate Fiscal Agency). Retrieved from <http://www.legislature.mi.gov/documents/2015-2016/billanalysis/Senate/pdf/2015-SFA-1015-E.pdf>

<sup>186</sup> Dorsey et al. (2009); Pino (2017); Senate Fiscal Agency (2016)

<sup>187</sup> Pino (2017); Senate Fiscal Agency (2016); SEG Management Consultants Inc. (2014); Dorsey et al. (2009)

<sup>188</sup> Ibid.

<sup>189</sup> Ibid.

- The empirical identification of functional relations between behaviour and environmental factors, known as functional assessment and analysis
- ABA interventions that are based on scientific research and the direct observation and measurement of behaviour and the environment
- The use of contextual factors, motivating operations, antecedent stimuli, or positive reinforcement
- The use of other consequences to help individuals develop new behaviours, increase or decrease existing behaviours, and emit behaviours under specific environmental conditions

Some factors which are excluded from scope of practice include:

- The practice of medicine or osteopathic medicine and surgery or medical diagnosis or treatment
- The practice of speech-language pathology, physical therapy, or occupational therapy
- Psychological testing, including standardized testing for intelligence or personality
- Diagnosis of a mental or physical impairment
- The practice of neuropsychology, psychotherapy, cognitive therapy, sex therapy, psychoanalysis, hypnotherapy, or counseling as treatment modalities

In Ontario, the scope of practice statements used in the health profession specific legislation (under the RHPA) serve as a frame of reference for regulated professionals to perform their authorized controlled acts [footnote to Bohnen, L. *RHPA: A Practical Guide*. Canada Law Book Inc. Aurora, Ontario 1994). Unlike under a licensing scheme (such as those used for BCBA regulation in the United States), the scope of practice statement in Ontario does not guarantee exclusivity; anyone unregulated may perform acts within the scope of practice of a regulated health profession under the RHPA. However, the performance of controlled acts within a profession's scope of practice must always be in accord with the legislative requirements.

**Certification:** Certification, unless it is mandated by legislation, is not required to practice ABA currently in Ontario. Certification, however, is often used to raise the stature of the profession in the eyes of the public, insurers, and governments, since certification is perceived as recognizing that those who are certified have defined and consistent set of qualifications. In the absence of regulation, certification attempts to ensure that certified providers are qualified to provide ABA services to clients, while uncertified providers may not be. However, certification standards may vary and more than one certification board may exist within one profession, thereby creating confusion.

The Behavior Analyst Certification Board (BACB) is based in the US and is the only certification identified during HPRAC’s review that offers certification to ABA providers both nationally and internationally, thus playing a major role in professionalization of ABA providers. The BACB is the only entity whose programs for certifying ABA professionals are recognized by both local and international ABA professional associations. The BACB administers the only legally and psychometrically validated professional examinations in the practice of ABA. This represents a much-needed attempt to standardize the qualifications of ABA providers.

As of January 16, 2018 the BACB estimates that approximately 31820 individuals across the globe currently hold some type of certification (BCBA-D, BCBA, BCaBa) from the Board, with 834 of them residing in the province of Ontario. The identified literature summarized that the BACB has established requirements for behaviour analysts wishing to provide supervision, including completion of an eight-hour competency-based training on effective supervision, an online supervision and experience training module, and a three-hour continuing education course as part of the total required 32-hours within each two-year re-certification cycle.<sup>190</sup>

Some limitations on reliance on BACB for oversight include:

- BACB certification for all ABA providers focuses on minimum, rather than optimum, educational standards. It hinges on an examination requiring only that multiple-choice questions be answered correctly, which does not significantly verify that practitioners can competently design or implement interventions in real life situations.<sup>191</sup>
- The board certification process is not adequate to protect clients or to prohibit abuses. The study suggested that the BACB did not appear to have the money, providers, time, or legal authority to provide the necessary ethical oversight. Instead, the study recommended that a state board of professional licensure should be established for consumer protection from unethical practices.<sup>192</sup>

**Education and Training Programs / Educational and Organizational Accreditation:** Several aspects of education and training programs are used by the BACB to regulate the training of ABA professionals and the delivery of ABA services to consumers. These include: course content, continuing education, and clinical supervisory training. Accreditation programs, which are based on self- and peer-review, ensure academic quality and accountability, and encourage improvement in higher education programs.

**Guidelines and Codes:** The BACB publishes guidelines and codes to help regulate the ABA profession in terms of professional and ethical behaviour (e.g., client responsibilities).

**Registries:** According to the 2014 SEG Management report and the BACB, registries serve as an important oversight mechanism to ensure that ABA interventions are delivered by qualified

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<sup>190</sup> Kazemi et al. (2013); Sellers et al. (2016)

<sup>191</sup> Critchfield, T. (2015). In *Dreams Begin Responsibility: Why and How to Measure the Quality of Graduate Training in Applied Behavior Analysis*. *Behav Analysis Practice*, 8, 123–133.

<sup>192</sup> Dorsey, M., Weinberg, M., Zane, T., & Guidi, M. (2009). The Case for Licensure of Applied Behavior Analysts. *Behavior Analysis in Practice*, 2(1), 53–58.



and certified ABA providers. Online registries developed by Autism Ontario and the BACB list such providers.

**Membership Organizations:** As reviewed above, membership organizations for ABA providers have been developed to protect and advance the interests of individuals engaged in the ABA (These organizations advocate for ABA providers' rights and interests) offer continuing education and promote awareness about the ABA profession to the public.

Association for Behavior Analysis International (ABAI): ABAI was established in 1974 and is the membership organization for behaviour analysts around the world. ABAI provides many services to its members including events that promote the dissemination of ABA, continuing education, job placement, research, scholarly articles, and a membership publication. Affiliated chapters<sup>193</sup> are membership organizations associated with ABAI and are defined by a geographical boundary (i.e., city, state/province, region, or country). As of 2017, there are 95 affiliated chapters with approximately 28,000 members, more than 15,000 in the US and more than 12,000 in other countries. These chapters hold conferences, sponsor lectures, and offer continuing education opportunities.

**Incident Reporting Systems and Disciplinary Actions:** These systems are used to regulate ABA providers and protect clients from professional misconduct.

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<sup>193</sup> The Ontario Association of Applied Behaviour Analysis (ONTABA) is an affiliate chapter of the ABAI

## Chapter 5: Conclusion

HPRAC recommends that ABA providers who are clinical supervisors be regulated as part of an existing health regulatory college, governed by the *Regulated Health Professions Act, 1991*(RHPA). This form of regulation would provide the highest degree of public protection and safety, and minimize the risk of harm associated with ABA activities. HPRAC's recommendation is supported by evidence gathered from literature, jurisdictional and jurisprudence reviews; and input from stakeholder consultations. Additionally, HPRAC acknowledges the SEG report commissioned by MCYS, for its process of conducting baseline research, consultation, and analysis.

Ideally, this form of regulation would mean that regulated clinical supervisors would oversee and approve ABA services delivered by front-line providers who may, or may not, be regulated. This tiered service delivery model should be a requirement for government funded ABA services.

HPRAC's advice to the Minister is based on the following findings it made:

- Client populations receiving ABA activities vary based on several characteristics which may combine to determine a client's potential risk of harm from ABA intervention
- Risk of harm is inherent in key ABA activities
- Oversight options range from doing nothing to full, self- regulation, and
- The public interest is best served by regulating ABA providers as part of an existing health regulatory college, governed by RHPA

### 5.1 Risk of Harm: Activities of ABA Intervention

Through evidence gathering and stakeholder consultations, HPRAC determined that key activities of ABA intervention carry some form of risk of harm. Additionally, risk of harm may occur as a result of a lack of ABA provider competencies and practising beyond them, as well as missed ABA intervention. It should be noted that increased competencies may mitigate the risks of harm associated with designing an ABA intervention plan.<sup>194</sup> The key activities of ABA intervention most likely to present a risk of harm to the client include:

- ABA assessment
- Designing an ABA intervention plan (including punishment, extinction and reinforcement based procedures)
- Delivering an ABA intervention plan, and
- Monitoring and evaluation of an ABA intervention plan

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<sup>194</sup> Vollmer et al. (2011).

## 5.2 Client Populations Receiving ABA Intervention

The client populations receiving ABA intervention go beyond individuals diagnosed with ASD. There are also many different settings in which clients receive ABA interventions (e.g., classrooms, community, and group homes). Risk of harm may be experienced by all client populations regardless of diagnosis (e.g., dual diagnosis).

HPRAC's findings affirm that clients' exposure to risk of harm when receiving ABA activities can vary based on at least four dimensions – setting, vulnerability, and severity of condition. Risk of harm may be experienced by all client populations regardless of diagnosis.

**Setting:** Client populations receive ABA intervention in a variety of settings, including geographical locations, such as rural and remote areas, as well as classrooms and group homes. Clients are also not limited to individuals who are diagnosed with ASD alone, and thus their treatment setting may vary.

**Vulnerability:** Can be due to several factors, including: the client's age, poor health, poor or no verbal communication skills or mobility, the absence of an advocate when the family is unable/unwilling to follow protocol, the client's setting which may present a challenge to service delivery; and the absence of a social support system. Additionally, client populations are at increased risk in the absence of ABA when consent is not properly obtained.

Although age is an element of defining client characteristics and vulnerability, children requiring ABA treatment are a special category. Early intervention strategies have been shown to benefit many children's life functions; however, there is a clear risk of harm.

**Severity of condition:** The risk of harm determined by severity of condition is based on a combination of factors on a continuum: degree of problem behaviour; client characteristics (needs and strengths); and quality of intervention. If a threshold is exceeded for one or more of these factors, the likelihood for risk of harm to occur increases.

- **Degree of problem behaviour:** A client may experience risk of harm based on problem behaviour when he or she exhibits one or more of the following factors (low to high occurrence) – moderate to severe actions; anti-social to criminal behaviour; actions directed at self or others; as well as inappropriate behaviour.
- **Client characteristics:** Client experience of risk of harm based on client characteristics (needs and strengths) could range from a continuum of high functioning (communication, good medical health, high mobility or moderate actions) to low functioning (non-communicative, poor medical health, immobility, or severe actions). The age of the client also constitutes an important characteristic which may contribute to his or her experience of risk of harm due to ABA intervention.
- **Quality of intervention:** A client's environment may also contribute to their experience of risk of harm. The environment may be optimal where the client receives care from a well-trained provider; has a supportive caregiver; or a support plan which is effectively

implemented by all involved in the client's care. Inversely, the client's environment may be sub-optimal, including conditions where the service providers may lack the relevant competencies; caregiver may be uninformed; and support plan may be poorly designed and require multiple, complex steps.

### **5.3 Oversight Options**

HPRAC acknowledges the SEG report completed for MCYS, which covered oversight mechanisms, among other issues. Because HPRAC was asked to assess ABA intervention for clients beyond those with ASD, it was necessary to augment and update SEG's findings on oversight mechanisms with its evidence and stakeholder consultations. The following were identified as key oversight options for providers who deliver ABA activities:

- Vetted voluntary provider list
- Mandatory Registry for government funded programs
- Regulation as part of an existing health regulatory college, and
- Regulation of title and exclusive scope of practice

Based on thorough analysis of the options, HPRAC recommends regulating ABA clinical supervisors as part of an existing RHPA college.

### **5.4 Observations**

In its deliberations, HPRAC made the following observations:

#### **Front-line providers are integral to how ABA activities are delivered**

HPRAC's recommendation focuses on clinical supervisors of ABA since they are essential to how ABA activities are delivered in Ontario. HPRAC also recognizes that front-line providers, who may or may not be regulated, deliver most of the ABA activities. Front-line providers also enable access to ABA activities in several settings, especially in rural, remote, Indigenous and ethno-cultural communities. Regulation of clinical supervisors would ensure proper oversight of ABA intervention plans delivered by most front-line providers while safeguarding continuation of care.

#### **Front-line providers must be accountable to clinical supervisors and employers**

Front-line providers, especially those working in private settings, must be held accountable to clinical supervisors and their employers. This is to ensure that they meet general requirements, such as passing police checks, in recognition of the vulnerable client population receiving care.

## **Transition period required to allow clinical supervisors to meet requirements**

HPRAC is aware that there is currently no standard for clinical supervisors overseeing the delivery of ABA activities in Ontario. In fact, many clinical supervisors have significant “life experience” but lack a certification credential. As such, clinical supervisors who provide oversight will require a transition period in order to meet the knowledge, skills, judgment, and competency standards required to join an existing regulated health college.

## **Ontario-based certification should be considered**

HPRAC heard and learned that there is a strong reliance on Behavior Analyst Certification Board (BACB) certification even though it is US-based. While HPRAC recognizes the stringent standards to meet BACB certification, it heard from stakeholders that having this certification did not necessary lead to knowledge and understanding of Ontario-specific needs, especially in the areas of privacy and consent. Therefore, HPRAC observed the need to develop an Ontario-based certification mechanism that builds on the BACB certification while taking into account the unique requirements of ABA providers in Ontario.

## **Communication to the public on how ABA is provided in Ontario**

HPRAC noted that it is difficult for the public to navigate the number of ABA programs that are offered and funded by multiple ministries and agencies. Further, titles vary based on program and this leads to confusion as to how ABA is delivered in Ontario. For this reason, HPRAC observed the need to improve communication on how, and by whom, ABA is delivered and to provide caregivers and clients with information on what to expect.

## 5.5 Recommendations

Based on what HPRAC heard and learned about ABA activities, it recommends to the Minister that clinical supervisors of front-line ABA providers involved in delivering these activities should be regulated as part of an existing health regulatory college governed by the *Regulated Health Professions Act, 1991*. In answer to the Minister's specific request for advice, HPRAC recommends the following:

### 1. In relation to activities of ABA intervention which present a risk of harm:

- i. The key activities of ABA intervention which present a risk of harm include:
  - ABA assessment
  - Designing an ABA intervention plan (including punishment, extinction and reinforcement based procedures)
  - Delivering an ABA intervention plan, and
  - Monitoring and evaluation
- ii. Additional risks of harm include inadequate competencies, including practising beyond the level of competency, training of ABA providers, and missed opportunities to provide ABA

### In relation to client populations who may experience risk of harm due to activities of ABA intervention:

- i. Clients receiving ABA intervention have a range of diagnoses beyond ASD
- ii. Client exposure to risk of harm when receiving ABA intervention varies based on setting, vulnerability, and severity of condition

### 2. In relation to potential oversight options of ABA providers:

The key oversight options which should be considered in relation to clinical supervisors of front-line providers who deliver ABA activities include:

- Vetted voluntary provider list
- Mandatory registry for government funded programs
- Regulation as part of an existing health regulatory college, and
- Regulation of title and exclusive scope of practice

HPRAC recommends regulation as part of an existing health regulatory college.



## Acronyms

Acronym	Meaning
ABA	Applied Behaviour Analysis
ABACUS	A list of Autism providers serving Ontario and run by Autism Ontario
ABAI	Association for Behavior Analysis International
ASD	Autism Spectrum Disorder
AO	Autism Ontario – Parent Advocacy Group
BA	Behaviour Analyst / Behavioural Analysis
BACB	Behavior Analyst Certification Board
BALC	Behavior Analyst Leadership Council
BCaBA	Board Certified Assistant Behavior Analyst
BCBA	Board Certified Behavior Analyst
BCBA-D	Board Certified Behavior Analyst -Doctoral
CAMH	Centre for Addiction and Mental Health
CNSC	Community Networks of Specialized Care
COTO	College of Occupational Therapists of Ontario
CPO	College of Psychologists of Ontario
CSPO	College of Physicians and Surgeons of Ontario
DD	Developmental Disabilities
DFO	Direct Funding Option
DSO	Direct Service Option
EA	Education Assistant
EAB	Experimental Analysis Behaviour
EDU	Ministry of Education
HPRAC	Health Professions Regulatory Advisory Council
IBI	Intensive Behavioural Intervention
ID	Intellectual Disabilities
MCSS	Ministry of Community and Social Services
MCYS	Ministry of Children and Youth Services
MOHLTC	Ministry of Health and Long-Term Care
NCR	Non-contingent Reinforcement
OADD	Ontario Association for Developmental Disabilities
OAP	Ontario Autism Program
OCSWSSW	Ontario College of Social Workers and Social Service Workers
ONTABA	Ontario Association for Behaviour Analysis
OSETT-ASD	Ontario Scientific Expert Taskforce for the Treatment of Autism Spectrum Disorders
OSLA	Ontario Association of Speech-Language Pathologists and Audiologists
OSOT	Ontario Society of Occupational Therapists
PHIPA	<i>Personal Health Information Protection Act, 2004</i>
PIPEDA	<i>Personal Information Protection and Electronic Documents Act</i>
PPM 140	Policy Program Memorandum – lays out requirements for providing Autism programming within schools



<b>Acronym</b>	<b>Meaning</b>
RAEB	Research, Analysis and Evaluation Branch (Ministry)
RAPON	Regional Autism Providers of Ontario
RASP	Registry of Autism Service Providers (British Columbia)
RBT	Registered Behavior Technician (under BACB)
RHPA	<i>Regulated Health Professions Act, 1991</i>
RNAO	Registered Nurses Association of Ontario
SAAAC	South Asian Autism Awareness Centre

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# APPENDICES

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## Appendix A: Minister's Letter to HPRAC, October 17, 2017

Ministry of Health  
and Long-Term Care

Office of the Minister

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80 Grosvenor Street  
Toronto ON M7A 2C4  
Tel. 416 327-4300  
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www.ontario.ca/health

Ministère de la Santé  
et des Soins de longue durée

Bureau du ministre

Édifice Hepburn, 10<sup>e</sup> étage  
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OCT 17 2017

HLTC2968MC-2017-205

Mr. Thomas Corcoran  
Chair  
Health Professions Regulatory Advisory Council  
56 Wellesley Street West, 12<sup>th</sup> Floor  
Toronto ON M5S 2S3

Dear Mr. Corcoran:

In June 2017, Ontario announced a sweeping transformation to how this province provides services and supports for children and youth with Autism Spectrum Disorder through the new Ontario Autism Program (OAP). Delivering the best services for children and youth with autism requires ensuring the appropriate quality and accountability of those services.

The Ministry of Children and Youth Services (MCYS) has previously contracted a study to assess the viability of creating an Ontario-based certification process for Applied Behaviour Analysis (ABA) practitioners working with those with Autism Spectrum Disorder. MCYS's study concluded that there was a risk of harm associated with the delivery of ABA therapy, and that there was a case to be made for increasing the oversight of ABA practitioners.

While ABA practitioners predominantly provide services to Ontarians with an Autism Spectrum Disorder, they also provide services to other client populations. With this in mind, I am asking HPRAC to provide me with advice on:

- What activities or aspects associated with ABA therapy pose a significant and inherent risk of harm (if any), and whether the risk of harm of this therapy varies by client population (e.g. children and adult); and
- If there is a risk of harm, what is the range of options for an approach to oversight that could be considered.

I would like HPRAC to provide me with its advice no later than January 31, 2018.

...2

Mr. Thomas Corcoran

-2-

Finally, I would like to express my appreciation to you and members of the Council for supporting this important initiative. If you have any questions, please contact Denise Cole, Assistant Deputy Minister, Health Workforce Planning and Regulatory Affairs Division (HWPRAD) at [denise.cole@ontario.ca](mailto:denise.cole@ontario.ca) or 416-212-7688.

Yours sincerely,



705 7 1 700

Dr. Eric Hoskins  
Minister

c: The Honourable Michael Coteau, Minister of Children and Youth Services  
Drew Davidson, Chief of Staff, Minister's Office, MCYS  
Nancy Matthews, Deputy Minister, MCYS  
Dr. Bob Bell, Deputy Minister, MOHLTC  
Denise Cole, Assistant Deputy Minister, MOHLTC  
Presidents and Registrars of the Regulated Health Professional Colleges

## Appendix B: About HPRAC

When a referral is received from the Minister, HPRAC strives to determine the key public interest concerns and tries to understand all relevant perspectives on the issues. Each referral proceeds through a multi-stage process in which information and responses are requested from, and often shared with, stakeholders. HPRAC conducts literature, jurisdictional, and jurisprudence reviews, and engages in key informant interviews. Further research and analysis help HPRAC determine where additional information is required.

Stakeholder input is important to HPRAC when it develops its recommendations to the Minister. As part of its consultation process, HPRAC notifies and consults with stakeholders that could be affected by its recommendations, including health regulatory colleges, health profession associations, health care professionals, and the public. In general, the following key principles are used in the development of the consultation program:

- The inclusion of interested stakeholders and members of the public at a level of involvement that reflects their needs and interests
- Flexibility in responding to unanticipated issues and stakeholder input throughout the referral period
- An expectation that the consultation process will crystallize broad themes as well as highlight unanticipated “outlier” issues. The data are not expected to indicate wholesale and definitive support for, or opposition to, a particular topic. Respondents self-select to participate in the consultation process and may not be representative of a larger group
- A commitment to incorporating issues, concerns, comments, and perspectives into the recommendation-making process
- Ensuring that all consultation material is available in both official languages (on request, HPRAC will provide information in accessible formats)

HPRAC may consult with selected individuals and organizations if it needs additional information to complete its work. Persons or organizations with identified expertise or a stake in the issue may be invited, at HPRAC’s discretion, to make presentations, reports, or submissions. See Table 3 for a list of organizations consulted for this referral.



## Appendix C: Brief Timeline of Significant Events in ABA

Early research on behaviour principles occurred in laboratory settings with animals and some humans to explain how environmental events influence behaviour. ABA evolved in the 1950s and 1960s as principles of behaviour were used with humans in naturalistic settings.<sup>195</sup> The following are significant events in ABA:

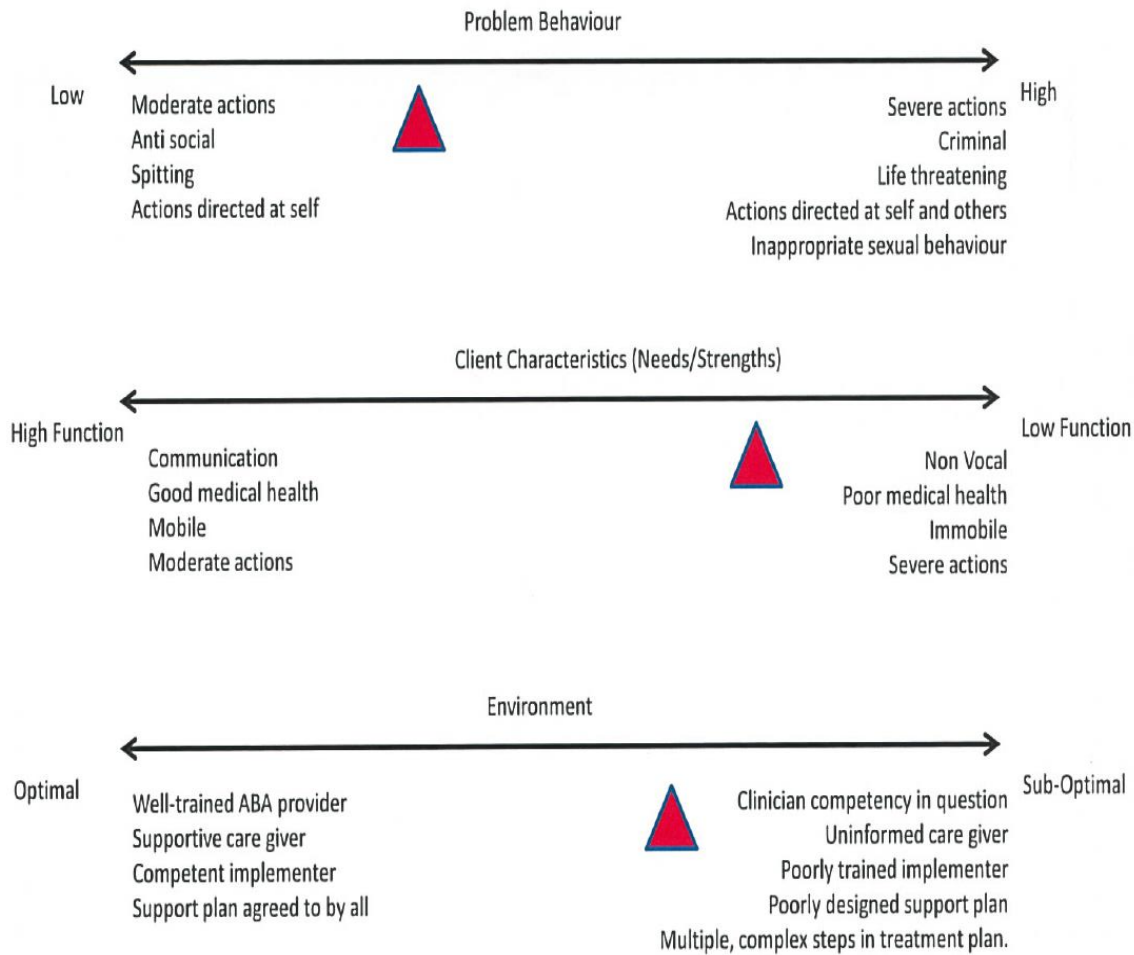
- **1930-'50s:** B. F. Skinner identified behaviour principles and process (e.g., reinforcement, punishment, extinction) in laboratory experiments. Founder of Experimental Analysis of Behaviour
- **1959:** Formal beginnings of ABA can be traced to article published in ABA by Ayllon and Michael “The Psychiatric Nurse as a Behaviour Engineer”. Direct care provider at a hospital used ABA procedures (e.g., reinforcement, extinction) to improve functioning (e.g., reduce problem behaviour and increase appropriate behaviour) of clients with psychiatric disorders (e.g., Schizophrenia)<sup>196</sup>
- **1961:** Ivar Lovaas begins work at UCLA on the treatment of autism. Lovaas’s work has influenced how ABA is provided to preschoolers with Autism today.
- **1968:** Contemporary ABA began with first issue of Journal of Applied Behaviour Analysis (JABA). Also, in 1968, Bear, Wolf and Risley provided both a definition of ABA and key features of the practice of ABA.
- **1982:** Iwata et al. (1994) published “Toward a functional analysis of self-injury”. This article has influenced how behaviour assessments are conducted to develop intervention plans for reducing problem behaviour.
- **1998:** U.S. based Behaviour Analyst Certification Board (BACB) established to provide consumers a way to recognize quality ABA providers.

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<sup>195</sup> Cooper et al., (2007)

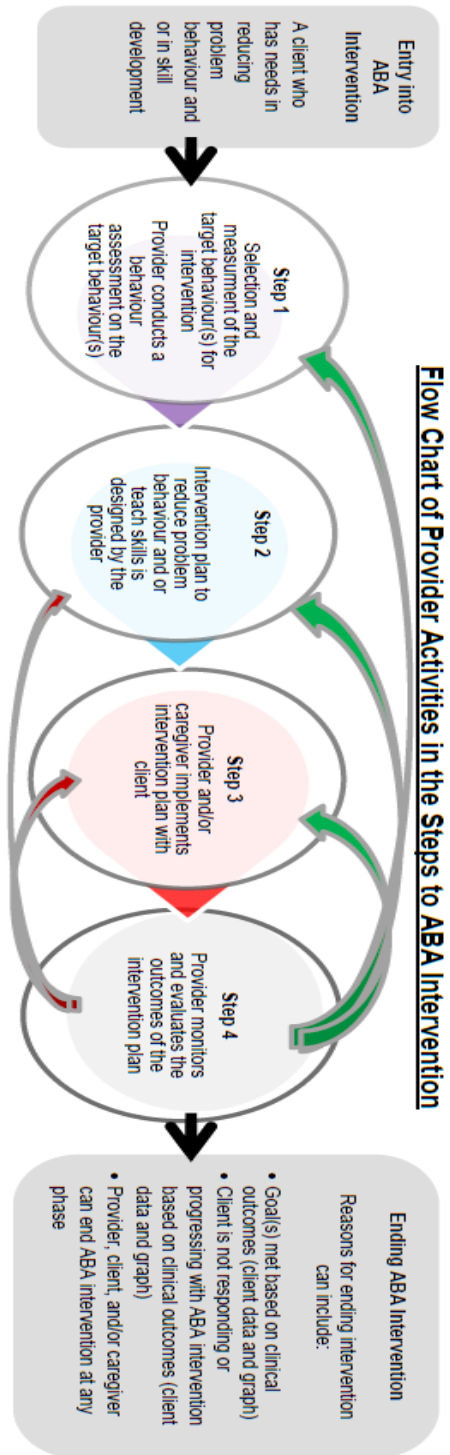
<sup>196</sup> Ayllon, T., & Michael, J. (1959). The psychiatric nurse as a behavioral engineer. *Journal of the Experimental Analysis of Behavior*, 2(4), 323–334. <http://doi.org/10.1901/jeab.1959.2-323>

## Appendix D: Client Population Severity Model



# Appendix E: Provider Activities in ABA Intervention

## Flow Chart of Provider Activities in the Steps to ABA Intervention



- Step 1: Behaviour Assessment**  
**Activities performed by the provider include (not limited to):**
- Collaborates with caregivers and clients in the selection of target behaviour(s) for intervention
  - Review and signs a confidentiality agreement with caregiver and client
  - Defines the target behaviour in observable terms
  - Selects appropriate method (i.e. frequency, duration) to measure the target behaviour
  - Conducts observations on the target behaviour(s) in natural environment(s)
  - Collects baseline data and/or teaches caregiver/client to collect baseline data on target behaviour
  - Reviews client records (e.g. medical history, past intervention plans)
  - Contacts other professionals involved with client or have been involved with client
  - Conducts a functional behaviour assessment (i.e. functional analysis, ABC analysis) to determine the "function(s)" and environmental factors that influence the problem behaviour and/or a skills assessment (i.e. curriculum, probe skill in natural environment)
  - Reviews baseline data and graphs data to visually inspect the trend line of data to determine need for intervention
  - Need for intervention is indicated if baseline trend line on graph indicates: (i) upward trend or high rates of problem behaviour for behaviour reduction plans; (ii) low rates or the absence of the target skill for skill acquisition plan
  - If baseline trend line indicates there is no need for intervention, the provider along with caregivers look at other possible target behaviours for intervention
- Step 2: Designing the Intervention Plan**  
**Activities performed by the provider include (not limited to):**
- Finalizes goal(s) for intervention with caregiver/client
  - Designs an intervention plan to reduce problem behaviour (e.g. selecting a functionally equivalent behaviour) and/or promote skill acquisition (e.g. selecting appropriate prompting and chaining procedures)
  - Selects procedures to include in an intervention plan using baseline data/assessment information, client and context characteristics, and best available evidence
  - Writes the procedures in detail and specific to allow for consistent implementation from caregiver(s) and/or other providers
  - Plans for potential side effects of certain procedures
  - Selects procedures by balancing a client's right to effective intervention and following a least-to-most intrusive approach
  - Incorporates methods to promote generalization of behaviour reduction and/or skill acquisition to other people, environments etc.
  - Reviews intervention plan with the caregiver(s) and client to obtain informed consent
- Step 3: Implementing the Intervention Plan**  
**Activities performed by the provider include (not limited to):**
- Implements the intervention plan directly to a client and/or caregiver
  - Provides training to caregivers to implement intervention and others in clients environment (i.e. educational personnel)
  - Provides "in vivo" training and support to caregivers or other providers during implementation
  - Problem solves implementation issues with caregivers and other providers
  - Implements intervention plan across several settings and caregivers to promote the generalization or acquired skills and/or behaviour reduction
- Feedback Loop (not limited to):**
- If the caregiver and/or provider is having difficulties in implementing all elements of an intervention plan, the provider may have to go back to intervention plan (step 2) and stagger or modify procedures
  - The provider monitor's the effects of the procedures on the client to determine if changes to procedures are required (i.e. Client is not responding to the chosen prompt sequence to teaching a skill). If so, changes to the intervention plan (step 2) or further assessment may be required (step 1).
- Step 4: Monitoring and Evaluation**  
*Please note that monitoring and evaluation is ongoing and occurring throughout all steps*  
**Activities performed by the provider include (not limited to):**
- Reviews and monitors data collection and graphs to determine the effectiveness of the intervention
  - Through visual inspection, looks for a functional relationship between the intervention plan on the target behaviour
  - Collaborates with caregivers, and clients, to determine whether to continue, discontinue, alter or fade the intervention and/or procedures based on graph/data
  - Follows up with client and/or caregiver to see if skills and/or behaviour reduction has maintained over a period of time (i.e. 1 month after intervention was ended)
  - Ongoing monitoring of:
    - Implementation of intervention plan by caregivers or other providers for treatment integrity
    - Intrinsic procedures used (if any)
    - Side effects (if any)
  - How the client is responding to the procedures
- Feedback Loop (not limited to):**
- I. If graph indicates a trend in the opposite direction to the goal of intervention, next steps may include:
    - Reviewing the implementation of the plan to see the provider and/or caregiver integrity to implementing the procedures (step 3);
  - II. Reviewing the intervention plan to determine if appropriate procedures were chosen or missed (step 2);
  - III. Reviewing assessment data to see if something was missed.

The flow chart was created using information from the following sources:  
 Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis* (2nd ed.). Upper Saddle River, NJ: Pearson - Merrill Prentice Hall  
 Slocum, T. A., Derrin, R., Wilczynski, S. M., Spence, T. D., Lewis, T., & Wolfe, K. (2014). The evidence-based practice of applied behavior analysis. *The Behavior Analyst*, 37(1), 41-56.  
 Volmer, T. R., Soman, K. M., & Piplin, C. S. P. (2009). Practical implications of data reliability and treatment integrity monitoring. *Behavior analysis in practice*, 1(2), 4-11.

## Appendix F: Invitation for Written Submissions

### Purpose

HPRAC invites key stakeholders to provide written submissions on their understanding of and views on what activities or aspects associated with Applied Behaviour Analysis (ABA) pose a risk of harm to the public. Furthermore, we are interested to know whether the risk of harm varies by client population and, if there is a risk of harm, what is the range of options for an approach to oversight that could be considered.

HPRAC understands that the delivery of ABA intervention includes several activities that consist of, but are not limited to:

- conducting a behaviour assessment,
- developing an intervention plan, and
- implementing the intervention plan.

These interventions may be delivered by one provider or in a tiered system where multiple providers are involved. Common in the delivery of ABA intervention are two types of providers:

- Providers who provide clinical oversight on all activities and participate in aspects of the delivery, and
- Provider(s) delivering the ABA intervention directly to a client and training caregivers to implement the intervention.

Both groups of providers may, or may not, be certified with the Behavior Analyst Certification Board (BACB).

When answering the questions below, consider the risk of harm (if any) to the public by both providers who supervise ABA interventions, and by providers who deliver the ABA intervention. The written submissions will be used as part of the process to inform the advice which the Health Professions Regulatory Advisory Council (HRPAC) will provide to the Minister of Health and Long-Term Care.

### How to complete the submission

Please provide a written response to each question. You may include additional comments at the end of the submission. Please submit your organization's written feedback by **Monday, December 8, 2017**, to the following email: [hpracsubmissions@ontario.ca](mailto:hpracsubmissions@ontario.ca). Late submissions may also be considered.

Note that written submissions will be made publically available on HPRAC's website. Please indicate in writing on the written submission, if you wish to withhold your consent to make your submission public.

## **Guidance Questions for input on the Applied Behaviour Analysis Referral**

1. Based on your experiences, do activities or aspects of ABA intervention pose a risk of harm to clients? If so,
  - a) What are these activities or aspects?
  - b) Are some groups of ABA clients more at risk of harm than others?
  - c) Are some settings where ABA is provided more high risk than others?
2. Who can provide ABA interventions (e.g., minimum education, training, experience and certification requirements)?
3. In your view, should an oversight mechanism of ABA providers be implemented in Ontario? If such an oversight mechanism were implemented, should it deal only with those providers who provide supervision who may, or may not, be certified, or should it also include those actually delivering ABA intervention directly with clients and caregivers who may, or may not, be certified? If so, what type of oversight mechanisms should be considered?

Any other comments:

Please provide any other comments which you feel will assist HPRAC in providing advice to the Minister of Health and Long-Term Care.

Thank you for your feedback.

## **Appendix G: Online Survey Questions and Responses**

### **Methodology**

- The survey comprised 18 closed and open-ended questions
- It was made available on SurveyMonkey via the HPRAC website
- Survey was open from November 27 to December 8, 2017
- It was sent out to providers, family associations, professional associations, health regulated hospitals, academic institutions, advocacy groups, other service recipients
- Total sample of 736 respondents

### **Summary of results**

- Providers with a BACB certification are found in both groups a) those delivering ABA and b) those supervising ABA; other professionals made up almost half of responders (40%)

### **ABA is provided to:**

- A variety of client populations with the highest prevalence for those with an Autism Spectrum Disorder and developmental disabilities
- Across the age span with the highest prevalence for those 18 and under, and
- Across multiple settings with home (76%) and school environments (62%) comprising the highest prevalence
- A high proportion of providers, both certified and uncertified, engage in ABA activities that include conducting assessments, designing intervention plans, implementing intervention plans with caregivers
- Approximately half of service recipients (e.g., family members, group home staff) are involved in ABA activities
- Standard qualifications for both providers delivering (92%) and supervising (91%) ABA would lead to safe and effective ABA
- A quality assurance approach would lead to safe and effective ABA (80%)

### **Risk of Harm:**

- Responders indicated a risk of harm associated with ABA (74%)
- Risk of harm varying by client population was split with almost half saying yes (44%) and others saying no (31%)

### **Oversight options:**

- Responders endorsed the regulation/legislation with title protection/scope of practice option (82%) followed by the registry (59%)
- High percentage indicated that both providers who supervise and deliver ABA should fall under this oversight (71%)

## **ABA Survey Results: Question 1**

**I am (please check all that apply)**

- Another professional 40.33%
- Provider who delivers ABA
  - without a certification from the BACB 20%
  - with a certification with the BACB 19%
- Provider who supervises the delivery of ABA:
  - without a certification from the BACB 12%
  - with a certification with the BACB 19%
- A member of an organization that supports a client that has received ABA (e.g., group home staff) 13%
- Other (please specify) 11% psychologists/teacher/speech pathologists
- Parent or a family member whose loved one has received ABA 11%
- A professor from an academic institution 8%
- A student enrolled in an academic institution 6%
- A client advocate 5%
- A client who has received ABA .41%
  - **Total Respondents: n=734**

## **ABA Survey Results: Question 2**

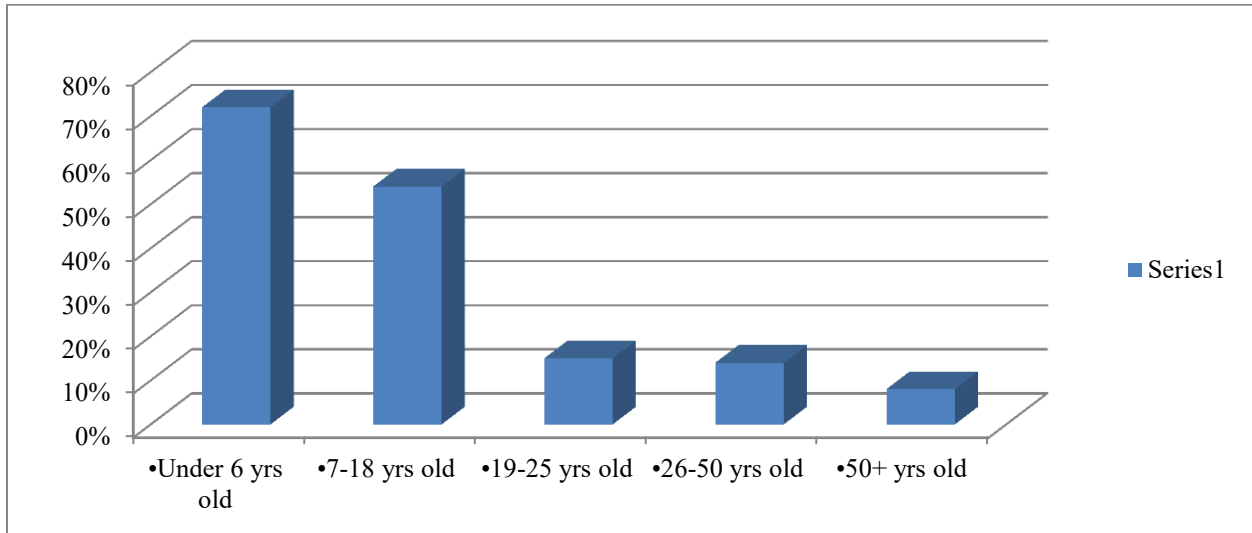
**If you are a client of ABA intervention or a family member please check off the diagnosis (if any) of the person you are supporting who received ABA. Please check all that apply. Total respondents (n=158)**

<b>Diagnosis</b>	<b>%</b>
Autism Spectrum Disorder	82
Developmental Disability	25
Dual Diagnosis	21
Attention Deficit Hyperactivity Disorder	21
Mental Health Disorder	9
Acquired Brain Injury	6
Genetic Disorder	6
Dementia	2

**Total respondents (n=158)**

### **ABA Survey Results: Questions 3**

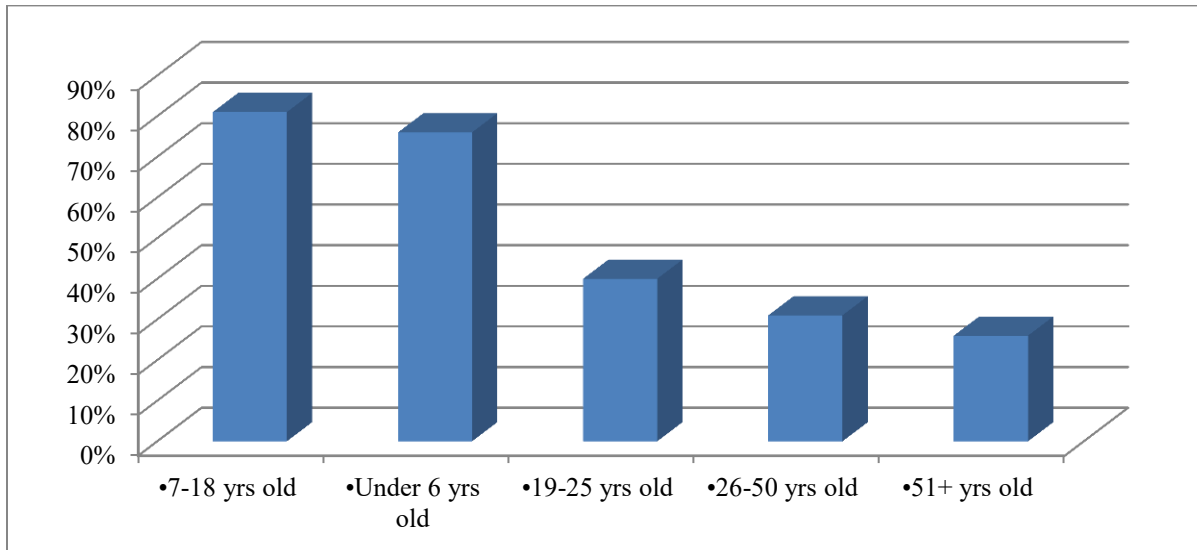
**If you are a client, family member or a member of an organization that supports a client that has received ABA, how old were you or your child/client when receiving ABA intervention?**



**Total Respondents: (n=286)**

### **ABA Survey Results: Question 4**

**If you are an ABA provider, what is the age range of clients that you supervised and delivered ABA intervention to?**

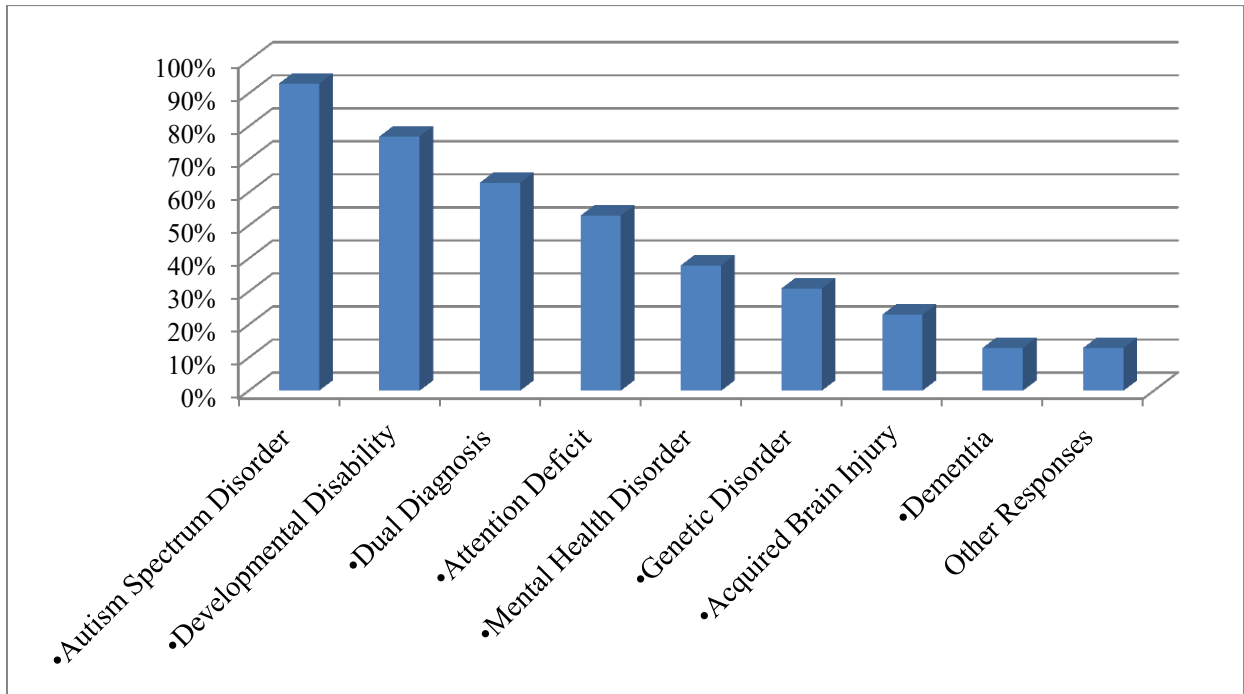


**Total Respondents: (n=406)**



## **ABA Survey Results: Question 5**

**If you are an ABA provider, please check off all the client populations that you have supervised and delivered ABA intervention to?**



**Total Respondents: (n=409)**

## **ABA Survey Results: Question 6**

**If you are an ABA provider, what types of activities have you engaged in, in your current role during the delivery of ABA intervention? Please check all that apply.**

- **Total Respondents: (n=406), common activities included:**

<b>Activity</b>	<b>% of Engagement</b>
Collected data on the target behaviour	90
Conducted assessments of relevant skill strengths and deficits	87
Analyzed graphs	86
Designed an intervention plan to reduce problematic behaviour	86
Designed an intervention plan for skill acquisition	84
Conducted a functional behaviour assessment	82
Trained providers to implement an intervention plan to a client/family members/other caregivers	82
Trained family members /caregivers to implement an intervention plan to the client	80
Implemented an intervention plan directly to a client	79

Activity	% of Engagement
Supervised providers in the delivery of ABA intervention	71

### **ABA Survey Results: Question 7**

**If you are a client, family member or a member of an organization that supports a client that has received ABA, what types of activities did you participate in during the delivery of ABA intervention?**

- **Total respondents: n=316, common activities included:**

Activity	% of Engagement
Selected the goal(s) for intervention	69
Helped to conduct an assessment of relevant skill strengths and deficits	61
Used ABA activities based on an intervention plan to teach skills	59
Used ABA activities based on an intervention plan to reduce problematic behaviour	58
Helped to conduct a functional behaviour assessment	58
Helped in the design of an intervention plan	56
Collected data	51
Reviewed graphs	50
Trained other family members and other caregivers to use ABA activities and implement an intervention plan	45
Selected the data collection methods	44

### **ABA Survey Results: Question 8**

**If you are an ABA provider, family member or a member of an organization that supports a client who has received ABA, please check off the settings in which ABA intervention was provided:**

- Family home 76%
- Group home 30%
- School 62%
- Nursing home 6%
- Hospital 15%
- Clinic 51%
- Community setting (e.g., park, library, mall) 50%
- Other Responses (please specify) 16%: Treatment centre/facility, centre, day care

**Total Respondents: n=537**

### **ABA Survey Results: Question 9**

**Do you believe that standard qualifications for providers "supervising" ABA intervention would increase the safety and effectiveness of ABA provided?**

- Yes 91%
- No 2%
- Undecided 7%

**Total Respondents: n=723**

### **ABA Survey Results: Question 10**

**If you chose "Yes" in question 9, what should be the standard qualifications for ABA providers that supervise the delivery of ABA intervention? Please check all that apply.**

- Due to amount of options, those above 50% presented below:
- Master's degree 69%
- Education in Applied Behaviour Analysis 67%
- Has 5 + years experience in delivering ABA intervention 53%
- Demonstrated competency in delivering ABA intervention 71%
- Demonstrated competency in supervising the delivery of ABA intervention 66%
- Received "in field" training in delivering ABA intervention 57%
- Received training on how to supervise providers delivering ABA intervention 61%
- Has experience with the client population 70%
- Has a certification with the BACB 61%
- **Total respondents: n=686**

### **ABA Survey Results: Question 11**

**Do you believe that standard qualifications for providers "delivering" ABA intervention would increase the safety and effectiveness of ABA provided to clients and their caregivers?**

- Yes 92%
- No 3%
- Undecided 5%
- **Total Respondents: n=726**

### **ABA Survey Results: Question 12**

**If you chose "yes" in question 11, what should be the standard qualifications for ABA providers that deliver ABA intervention? Please check all that apply.**

- **Total Respondents: n=685**
-

<b>Qualifications for Delivery</b>	<b>% of Respondents</b>
Demonstrated competency in delivering ABA intervention	73
Education in Applied Behaviour Analysis	70
Received "in the field" training in delivering ABA intervention	69
Has experience with the client population	61
Undergraduate degree	54
Other	12

### **ABA Survey Results: Question 13**

**Should there be a quality assurance approach to ensure that quality and effective ABA intervention is provided to clients and their caregivers?**

- Yes 80%
- No 2%
- Undecided 17%
- If you chose "Yes", how do you envision this quality assurance approach? 53%: Review mechanisms, quality assurance, continuing education, regulatory body, peer review, college of psychologists

**Total Respondents: n=723**

### **ABA Survey Results: Question 14**

**Are there activities or aspects of ABA interventions that pose a risk of harm to clients?**

- Yes 74%
- No 8%
- Undecided 18%
- If you chose "Yes", please describe these activities/or aspects and the risk(s) 67%: Please see next slide

**Total Respondents: n= 719**

**Risks indicated by respondents include:**

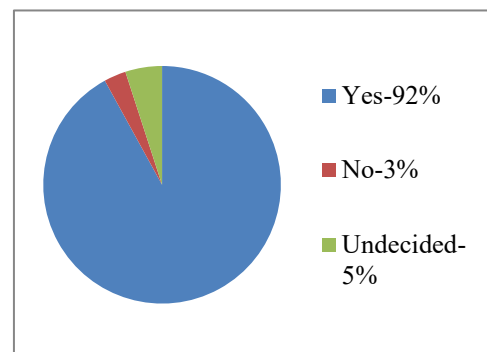
- Lack of collaboration
- Risk of harm due to not collecting precise measurement of behaviour
- Any ABA activity can cause harm
- Specific procedures identified: reinforcement, intrusive, prompting, extinction, functional analysis, punishment, restraints, aversive techniques, procedures for feeding disorders/challenging behaviours/not collecting data or using data during intervention/monitoring
- Practising beyond competency (i.e., medical, communication disorders)
- Incompetent providers or providers that lack training and education in ABA

- Omission/commission issues (i.e., not determining “function” for behaviour for plan) and reinforcing a problem behaviour by not knowing
- Clients with aggression, self-injurious behaviours
- Choosing the wrong goals for intervention or not based on child developmental sequence
- Inappropriate procedures during teaching skills programs and reducing problem behaviours
- Implementation of procedures without treatment integrity, and supervision by qualified professional
- Risk of harm of not knowing clients’ rights about consent, privacy, confidentiality
- Treatment decision making during the design of the intervention plan
- Lack of planning for generalization
- Providing effective/competent treatment to children with Autism during “critical time” lead to long term impact on development-delayed progress-lack of generalization

### **ABA Survey Results: Question 15**

**If you chose "yes" in question 14, does this risk of harm vary by client population?**

- Yes 44%
- No 31%
- Undecided 24%
- If you chose "yes", please describe below 39%% (please see next question)
  - **Total Respondents: n= 614**



**If risk varies by client population, common responses included risk of harm due to:**

- Intensity/frequency of client’s challenging behaviour
- Size of client (the taller/stronger) can cause more physical harm to others
- Clients that are unable to communicate to express consent, displeasure with treatment, advocacy etc.
- Cognitive deficit of client to understand treatment choices etc.
- Age carries risk:
  - Some indicate that the older and stronger the client the more risk of harm to caregivers than younger clients and,
  - Other respondents included that children more at risk of harm if effective treatment is not provided which can have long term implications on their quality of life
- Mental health needs of client carries more risk of harm due to ABA provider practising within competency

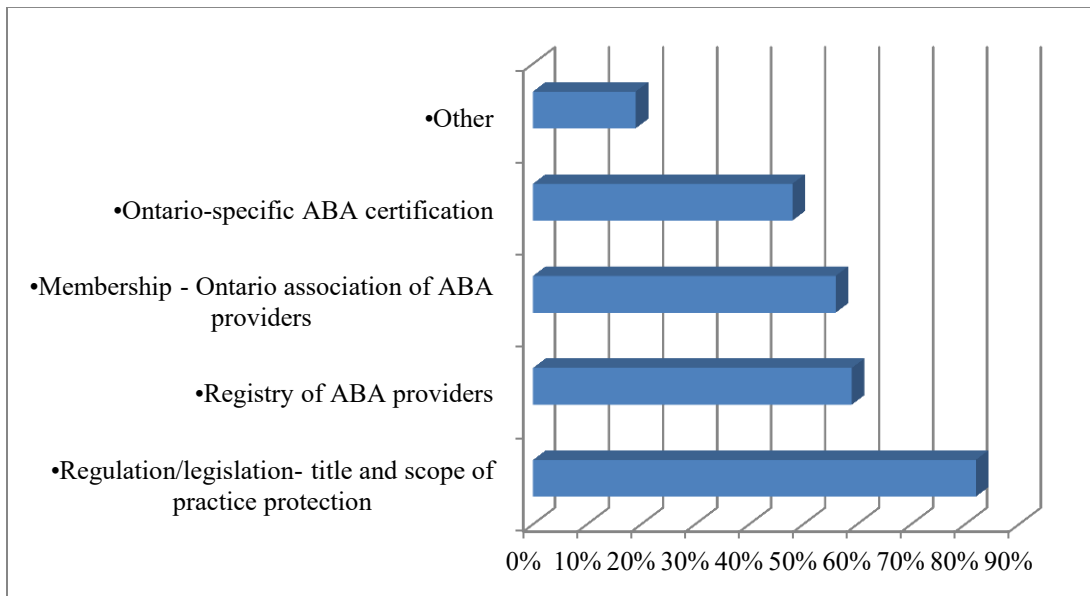
## **ABA Survey Results: Question 16**

**Should there be a formal process for ABA clients and service recipients to lay complaints against ABA practitioners for poor quality services, incompetence or unprofessional conduct?**

- Yes 91%
- No 2%
- Undecided 8%
- If you chose "Yes", how do you envision this process? 66%: Registered profession, regulatory body, BACB, provincial review of providers, regulated health, college of psychology
  - **Total Respondents: n=723**

## **ABA Survey Results: Question 17**

**What type of oversight options would ensure that a safe and effective ABA intervention is provided? Please check all that apply:**



**Total Respondents: n=717**

## **ABA Survey Results: Question 18**

**Which ABA providers would be included in the oversight mechanism you chose in question 17? Please check all that apply:**

- Providers with certification from the BACB 55%
- Providers that do not have a certification with the BACB 17%
- Both BACB certified and uncertified providers 47%

- Providers who supervise the delivery of ABA intervention 41%
- Providers who deliver ABA intervention 31%
- Both providers who supervise and deliver the ABA intervention 71%
- Other (please specify) 15%
- **Total Respondents: n=703**







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