

Artificial intelligence–assisted mental healthcare in general practice: Benefits, risks and future possibilities

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This article is part of a series of articles on artificial intelligence.

Background

General practitioners (GPs) are increasingly exploring artificial intelligence (AI) to support mental healthcare on the backdrop of a broader discourse about how AI could safely play a part in assisting people with mental health issues.

Objective

This paper examines how AI tools could augment GP-led mental health services by improving access and personalisation of care, while highlighting the central role of GPs in assessment and continuity.

Discussion

We review current AI applications in mental health, from basic note-taking assistants to chatbots and predictive analytics. These tools offer potential benefits including 24/7 access, reduced stigma, improved efficiency, expanded clinical capability, greater patient engagement and support for measurement-based care. However, important risks remain, including privacy concerns, variable reliability and accuracy, algorithmic bias, and broader ethical and regulatory challenges. Given the sensitive and personal nature of mental health, careful integration is essential. Practical implementation requires clear informed consent, prioritising lower-risk use cases initially, and maintaining strong GP oversight at all times. AI should support, not replace, clinical judgement. Overall, AI represents a promising adjunct in general practice mental healthcare, with the potential to extend reach and improve care delivery. However, the therapeutic relationship, clinical expertise and human connection remain central and irreplaceable in delivering safe, effective and compassionate mental healthcare.

MENTAL DISORDERS ARE COMMON and often undertreated, signalling a need for innovative strategies to assist people to get effective care and to support general practitioners (GPs) in the provision of mental healthcare. In Australia, an estimated 42.9% of people aged 16–85 years will experience a mental disorder in their lifetimes.¹ Yet less than half of those who need care receive the treatment they require.² General practice is frequently the first point of contact for individuals facing mental health issues.³ The growing demand for mental health support and gaps in services place increasing pressure on GPs and the broader mental health system. We argue that artificial intelligence (AI) technologies have the potential to help bridge these gaps.

Early evidence suggests AI could make mental health support more accessible, personalised and efficient.⁴ For example, AI-powered platforms might offer ongoing support to patients between GP visits while also assisting doctors by screening for high-risk clients, tracking progress and automating time-consuming tasks. In practice, medical scribe software is already reducing the day-to-day burden of creating medical progress notes. The rationale for exploring AI is not to replace the therapeutic role of the GP, but to enhance it with the clinician always in the loop when managing mental health conditions.

AI applications in mental healthcare

A variety of AI-driven applications have emerged to support mental healthcare. Table 1 summarises key types of AI tools and their uses in general practice settings, with examples from recent studies.^{5–17} These AI tools range from those already in use (eg documentation assistants) to experimental systems in research settings (eg predictive models for new-onset mental illness). Notably, some tools operate in the background of care (eg note-taking AI or risk algorithms scanning electronic health records), while others interface directly with patients (eg chatbots or apps).⁵ Chatbot-based therapies can serve as an extension of care beyond the clinic,¹⁸ providing daily check-ins or exercises that reinforce what was discussed with the GP. This builds on the well-established principles of routine outcome monitoring and measurement-based care.^{19,20}

Benefits of AI in general practice mental healthcare

AI has the potential to enhance mental healthcare in general practice in several ways while keeping the GP at the centre of care and maintaining the human elements of empathy and good clinical practice.

24/7 access and patient engagement

One of the benefits of AI tools is that they can offer support, and promote active interventions, outside of normal clinic hours. For instance, therapeutic chatbots and mental health apps are available at all times, allowing patients to access help when they need it – late at night or between appointments.⁷ The GP consultation itself is necessarily just a small

snapshot of the patient's progress, and the use of AI can help provide 24-hour advice and support when the patient needs it.

We have already seen that many people are turning to generative AI platforms such as ChatGPT (Open AI) for therapeutic purposes without any clinician involved.^{21,22} This trend highlights a growing demand for accessible, flexible and self-directed forms of mental health support, while simultaneously raising important questions about when an AI assistant may, in effect, be functioning as a psychotherapist.^{21,22} Unlike traditional models of care that rely on scheduled appointments with clinicians, these tools allow individuals to initiate engagement independently, at times and in ways that suit their personal

needs and preferences. However, this form of interaction with large language models for issues such as stress, life crises, anxiety and depression currently occurs without professional supervision, raising significant concerns about patient safety and the quality of advice provided.

Reduced stigma and increased help-seeking

In practice, many patients hesitate to disclose mental health concerns because of stigma, fear of judgment or previous negative experiences with the healthcare system. One potential advantage of AI-based mental health support is the sense of anonymity and privacy it can provide, which may help to

Table 1. Mental health artificial intelligence (AI) applications relevant to general practice: Current and emerging technologies

Existing technologies

Medical note-taking assistance	AI 'scribes' that transcribe and summarise consultations in real time are producing draft clinical notes for the general practitioner (GP). ^{5,6} Example: voice-enabled systems (eg Lyrebird [Lyrebird Health], Heidi [Heidi Health]) reduce the documentation workload by capturing in real time patient-GP consultations and highlighting key details for the progress notes.
Chatbots and conversational agents	Text- or voice-based chatbots that provide psychological support or therapy exercises through conversation. These AI-powered chatbots (eg Woebot [Woebot Health] or Wysa [Touchkin eServices]) can engage patients in cognitive behavioural techniques. In one study, a randomised trial with Woebot showed significant reductions in depression scores over just 2 weeks of use. ⁷
Digital therapies	Software applications (mobile apps or web platforms) that deliver therapeutic content (eg psychoeducation, meditation or structured therapy modules). Many incorporate AI to tailor content to the user's needs or to maintain engagement. Internet-based cognitive behavioural therapy programs have demonstrated efficacy for common conditions. ⁸
Just-in-time interventions	AI-powered mobile health tools that provide support when it is needed on the basis of real-time data. These systems use smartphone sensors or wearables to monitor sleep, activity or mood and deliver timely interventions when they detect risk patterns. ⁹ For example, an app might send a reminder for a relaxation exercise if a user's stress biomarkers spike, or it might alert the GP if data suggest an impending depressive episode.

Emerging technologies

Predictive analytics	Machine learning models can analyse patient data (electronic health records, surveys or even social media) to flag early signs of mental illness or risk of self-harm. ^{10,11} For instance, algorithms have been used to predict suicide risk by identifying patterns in demographics, history and even social media usage that often precede crises. ¹² Advanced data analytics can also predict health trajectories and outcomes. By analysing large datasets (clinic visits, medication adherence, symptom trackers), AI can forecast which patients are likely to deteriorate or require intensive support. For instance, algorithms can be trained to predict relapse in depression, the pattern of suicide ideation, ¹³ risk of functional impairment ¹⁴ or the emergence of bipolar disorder in at-risk youth, ¹⁵ allowing GPs to implement preventive strategies earlier. ¹⁶
Agentic AI	An emerging development is AI agents that can carry out many specific tasks or combine many functions described above autonomously on behalf of a GP. This may include analysing notes or data to produce reports or update medical records, create personalised scheduling, generate personalised recommendations, follow-up assessments for measurement-based care (progress monitoring) or search the internet for local services relevant to a person's needs. While some of these tasks may be carried out autonomously, the GP can be kept in the loop for critical decision points. For example, a Mental health Intelligence Agent (MIA) has been developed to guide assessment and facilitate service navigation and care planning in these settings. ¹⁷

lower these barriers to help-seeking.²³ The ability to engage privately, through speech or text, can feel less confronting than a face-to-face consultation, allowing users to express thoughts and emotions they might otherwise withhold. For example, a person who feels embarrassed about their symptoms or uncertain about the legitimacy of their distress may be more comfortable exploring their feelings through a self-guided app or conversational agent as a first step before seeking professional help.

Efficiency and workload relief

Integrating AI into clinical workflows can streamline many aspects of care delivery. A prominent example is the use of AI medical scribes to assist with documentation and the collection of psychometric data before or between consultations. These systems can transcribe clinical consultations, generate draft progress notes and even prepare components of GP Mental Health Treatment Plans – reducing administrative burden and minimising the distraction of typing during patient interactions. For example, in a 2025 study involving allied health providers, the introduction of an AI scribe led to significant reductions in time spent on record keeping, letter writing and after-hours documentation, with measurable improvements observed between baseline and 6 weeks, and sustained at 3 months.²⁴

Personalised and data-driven care

Looking ahead, one of the most promising frontiers for AI in mental healthcare lies in its capacity to analyse vast datasets and detect subtle patterns that may elude even the most experienced clinician. Emerging digital platforms can already track indicators such as mood, sleep and physical activity over time, using machine learning to adapt and refine interventions to suit each individual's needs. For example, AI-driven recommendation systems can help identify personalised treatment targets and inform care decisions on the basis of a person's unique behavioural and clinical data.²⁵ While many of these applications are still in early development, they signal a clear movement toward precision mental health – an approach that aims to tailor care to the individual, rather than relying on a one-size-fits-all model.^{26,27}

Augmenting the GP's capacity and capability

As AI becomes more integrated into general practice, there is potential to expand the capacity and capability for GPs to deliver more effective mental healthcare. Generative and agentic AI systems can provide GPs with the specialised knowledge and expertise needed to make critical care decisions based on the best available evidence-based literature and practice guidelines. For example, the Mental Health Intelligence Agent (MIA; developed by UNCAPT in partnership with the Brain and Mind Centre) can be used to assist GPs to conduct highly specialised assessments, use predictive models to flag patients at high risk, and find relevant and available services that match a person's needs.¹⁷ Monitoring between consultations through apps including biometric measures can prompt patients to come in for consultations. Conversational AI and other digital tools can be used to educate and motivate patients through psychoeducational modules, symptom monitors and reminders, reinforcing the GP's treatment plan between visits.

Addressing health inequities and improving access to underserved populations

AI has the potential to play an important part in improving access to care and reducing inequities in mental health services. Mental health needs vary substantially across populations and settings,²⁸ with persistent gaps in access among rural and remote communities, Aboriginal and Torres Strait Islander peoples, culturally and linguistically diverse (CALD) groups and those from lower socioeconomic backgrounds.²⁹ AI-enabled systems that map real-time and even predicted workforce availability could help match patients to clinicians on the basis of live service capacity, directing resources where they are most needed. Although these tools remain in development, they hold promise for connecting underutilised providers with underserved communities.

Similarly, AI systems such as MIA,¹⁷ when used by GPs, may enhance the consistency of assessment, care planning and follow-up across the health system – contributing to a more equitable and standardised model of mental healthcare.

Nevertheless, it is important to recognise that AI alone will not close the equity gap. Lasting progress will depend on broader structural and service-level reforms that ensure technological innovation translates into real-world accessibility and quality of care.

Risks and challenges of AI in general practice mental healthcare

Lack of digital literacy

Individuals with low technological or digital health literacy face substantial barriers to accessing online mental health services such as telehealth and app-based support in Australia. Without adequate digital skills, people may struggle to navigate key platforms, limiting their ability to seek timely help for anxiety, depression or crisis situations. This digital divide is especially concerning in rural and remote regions, where such services could otherwise help mitigate geographical isolation and service shortages.

Furthermore, disadvantaged populations – including people experiencing homelessness – often have lower levels of digital health literacy, which contributes to reduced engagement with online mental health resources, even when they have access to smartphones.

The introduction of digital navigators – staff who assist clients directly in using digital health technologies – offers a promising approach to bridging this gap. By helping individuals develop confidence and skills in accessing and navigating online and AI-enabled systems, digital navigators can play a crucial part in reducing inequities in digital mental healthcare.³⁰

Accuracy and reliability

AI tools in mental health show considerable promise, but, like all clinical instruments, they are not perfectly accurate or reliable. Clinicians need to be aware of these limitations when integrating them into practice. For example, when predictive models produce Type I or Type II errors, the consequences for patients can be highly significant:³¹ false positives could result in unnecessary interventions, inappropriate labelling or patient distress, while false negatives risk delayed recognition of serious conditions and missed opportunities for timely treatment. Such errors can undermine

both patient trust and the perceived legitimacy of the technology. Accordingly, AI should be regarded as a decision-support tool rather than a replacement for clinical judgement, with diagnostic and treatment decisions always requiring human oversight.

While improving accuracy and reducing bias in AI systems is essential, it is equally important to recognise that human decision making is unfortunately also prone to error and bias. Our pragmatic view is that the best approach is likely to be human-led, AI-supported care, where clinicians retain responsibility but use AI to enhance consistency, efficiency and detection of subtle patterns. Though it is of interest that recent meta-analytic evidence indicates that human–AI combinations often do not outperform the best of either humans or AI alone, with outcomes varying by task.³² Thus, more research is needed to clarify which tasks in general practice benefit most from AI support.

At this stage, the safest and most practical model is for clinicians to lead, supported by AI insights that inform but do not replace clinical judgement. This gradual integration may follow a trajectory similar to self-driving car technologies, where automation is introduced step by step, rigorously tested and always under human supervision until proven safe. The future challenge is to identify which tasks are best suited to AI and to develop shared protocols that combine human expertise and machine intelligence to improve reliability and safety for our patients.

Algorithmic bias, fairness and generalisability

For AI systems to deliver reliable outcomes, they must perform well across diverse populations.³³ However, AI tools – both within and beyond healthcare – can inherit and even amplify biases present in their training data. When models are trained predominantly on data from certain groups, their performance may decline for patients from underrepresented demographics, such as younger or older individuals, or CALD populations. These biases risk compounding existing health disparities, potentially leading to suboptimal or even unsafe recommendations for some patients.

This limitation in generalisability is underscored by evidence showing that a

majority of psychiatric prediction models have not undergone external validation.³⁴ Accordingly, AI-generated recommendations should be interpreted with caution and always weighed against the clinician's broader understanding of the patient and their cultural and social context. This is more evidence to suggest that, at this stage, human oversight remains essential to ensure that AI supports, rather than substitutes, sound clinical judgement.

Privacy and data security

Mental health information is among the most sensitive categories of personal data, and the use of AI in this domain often involves extensive data collection and cloud-based processing, raising legitimate concerns about confidentiality and data security. Many mental health apps invite users to record mood symptoms, track behaviour or journal deeply personal reflections. If these data are not securely stored or transmitted, patient privacy can be seriously compromised.

Evidence suggests this is not a theoretical risk: analyses of popular mental health apps have shown that a large proportion transmit user data to third parties – such as analytics or advertising services – without transparent disclosure.³⁵ A 2019 review found that 29 of the 36 top-ranked depression and smoking cessation apps shared user data, including with major technology companies such as Facebook and Google, yet only a small minority mentioned this practice in their privacy policies.³⁵

These findings highlight the urgent need for stronger data governance frameworks, clear informed consent processes and greater transparency in how mental health data are handled. Ensuring that users understand who has access to their information, where it is stored and for what purpose is critical for maintaining trust. For clinicians recommending digital mental health tools, it is essential to be aware of these data practices and to guide patients toward platforms that meet robust privacy and security standards.

Regulatory and ethical uncertainty

The regulatory landscape for AI in healthcare is still evolving. In Australia, some AI tools fall under Therapeutic Goods Administration (TGA) regulation,

while others do not.³⁶ However, regardless of a tool's regulatory status, the clinician remains fully responsible for all decisions made using its output. Professional and legal standards are clear: the buck stops with the doctor.

AI can support diagnosis, documentation and care planning, but it must always operate under human supervision. This is especially vital in high-risk situations, such as acute suicidality or manic episodes, where AI should only assist, not act autonomously.

Guidance from the Australian Commission on Safety and Quality in Healthcare³⁷ and Australian Health Practitioner Regulation Agency (Ahpra)³⁸ reinforces that accountability lies with the treating clinician, who must inform patients of the risks and limitations of any AI tools used. Safe adoption therefore requires GPs to critically appraise each system, use it transparently and integrate its recommendations within sound clinical judgement and medicolegal standards.

Interoperability and integration challenges

For AI tools to be genuinely useful in clinical practice, they must integrate seamlessly into existing healthcare systems and workflows – a task that is often more difficult than it sounds. Most general practice clinics rely on specific electronic medical record (EMR) platforms, and if an AI tool cannot interface directly with these systems, it can create inefficiencies such as manual data transfer, copying and pasting, or duplicate record keeping. In such cases, even promising technologies may go unused because they disrupt rather than streamline clinical work.

Ensuring interoperability – the ability of different digital systems to communicate and exchange data accurately – is therefore critical. This is a rapidly developing field,³⁹ with international standards now emerging to support the secure, seamless flow of health information across platforms and settings.⁴⁰

The integration of AI into general practice will also depend on developing sustainable and equitable funding models. As AI tools become part of routine care, their use will need to be recognised within future reimbursement frameworks such as the Medicare Benefits Schedule or through affordable private models. Clear guidance will be required on when AI-assisted

consultations or decision-support activities can be billed and how costs will be shared between government, clinics and patients. Without such mechanisms, adoption is likely to favour well-resourced practices and widen inequities. Ensuring that AI-supported care remains affordable and accessible will be essential to its equitable implementation.

Safety and risk

Safety and risk management are central to the responsible use of AI in mental healthcare. For GPs, AI tools can assist with screening, documentation and care planning, but they also introduce new forms of clinical and ethical risk. Errors in prediction, inappropriate recommendations or biased outputs can all have serious implications, particularly when applied to vulnerable patients. Rigorous validation, transparent documentation of algorithms, and human oversight are essential safeguards before AI tools are used in clinical decision making.

Perhaps the most publicised safety concern involves patients using general-purpose chatbots for self-directed therapy without clinical guidance. While such tools may help lower barriers to help-seeking and provide scalable, accessible support, they are not designed to manage complex disorders or crises. Large language models, including chatbots, can mirror users' language and emotional tone but lack true empathy or clinical discernment. This can result in unsafe or misleading advice, such as reinforcing delusional beliefs or suggesting harmful coping strategies.

These risks highlight the need for purpose-built, evidence-based digital mental health tools with embedded safeguards that restrict unsafe outputs and align responses with established clinical guidelines. Ultimately, ensuring safety requires a dual approach: developing AI systems designed with ethical guardrails, and maintaining human oversight so that GPs remain the final arbiters of clinical judgement and patient wellbeing.

Future directions

The intersection of AI and mental healthcare in general practice is still in its early days. Looking ahead, several developments could shape the future landscape.

Box 1. Tips for general practitioners starting to use artificial intelligence (AI) mental health resources

1. Ensure patient consent and education

Before deploying any AI that will use patient data or interact with the patient, obtain informed consent and document this in the record. Patients should understand what the tool does, what data it collects and any privacy implications. For instance, if consultations will be recorded for an AI scribe, the patient must agree to that recording, knowing who will have access to the audio or transcript. Likewise, if the general practitioner (GP) suggests a self-help app, the patient should be informed about its privacy policy (eg data storage and sharing). Educating patients about the tool's purpose and limitations is also critical to set appropriate expectations.

2. Start with low-risk cases

Introduce AI tools first with patients who have mild-to-moderate symptoms and are stable, rather than those in crisis or with complex psychiatric conditions. For example, consider using a meditation app or motivational chatbot as a supplement for a patient with mild anxiety would be a low-risk way to start trialling the technology.

3. Integrate with existing care and close monitoring

Introduce the AI tool as one component of a comprehensive care plan, not a standalone solution. Check-ins about the tool should be incorporated into follow-up appointments (eg 'How are you finding the app? Has it been useful? Any issues?'). Monitoring is crucial – both of patient outcomes and of the tool's performance. If an AI is summarising session notes, the GP needs to review those summaries for accuracy to ensure no critical information is lost or misinterpreted. The approach is to always maintain a human in the loop.

4. Maintain clinician oversight and responsibility

The GP remains ultimately responsible for the patient's care and any AI tools that they introduced to the patient. For instance, an AI decision-support tool might suggest a diagnosis, but the GP must always confirm it through clinical evaluation. Clinicians should be ready to override or disregard AI advice if it contradicts their clinical judgment or patient preferences. It is also important to avoid over-reliance on AI. As a safeguard, one should always step back and ask, 'Does what the AI is telling me make sense for this patient?'

More general practice-based research

Recent systematic reviews provide an emerging international evidence base for the use of AI tools in mental healthcare, though their direct applicability to Australian general practice remains only partially established. A 2024 *Psychological Medicine* review synthesised 85 studies on AI for diagnosis, monitoring and interventions, highlighting promising roles for machine-learning algorithms and chatbot-based support.⁴¹ Similarly, a 2025 *BMC Psychiatry* review found benefits for early detection, personalisation and patient engagement, particularly through tools such as Wysa (Touchkin eServices).⁴² However, most included studies were conducted in non-GP specialist or research settings, often outside primary care and in health systems with different funding and digital infrastructure from Australia's Medicare-based model. While these findings suggest potential value for integrating AI-enabled tools into GP-led mental healthcare – especially for triage,

treatment planning and augmentation of telehealth – the current evidence base needs more research in Australian general practice settings.

More clinical research

As AI tools proliferate, a strong evidence base is needed to determine which ones genuinely improve patient outcomes. Future research should include rigorous clinical trials and real-world implementation studies in general practice, testing AI-assisted interventions – for example, comparing outcomes from GP + AI care versus standard GP care alone. Key research questions include assessing patient acceptability, the extent to which AI chatbots lead to sustained symptom improvement, which patients benefit most and what specific risks are involved.

Beyond evaluating individual tools, further research is needed on how AI reshapes existing models of care. The expanding capabilities of AI are already influencing how mental health services are delivered,

highlighting the need for implementation studies focused on new, digitally integrated models that combine clinical expertise with technological innovation.

Advances in AI capabilities

On the technology side, AI itself is rapidly advancing. Future AI mental health tools will become more user-friendly – for example, next-generation chatbots could recognise a user's emotional state from voice tone or facial expression and adjust their responses. Multimodal AI systems might combine data from wearable sensors, smartphone usage patterns and even genomics to provide a holistic mental health assessment.

There is potential for AI to assist in currently challenging areas such as predicting and preventing suicide or identifying early signs of psychosis in young people through subtle digital signals. We are already seeing AI systems capable of using highly specialised knowledge to conduct diagnostic reasoning and conversations.⁴³

As these capabilities grow and the availability of specialised tools proliferates, general practice could become an even more proactive front line for mental health, with AI alerting GPs to issues before they fully manifest or providing red flags on electronic health records to alert GPs of patients at high risk. This has the great potential for identifying high-risk clinical situations earlier.

Education and training

The evolving role of GPs will increasingly require competence in AI. Integrating AI education into both undergraduate medical curricula and ongoing professional development is essential to help GPs critically appraise, safely adopt and effectively use AI tools in clinical practice.⁴⁴ Such training should go beyond basic technical literacy to include understanding of data ethics, algorithmic bias, medico-legal accountability and the appropriate use of AI in sensitive areas such as mental health. In this context, GPs need the skills to evaluate whether an AI tool is evidence based, interpret its recommendations within the broader clinical picture and communicate its limitations transparently to patients.

To support this transition, health services could establish GP digital champions or designated technology leads within practices

who stay abreast of emerging innovations, curate trusted tools and guide their safe and effective integration into routine care. Building this capability across the workforce will be critical to ensuring that AI enhances, rather than disrupts, the therapeutic relationship and quality of care in general practice.

Conclusion

Australia currently offers a robust and evolving suite of e-mental health services designed to improve accessibility and equity across diverse populations. AI can significantly enhance these established services in several ways, and many of the existing mental health platforms are planning to integrate AI into their provision. At a basic level, AI can act as a scribe (eg automating documentation, streamlining booking, supporting more routine communications). More advanced applications include intelligent triage systems, adaptive assessments, predictive analytics and tailored therapeutic approaches. For example, AI chatbots are being explored for guiding cognitive behavioural therapy-based interventions, conducting assessments and monitoring emotional states in real time.⁴⁵

Emerging chatbot tools illustrate potential service gap bridging via immediate support or intake assessment, though experts emphasise AI should remain an adjunct – not a substitute – for human empathy, clinical judgment and a therapeutic alliance.⁴⁶

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