COLLEGE OF CHIROPRACTORS OF ALBERTA

Artificial Intelligence (AI) Guideline for Chiropractors

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Introduction

Artificial intelligence (AI) is a broad term used to describe the science and engineering of developing machines that are capable of performing tasks typically associated with human intelligence. These systems operate through algorithms or defined sets of rules that enable them to replicate cognitive functions such as learning, pattern recognition, and problem solving. Terms such as agentic AI, generative AI, and predictive AI are used to describe different types of AI applications, each with distinct capabilities and uses.

Many AI systems operate with human oversight, meaning that a person reviews, validates, and remains responsible for the outputs generated by the technology. This approach is commonly referred to as having a human-in-the-loop. In contrast, agentic AI systems function without human oversight or validation, which introduces increased risk.

AI is increasingly used in health care. AI tools may help with tasks such as documentation, scheduling, communication, and organizing information. These tools are beginning to appear more in chiropractic practices.

When properly deployed, AI can improve efficiency and reduce administrative workload. However, it can **never** replace a chiropractor's professional judgment or clinical reasoning. AI tools used in regulated health care practice are expected to include a human-in-the-loop to ensure appropriate oversight, accountability, and professional judgment. AI may be used in chiropractic practice only if it complies with applicable legislation and professional standards, including:

- The *Health Professions Act* (HPA)
- The *Health Information Act* (HIA)
- The Personal Information Protection Act (PIPA)
- The *Personal Information Protection and Electronic Documents Act* (PIPEDA)
- CCOA *Code of Ethics* (COE)
- CCOA *Standards of Practice* (SP)

This guideline is intended to help chiropractors understand how AI may be used safely and responsibly in chiropractic practice.

This guideline explains:

- The benefits and risks of AI tools
- The professional responsibilities of chiropractors who use AI
- How AI use must comply with the *Health Professions Act*, *Code of Ethics*, and *Standards of Practice*

This guideline is intended to:

- Protect the public interest
- Help chiropractors meet their professional and ethical obligations
- Support safe and responsible use of AI in practice

This guideline supports the requirements of the *Health Professions Act*, the Standards of Practice, and the Code of Ethics. It may be considered as part of the following non-exhaustive list of processes:

- Complaints and investigations
- Practice visits or competence reviews
- Assessments of professional conduct or documentation

Legislative Background

Chiropractic practice in Alberta is governed by several laws that continue to apply when AI tools are used in practice. The use of AI does not change a chiropractor's legal or professional responsibilities. Instead, it adds additional considerations and responsibilities related to privacy, data use, and accountability that must be addressed before AI tools are introduced.

At present, there is no comprehensive federal legislation that specifically regulates the development or use of artificial intelligence in health care. However, for the purposes of AI use in chiropractic practice, chiropractors must identify, understand, and comply with the legislation that is applicable to AI use, including:

- **The *Health Professions Act***. This Act establishes the regulatory framework for chiropractic practice in Alberta and supports the College's mandate to protect the public interest.
- **The *Health Information Act***. This Act governs how health information is collected, used, disclosed, stored, and protected by custodians and affiliates. It applies to chiropractors who work in public systems or who act as affiliates of custodians under the Act.
- **The *Personal Information Protection Act***. This legislation applies to chiropractors working in private practice. It regulates how personal and health information is collected, used, and disclosed in the course of professional practice.
- **The *Personal Information Protection and Electronic Documents Act***. This federal legislation applies in limited situations, particularly when personal information is transferred across provincial or national borders as part of commercial activity. It may apply when AI vendors store or process data outside Alberta or Canada.

Because dedicated AI legislation is limited and evidence related to the safe use of AI in chiropractic practice is still developing, there are many unknowns. For this reason, chiropractors must take a cautious and informed approach when considering whether and how to use AI tools in their practice.

Chiropractors should be aware that federal and provincial approaches to AI regulation are continuing to evolve. New legislative requirements may be introduced as governments respond to emerging technologies. Chiropractors are responsible for keeping up with all legislation that governs any part of their practice, including AI.

Risks of AI Use

Because artificial intelligence offers both potential benefits and important risks, chiropractors must clearly understand their responsibilities when choosing to use AI in practice.

Although AI may offer useful benefits, it also presents risks. These risks must be understood and actively managed by chiropractors before AI tools are introduced or relied upon in chiropractic practice. Risks that may arise in chiropractic settings include, but are not limited to, the following:

1. **Hallucination, misinterpretation, or fabrication of information,** particularly with generative AI tools. These tools may produce information that is inaccurate or completely incorrect. Because these responses can appear confident and authoritative, there is a risk that incorrect information may be included in documentation, communication, or decision-making.
2. **Inaccurate or non-evidence-based conten**t. This risk is particularly relevant when AI is used to support information related to diagnosis, treatment planning, or patient education. AI outputs may rely on outdated or poor-quality sources that are not aligned with current chiropractic evidence or the profession's scope of practice.
3. **Limited transparency in how AI systems process and analyze data**. In some systems, it may be difficult to understand how the AI reached a particular conclusion or recommendation. When the reasoning behind an output is unclear, chiropractors may either trust the output too much or dismiss it without properly evaluating it.
4. **Overreliance on AI outputs**. Heavy reliance on AI support may weaken clinical reasoning and professional judgment over time.
5. **Bias and discrimination in AI outputs**. Bias may occur when training data does not represent a wide range of people, when assumptions are built into how an algorithm is designed, or when patterns develop through user interaction. When bias occurs, AI systems may generate recommendations that are inappropriate or unfair for certain patients.
6. **Privacy and confidentiality risks**. AI systems often rely on large amounts of data, including personal health information. This increases the risk of unauthorized access, improper storage, or the transfer of patient information outside Canada. Chiropractors must ensure that all information is collected, stored, and used in ways that meet all legal requirements.

The Responsibility for AI Rests with the Chiropractor

AI tools must never replace professional judgment or independent clinical assessment. Responsibility for patient care, communication, and professional decision-making always remains with the chiropractor, regardless of whether AI tools are used to support those activities.

Using AI does not reduce a chiropractor's professional or legal responsibilities. Chiropractors may only use AI for tasks they are already competent to perform. If a chiropractor cannot perform a task independently, it should not be delegated to an AI system.

AI should always be treated as a support tool, never a decision-maker, as it only produces suggestions or summaries, not clinical decisions. Chiropractors must remain the human-in-the-loop when AI is used. This means that the AI never works without the chiropractor's intervention and oversight. Chiropractors must review, confirm, and take responsibility for all outputs produced by AI tools.

Chiropractors must remain attentive when using AI tools. They must be able to recognize when outputs are flawed, misleading, or inappropriate. Chiropractors must also be prepared to correct the output, override it, or stop using the AI tool if necessary.

Under the *Professional Communication Directive*, chiropractors are also responsible for the actions of individuals who use AI tools on their behalf. This includes administrative staff and other agents who may interact with AI systems as part of their work. Responsibilities include, but are not limited to, the following:

- Responsibility for any agent using AI on the chiropractor's behalf.
- Oversight of AI tools used by administrative staff, such as chatbots or automated booking systems.
- Ensuring that staff understand the limits of AI tools, including privacy risks and professional communication requirements.

Privacy and Security Considerations

Using artificial intelligence in chiropractic practice requires careful attention to risk management, privacy protection, and information security.

Artificial intelligence systems often rely on large amounts of data to function. Because of this, privacy considerations are especially important when AI tools are used in chiropractic practice. Chiropractors must understand how AI systems collect, use, store, and share patient information. They must also ensure that these practices comply with privacy legislation and CCOA standards.

Before introducing AI tools, chiropractors must carefully review vendor agreements and privacy policies.

They must understand how patient information will be accessed, stored, protected, retained, and destroyed. Chiropractors must also ensure that contractual terms allow them to meet their legal and professional responsibilities for protecting patient information.

If AI tools use patient information, chiropractors must ensure that the system meets privacy and security requirements under all applicable legislation. As AI technology is changing quickly, tools that appear reliable today may change as they are updated or retrained. Chiropractors who choose to use AI must stay informed and use these tools cautiously.

Open or public AI systems must not be used to process any patient information. Chiropractors must also ensure that vendor agreements and data storage practices comply with privacy laws. Patients cannot consent to AI systems that violate standards, rules, and laws – chiropractors must never ask patients to consent to this.

Reducing the amount of data collected and using anonymized information helps protect privacy. However, using too little data or using poor quality data may lead to inaccurate AI outputs. Chiropractors must balance their privacy obligations with the need for AI systems to produce reliable and appropriate results. Key considerations include the following:

- **AI systems may store or process data outside Canada**. Under the Personal Information Protection Act, personal information should be maintained and stored in Canada. If international services are used, chiropractors must notify affected individuals that their information may be stored outside Canada. Patients must also be given the opportunity to withhold consent and request an alternative way of managing their information if they choose.
- **Some AI tools may be able to reidentify data that was thought to be anonymous**. Appropriate safeguards must be in place to reduce the risk of this occurring.
- **Vendor contracts may allow data to be used for purposes beyond the chiropractor's intended use**. Chiropractors must ensure that patient information is used only for purposes to which the patient has consented.
- **Some AI systems may allow access to data by third parties or other AI tools**. Chiropractors must understand how patient information may be accessed or shared and must ensure that proper protections are in place.

AI systems may introduce security risks. These risks may include cyberattacks that attempt to access patient health information, alter stored data, or interfere with the outputs produced by an AI system. AI systems may also be vulnerable to inaccurate or malicious data that can affect results and lead to inappropriate outcomes.

Chiropractors are responsible for reviewing the requirements of the HIA and determining whether their intended use of artificial intelligence requires a Privacy Impact Assessment and subsequent submission

to the Office of the Information and Privacy Commissioner of Alberta (OIPC). Under section 64 of the HIA, a PIA is generally required when a new or modified information system or administrative practice involves the collection, use, or disclosure of individually identifying health information. While not every use of AI will necessarily trigger this requirement, many applications of AI in chiropractic practice are likely to require a PIA.

An Algorithmic Impact Assessment is not required by the HIA but is recommended. This assessment helps identify and evaluate potential risks, impacts, and ethical concerns associated with an AI system, including privacy, bias, transparency, and human oversight. These assessments support informed decision-making and help demonstrate that reasonable steps have been taken to evaluate risks before implementing AI in practice.

Although the development of AI technology is moving quickly and may increase cybersecurity risks, the basic principles for protecting patient information remain the same. These risks can be reduced through appropriate safeguards, ongoing monitoring, and the completion of privacy and AI impact assessments before a system is introduced. Chiropractors must ensure that policies and procedures are in place to identify and manage risks related to AI use. They must also understand these procedures and apply them consistently in practice.

Chiropractors remain responsible for the care they provide and must understand the AI tools they use. This includes knowing how the tools function, what data they rely on, and what limitations or weaknesses they may have. Chiropractors are not expected to be technical experts, but they must understand AI systems well enough to recognize potential risks and properly review the outputs they produce. Chiropractors must:

- **Ensure cybersecurity protections are active and regularly updated**. This includes tools such as firewalls, antivirus software, and monitoring systems that help prevent unauthorized access and cyber threats.
- **Limit access to AI systems and related data**. Access should be restricted to individuals who require it to perform their professional or administrative responsibilities. This reduces the risk of unauthorized use or disclosure.
- **Use multifactor authentication for systems that connect to AI tools**. This adds an additional layer of security beyond passwords alone.
- **Ensure patient information is encrypted when stored and when transmitted**. This is particularly important when information is shared with AI vendors or processed through cloud-based services.
- **Review vendor agreements and privacy policies carefully**. Chiropractors must understand how data may be used, stored, retained, or shared by vendors and must confirm that patient information will only be used for approved purposes and in accordance with legal requirements.

- **Complete a Privacy Impact Assessment**. Privacy Impact Assessments and Algorithmic Impact Assessments help identify risks before introducing AI systems.
- **Regularly test and monitor AI systems**. Chiropractors should regularly test and review AI tools to ensure they continue to function as intended, produce accurate and reliable results, and remain appropriate for their intended use. Ongoing monitoring can help identify errors, bias, changes in performance, and emerging risks to patient safety and privacy.

Responsibility for managing the risks associated with AI use rests with the chiropractor who chooses to use and benefit from the AI system. Chiropractors remain accountable for ensuring that AI is used safely and ethically, that all legal and regulatory requirements are met, and that patient privacy and public trust are always protected.

Disclosure and Consent to AI Use

The chiropractor must inform patients when AI tools are used in any part of their care. Patients must provide consent for the use of AI in any part of their care. If concerns arise about safety, accuracy, privacy, or consent, chiropractors must be prepared to stop using the AI tool immediately.

Artificial intelligence may be used in both visible and less visible ways in chiropractic practice. In some situations, patients may recognize that AI is being used. For example, they may see AI tools used for documentation or intake forms. In other situations, patients may not realize that AI is part of systems such as chatbots, appointment scheduling platforms, or insurance and claims processing tools.

Chiropractors must be open and transparent about how AI is used in their practice. Patients should understand when AI tools are involved and should know that the chiropractor remains fully responsible for all aspects of their care. AI should always be described as a support tool and not as a decision-maker.

Disclosure of AI use is an important part of informed consent. If AI use is not disclosed, several concerns may arise, including the following:

- Patients may raise concerns or complaints if they learn that AI was used without their knowledge or consent.
- The chiropractor's reputation may be affected if patients later discover that AI was used in clinical or administrative processes without being informed.

AI technology and regulatory expectations are continuing to evolve. As these changes occur, expectations for disclosure may also change. Chiropractors must remain aware of these developments and adjust their practices when necessary.

Consent for the use of artificial intelligence is separate from consent for chiropractic treatment. However, it must still follow the core principles of consent and the requirements for informed consent set out in the Standards of Practice.

Consent for AI use must meet the following principles:

- **Autonomous:** Patients have the right to make their own decisions and decline the use of AI as part of their care. Chiropractors have both an ethical and legal responsibility to explain how AI is used in a way that supports informed decision-making.
- **Informed:** Consent must be based on clear, accurate, and complete information. Chiropractors must explain how AI tools are used, the potential benefits, and the possible risks in language that the patient can reasonably understand. Chiropractors must be able to answer all patient questions about the use of AI in their care.
- **Right to Decline or Withdraw:** Patients have the right to decline the use of AI in their care and may withdraw consent at any time. Chiropractors must be prepared to adjust their processes or stop using AI tools if a patient does not consent. Chiropractors must not decline treatment because a patient does not consent.

Obtaining informed consent for AI use may sometimes be challenging. Patients may have different levels of understanding and different views about the use of AI in health care. Chiropractors must be able to answer patient questions about the AI tools they use. This includes explaining how the tools function, what information they access, and what risks and safeguards are in place.

The Impact of Bias

Bias is an important concern when artificial intelligence is used in health care. Bias may arise from how an algorithm is designed, from the data used to train the system, or from how the tool is used in practice.

Two main concerns related to bias include the following:

- Errors or distortions in AI outputs that result from biased or incomplete training data.
- Insufficient human oversight or critical review of AI outputs.

Bias may be introduced during the development of an AI system if designers rely on assumptions that are not recognized or examined. Bias may also occur when the data used to train an AI system does not reflect the diversity of the population it is intended to serve. In these situations, AI outputs may fail to consider important factors such as social conditions, health differences, or individual patient circumstances. This may lead to recommendations that are inappropriate or unfair.

Because chiropractors typically use AI systems rather than develop them, bias may exist without being obvious. It may also be difficult to understand how an AI system processes information or produces a result. When the process behind the output is not clear, it may be harder to recognize biased results, and the risk of harm may increase.

For these reasons, chiropractors must carefully review all AI outputs and remain alert to the possibility of bias. Chiropractors are responsible for ensuring that AI tools do not create barriers to care or contribute to unequal or exclusionary outcomes. If an AI output appears flawed, misleading, or inappropriate, the chiropractor must intervene and take corrective action.

Examples of AI Use in Chiropractic Practice

Although the following are general examples of permitted and non-permitted uses of AI in chiropractic practice, each specific situation will need to be assessed with reference to the considerations set out in this guideline.

Examples of permitted uses of AI with chiropractor oversight include:

- Drafting administrative emails with review
- Automated booking systems
- AI scribes (with review and consent)
- Research summaries for practitioner learning
- Drafting social media captions (must meet communication rules)

Examples of non-permitted uses of AI include:

- Autonomous diagnostic or treatment-plan generation
- AI-written testimonials
- AI-generated clinical documentation that is not reviewed and corrected
- AI chatbots giving clinical advice or scope-of-practice statements

Checklist for AI Use in Chiropractic Practice

This checklist is designed to assist chiropractors in fulfilling their professional, ethical, and legal responsibilities in the use of AI. It is not a replacement or substitute for chiropractors' engaging in their own due diligence to ensure complete compliance with all legislation and standards applicable to the use of AI in chiropractic practice.

1. General Responsibilities

- I understand that AI is a **support tool, not a decision-maker**, and cannot replace my clinical judgment or reasoning.
- I only use AI for tasks I **am already competent to perform**.
- I review, confirm, and take responsibility for all **AI-generated outputs**.
- I remain the **human-in-the-loop** at all times.

- I stay informed about **updates, limitations, and changes** to any AI tools I use.
- I never put patient information into open AI systems.

2. Legal & Regulatory Compliance

- My use of AI complies with:
  - *Health Professions Act* (HPA)
  - *Health Information Act* (HIA)
  - *Personal Information Protection Act* (PIPA)
  - (If applicable) *Personal Information Protection and Electronic Documents Act* (PIPEDA)
  - CCOA *Code of Ethics*
  - CCOA *Standards of Practice*
- I have ensured that my professional liability protection or insurance covers all of my uses of AI.
- I understand that using AI does **not in any way reduce my professional, legal, or ethical responsibilities.**

3. Privacy & Data Protection

- I **never upload identifiable patient information** into open or public AI systems.
- I have confirmed where AI vendors **store and process data** (Canada vs. international).
- If data may be stored outside Canada, I notify patients and offer alternatives.
- I ensure vendor contracts limit data use to **consented purposes only**.
- I have verified safeguards against:
  - Unauthorized access
  - Reidentification of data
  - Third-party data access
- I have completed a **Privacy Impact Assessment (PIA)** before using any AI tool.

4. Safety & Risk Management

- I evaluate AI tools for **accuracy, transparency, and reliability**.
- I monitor for:
  - Bias in outputs
  - AI hallucinations or fabricated content
  - Non-evidence-based recommendations
- I am prepared to **override or discontinue** use of an AI tool if safety, accuracy, or privacy concerns arise.

- I maintain updated:
  - Firewalls
  - Antivirus software
  - Cybersecurity monitoring
- I use **multifactor authentication** for AI-connected systems.
- Patient information transmitted or stored through AI systems is **encrypted**.

5. Clinic Policies & Staff Oversight

- My clinic has written **policies and procedures** for AI use.
- All staff receive **training** on:
  - Limits of AI tools
  - Privacy requirements
  - Professional communication expectations
- I supervise any staff member using **AI on my behalf**.
- I ensure no staff or automated systems provide **clinical advice** through AI.

6. Disclosure & Consent

- I inform patients whenever AI is used in any part of their care or documentation.
- I explain AI as a support tool, not a decision-maker.
- I provide clear information on:
  - How AI is used
  - Benefits and risks
  - Privacy considerations
- I obtain informed consent for AI use, separate from treatment consent.
- I respect a patient's right to decline or withdraw consent at any time.

7. Bias Monitoring & Ethical Use

- I critically review AI outputs for possible **bias or inequitable outcomes**.
- I consider whether the training data may limit the AI tool's fairness or relevance.
- I intervene, correct, or discontinue tool use when any biased or harmful output occurs.

8. Pre-Implementation Evaluation

Before implementing any AI tool, I have:

- Completed a **Privacy Impact Assessment (required)**.

- Considered conducting an **Algorithmic Impact Assessment (recommended)**.
- Evaluated risks and safeguards for:
  - Patient safety
  - Data accuracy
  - Privacy
  - Accountability
- Confirmed the tool fits within chiropractic **scope of practice**.

9. Ongoing Accountability

- I maintain full responsibility for:
  - Patient care
  - Documentation
  - Communication
  - Professional decisions
- I continuously review AI outputs for accuracy and appropriateness.
- I remain prepared to adjust processes if legislation or standards change.