# Guidance for the use of AI in primary care

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## Introduction

Generative AI (GenAI, and also referred to in this document as AI) offers significant potential in primary care, but it also presents challenges. Pinnacle recognises many practices are already using GenAI tools, and our goal is to support their responsible use without requiring practitioners to become AI experts. We aim to build on existing skills and provide additional guidance where needed.

AI is rapidly evolving, so it's important to regularly review processes, stay informed about risks and adapt as needed.

## What is GenAI?

GenAI is a form of artificial intelligence that generates new content, such as text, images, music, code, and voice, based on patterns in large datasets. It operates on user-provided prompts to produce responses.

Unlike traditional AI, which analyses and processes existing information, GenAI creates original outputs. Examples you have likely heard of and may even use, include ChatGPT, DALL-E, Copilot, and Heidi.

These tools can enhance productivity by automating routine tasks, but they also carry risks due to their evolving nature.

## What is GenAI not?

While GenAI is a valuable tool, it is important to understand its limitations. GenAI is **not**:

- *a replacement for clinical judgment* – it cannot diagnose, prescribe, or provide medical advice
- *always accurate* – AI-generated content can be incorrect or misleading and requires human verification
- *a secure system for handling patient data* – AI tools should not be used to store or process identifiable patient information unless explicitly designed for that purpose
- *fully transparent* – AI models operate as "black boxes," meaning the logic behind their outputs may not always be clear
- *culturally competent* – AI models are trained on large datasets that may not adequately represent Māori, Pasifika, and other priority populations, potentially reinforcing biases.

## Benefits of GenAI in primary care

When used thoughtfully, AI can take care of time-consuming tasks, giving clinicians more time to focus on patient care. Here are some practical ways GenAI can support primary care teams.

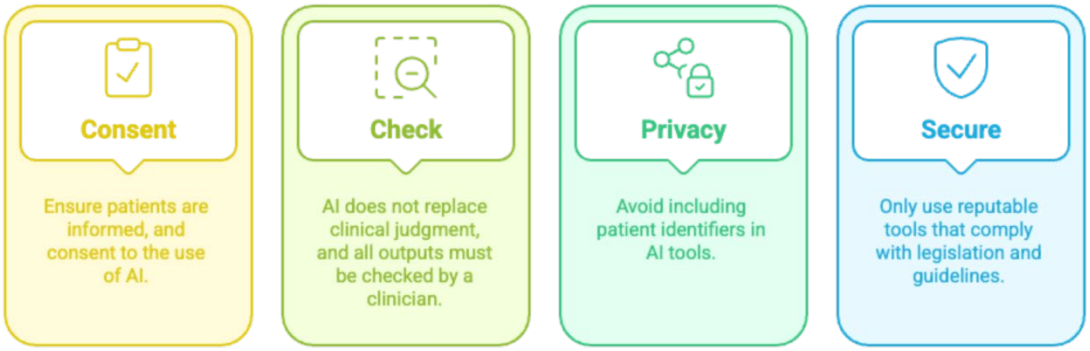
| Benefits | Example |
|---|---|
| Increases efficiency | Takes real-time notes during consultations and summarises transcripts into structured notes.<br>Automates repetitive tasks like referral letters. |
| More time to focus on the patient | Reduces documentation time, allowing more patient interaction during consultations. |
| Summarises information | Creates concise meeting summaries for staff emails. |
| Automates administrative tasks | Sends appointment reminders and automates patient recalls. |
| Reduces errors | Highlights missing data fields, checks spelling in clinical documents. |
| Enhances patient experience | Updates patient records, ensuring clinicians have accurate information. |

## Key AI terms

| Term | Definition |
|---|---|
| Artificial Intelligence (AI) | The ability of computer systems to perform tasks that usually need human intelligence, such as thinking, learning, and making decisions like humans. |
| Automation | Technology that allows processes or procedures to be done with minimal human intervention, often for repetitive tasks. |
| Data anonymisation | Removing personal identifiable information from data to protect privacy. |
| Large language model (LLM) | An advanced AI trained on vast amounts of text data to comprehend and generate human-like responses. |
| Machine learning (ML) | A subset of AI that enables computers to learn from data and make decisions or predictions without being explicitly programmed to do so. |
| Natural language processing (NLP) | A branch of AI that uses machine learning to enable computers to understand and process human language. |

## Key principles for using GenAI in practice

Using AI in healthcare comes with responsibilities. Following these four key principles will help ensure safe and ethical use: Consent, Check, Privacy, and Secure.




**Step 1: Consent**

- Inform patients about the use of AI and obtain their consent before using it in consultations.
- Advise the patient they can opt out of AI-driven processes and consultations if they choose.
- Include AI usage at your practice in enrolment forms.

**Step 2: Check and review**

- AI should never replace clinical judgment, and outputs must be checked by a clinician.
- AI cannot diagnose, prescribe, or provide medical advice.
- AI tools must not be used for clinical decision-making, including differential diagnoses, prescribing, or patient education about medications.
- All AI-generated content must be verified by a human before use.
- AI-generated notes must be reviewed with the patient.

**Step 3: Privacy, security and compliance**

- Patient data must be protected by avoiding identifiers.
- Patient data should not be input into public AI tools without anonymisation.

**Step 4: Secure**

- Only secure, reputable AI tools that comply with regulations should be used.
- There is currently no specific statute on AI although laws that regulate its use include the Privacy Act 2020, the Human Rights Act 1993, the Fair Trading Act 1986 and the Harmful Digital Communications Act 2015.
- The principles of Te Tiriti o Waitangi and the Companies Act 1993 help guide the use of AI in making decisions.
- The Privacy Commissioner's office has published comprehensive guidance on AI and Information Privacy Principles.

## Ethical considerations in AI use

AI can be a fantastic tool, but we also need to think about how we use it responsibly. Using AI responsibly means considering its environmental impact, ensuring fair and equitable use, and being transparent with patients and colleagues.

**Energy consumption and environmental impact**

AI systems, particularly large language models, require substantial computational power, leading to high energy consumption. When possible, opt for AI tools that prioritise efficiency, and be mindful of unnecessary AI use to reduce the carbon footprint.

**Transparency and accountability**

Patients and staff should be informed when AI tools are being used, especially in decision-making processes. Clearly communicate AI's role, its limitations, and the safeguards in place to ensure its responsible use.

**Fairness and equity**

AI models are trained on vast datasets that may not fully represent all patient populations. This can reinforce biases, particularly for Māori, Pasifika, and other priority populations. Regular audits and human oversight are essential to ensuring AI-generated recommendations are fair and equitable.

## Keeping AI fair, inclusive and culturally responsive

AI learns from data, but that data isn't always diverse or representative of everyone. This is especially important when considering te ao Māori perspectives on privacy and AI use. AI tools developed overseas may not accurately reflect te ao Māori, creating biases that impact Māori health outcomes.

By taking a proactive approach, you can ensure your AI use aligns with Māori values and tikanga.

Concerns may include:

- Bias in AI systems trained on overseas data that do not work accurately for Māori.
- If a GenAI model's training data lacks diverse linguistic and cultural representation, like te reo Māori or various accents, it can introduce biases and reduce accuracy – this may lead to misunderstandings or incorrect outputs.
- Collecting Māori information without first establishing trusting relationships can result in misrepresenting Māori taonga and failing to uphold tapu and tikanga.

By embedding Te Tiriti o Waitangi principles in AI governance and engaging with Māori whānau and communities from the outset, we can ensure our usage of AI tools uphold equity, trust, and cultural safety.

## Implementing GenAI in practice

GenAI can streamline workflows and improve patient communication, but it's important to implement it safely and effectively. This section outlines key steps to ensure AI is implemented safely and effectively.

**Define purpose and evaluate needs**

- Identify where GenAI could provide the most value (such as patient consultation, admin automation, patient communication).
- Assess risks and develop mitigation strategies.
- Refer to existing Privacy Impact Assessments (PIAs) conducted by Pinnacle for Nabla Copilot and Heidi before implementing new AI tools. If using AI tools beyond these, ensure they align with privacy and security best practices.

**Develop policies and training**

- Create internal policies outlining AI use.
- Train staff on AI capabilities, limitations, and ethical considerations.

**Ensure transparency and compliance**

- Maintain human oversight of AI-generated content.
- Monitor and audit AI use regularly.
- Engage with patient and iwi groups to address concerns.

## Risk and mitigation strategies

| Risk | Example | Mitigation |
|---|---|---|
| Inaccuracy | AI generates incorrect practice policies or outdated information. Māori names and words may not be spelled correctly. | Ensure human oversight; verify all AI-generated content. Review all AI-generated content, and correct spelling. |
| Bias | AI lacks diverse training data, leading to inequities in responses. | Regular audits; engage with patient groups and iwi. |
| Lack of transparency | AI-generated responses do not explain how conclusions were reached. | Review AI tool terms; provide staff training on limitations. |
| Data sovereignty concerns | AI stores patient data offshore, breaching privacy laws. | Use compliant tools; obtain patient consent for offshore data storage. |
| Privacy risks | AI processes sensitive patient data without safeguards. | Anonymise data before inputting; review privacy policies. |
| Over-reliance on AI | Staff may defer too much to AI, leading to reduced critical thinking. | Maintain human oversight; implement policies to ensure human validation. |
| Security vulnerabilities | AI-generated content may be intercepted or manipulated. | Ensure encryption and secure access to AI tools. |
| Legal and ethical concerns | AI use may conflict with existing medical regulations or patient rights. | Establish clear ethical guidelines and align AI use with legal standards. |

## Staying informed

We have a dedicated 'AI tools in general practice' page on our website where you can find additional resources, including a link to the AI in primary care working group's resource page. This web page will also be the hub for any future Pinnacle-specific guidance.

We encourage practices to share their experiences with AI tools, including challenges and successes, to help improve this guidance and potentially support others in the network. To share your stories, email communications@pinnacle.health.nz.

## Conclusion

AI has the potential to make life easier in primary care — streamlining admin, reducing burnout, and freeing up more time for patient care. But like any tool, it needs to be used thoughtfully. It's not a replacement for human judgment, and it's important to stay aware of its limitations. By keeping oversight in place, staying transparent with patients, and making sure AI tools align with best practices, we can get the most out of this technology while keeping patient care and safety at the centre of everything we do. Used wisely, AI can be a valuable support in delivering high-quality, efficient, and compassionate healthcare.