Connected Health

AI medical scribes in primary care

An exploration into the experiences of General Practitioners and consumers with AI medical scribe use in the general practice setting

2 December 2024

BIAS

Acknowledging country

We would like to acknowledge that we meet and work on the land of the Kayimai and Cannalgal People of the Guringai Nation. We would also like to pay respect to the Elders both past and present, acknowledging them as the traditional custodians of knowledge for this land.

About Tobias

Tobias is a strategic design consultancy. We partner with progressive thinkers and change-makers to spot signals of change and make sense of these in the context of their organisational needs and the people they serve. We help established organisations, start-ups, and scale-ups envision thriving futures, establish alignment across stakeholder groups, and then create value propositions and roadmaps so that they can adapt, innovate and grow in a responsible and sustainable way.

One of the main drivers of change is rapidly evolving technology, which has a profound effect on the way people and organisations interact. Through a practice we call human-centred digital transformation we optimise the user experience (customer, employee, and partner) across the entire user journey – considering all touchpoints, processes, protocols, policies, and technologies, to deliver an exceptional experience. Through an iterative design process, we identify opportunities, create strategies, develop new and responsible business models, build capability, and deliver products and services that people love. One of the most significant opportunities to emerge over the last few years has been in AI-driven transformation.

The integration of artificial intelligence in healthcare continues to evolve, bringing a range of transformative technologies to clinical settings across Australia. In response, we have commissioned our own research into the adoption of AI medical scribes in a general practice setting. We see this as a relatively safe and accessible way to help us understand current consumer attitudes towards AI being used in healthcare and identify what needs to be in place to design safe and innovative futures, in ways that benefit both consumers and healthcare professionals.

About the authors

Meg Tonkin, PhD

With a PhD in Social Robotics, Meg's interest lies in the relationship between AI-driven social robotics and AI medical scribes. Both of these begin with a foundation of speech-to-text conversion, then apply generative AI to summarise conversation. For social robots, this technology enables real-time responses and advances conversational and task-oriented engagement. Similarly, AI scribes convert spoken consultations into structured summaries, facilitating documentation for general practitioners (GPs). However the user experience of the AI is quite different.

Passionate about innovation, Meg consults across industries to develop inclusive, accessible, and lasting solutions that blend deep tech with practical user experiences. Her work bridges the gap between advanced technology and real-world usability, with a focus on responsible and effective applications.

Nicole Jess, RN, MAdvNursPrac

Nicole is a lead strategic designer and a registered nurse with a deep understanding of consumer care and clinical workflows. This dual experience as a strategic designer and clinician provides her with invaluable insights into the practicalities of clinician-consumer interactions, and the rigorous demands placed on healthcare providers during routine consultations and in high-pressure acute environments.

This research report benefits from Nicole's unique blend of frontline clinical knowledge and her deep commitment to improving healthcare efficiency and quality. Her extensive clinical background combined with her strategic design skills offer a comprehensive perspective on enhancing the effectiveness of healthcare delivery.

Preface

The integration of artificial intelligence in healthcare continues to evolve, bringing a range of transformative technologies to clinical settings across Australia. Among these, AI medical scribes are gaining traction, promising to alleviate administrative burdens on general practitioners (GPs) while enhancing documentation accuracy.

This research report examines AI scribes' role in Australian general practice, exploring real world experiences and the potential to reshape both the clinician and consumer experience.

The authors of this report, Dr. Meg Tonkin and Nicole Jess, bring together their shared expertise in human-centred innovation and strategic design with individual expertise in social robotics and clinical healthcare to delve into how AI scribes might redefine traditional healthcare interactions.

This report aims to be an essential read for healthcare leaders, policymakers, and clinicians seeking to understand the real-world application, potential challenges, and initial benefits of AI in primary care. Readers will gain a foundational understanding of the impact of AI scribe use on the health appointment, highlighting its role in shaping the future of consumer-centered healthcare.

Defining terminology

The terminology in healthcare is evolving to reflect shifts in the relationship between care providers and recipients. In this report, the term "**consumer**" is used instead of "**patient**" to emphasise the growing autonomy, choice, and active participation individuals have in managing their health and engaging with healthcare providers. This choice acknowledges the broader role consumers play in their healthcare journey, moving beyond the traditional passive patient role.

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Introduction

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Revolutionising healthcare: The role of AI medical scribes in Australian GP consultations

AI tools have the potential to revolutionise healthcare by enhancing efficiency while maintaining high care standards[1]. A key advancement in this field is the AI medical scribe, which assists GPs by automating the transcription and summarisation of consultation notes [2]. These tools have the potential for streamlining workflows, allowing GPs to focus more on consumer interactions.

AI scribes are among the first AI tools gaining traction in the Australian healthcare sector, playing a crucial role in establishing trust and paving the way for broader AI acceptance in the healthcare space. Responsible practice, including obtaining of informed consent, and user-friendly implementation will be essential for building confidence in this emerging technology. Successful implementation of AI scribes may encourage adoption of future AI tools and support wider AI integration into healthcare, contributing to an improved healthcare future for Australians.

While AI scribes are quickly becoming commonplace in the Australian primary care landscape, experiences with their implementation, use and potential benefits, are still largely undocumented[3]. There is uncertainty about the safety, effectiveness, and consumer acceptance of these tools in consultations, which has slowed their adoption and delayed the realisation of their full potential benefits.

This research report presents findings from independent market research on the use of AI scribes in Australian GP consultations, incorporating insights from GPs' and healthcare consumers' real-world experiences. The research explores both consumers' and GPs' attitudes towards AI scribes. Utilising a qualitative approach, the research aims to create understanding of the factors affecting adoption and informed consent practices, as well as a deeper understanding of what constitutes responsible implementation and use.

Qualitative research uses non-numerical data to explore users' behaviors, attitudes, needs, and motivations. It enables researchers to understand participants as individuals, uncover pain points, and identify opportunities for improvement. One-on-one interviews, in particular, create a safe space for participants to share their experiences while allowing researchers to probe deeper for detailed insights. This approach reveals nuances in participant experiences and provides a richer understanding of the current state.

The research identifies key initial insights into engagement points along the care encounter, and changes in the clinician-consumer relationship as a result of AI scribe use during appointments. Additional research will be required to support further understanding of these aspects.

Understanding of these aspects of AI scribe use provides valuable guidance for healthcare consumers, providers, organisations, and technology innovators interested in AI tools.

The responsible implementation of AI scribes may lead to significant improvements in future healthcare delivery, laying the foundations for a future where AI tools are an integral part of the healthcare landscape in Australia.

Cohort and coverage

A qualitative approach was taken to allow a full exploration of GP and consumer experiences with AI medical scribes. Interview participants consisted of Australian GPs using AI scribes in their clinical practice and consumers who had recently attended GP appointments involving the use of an AI scribe by their GP. All participants were informed on the scope of the study and provided informed consent. Semi-structured interviews were conducted via online video conferencing.

6

GENERAL PRACTITIONERS

3 Male

3 Female

11

CONSUMERS

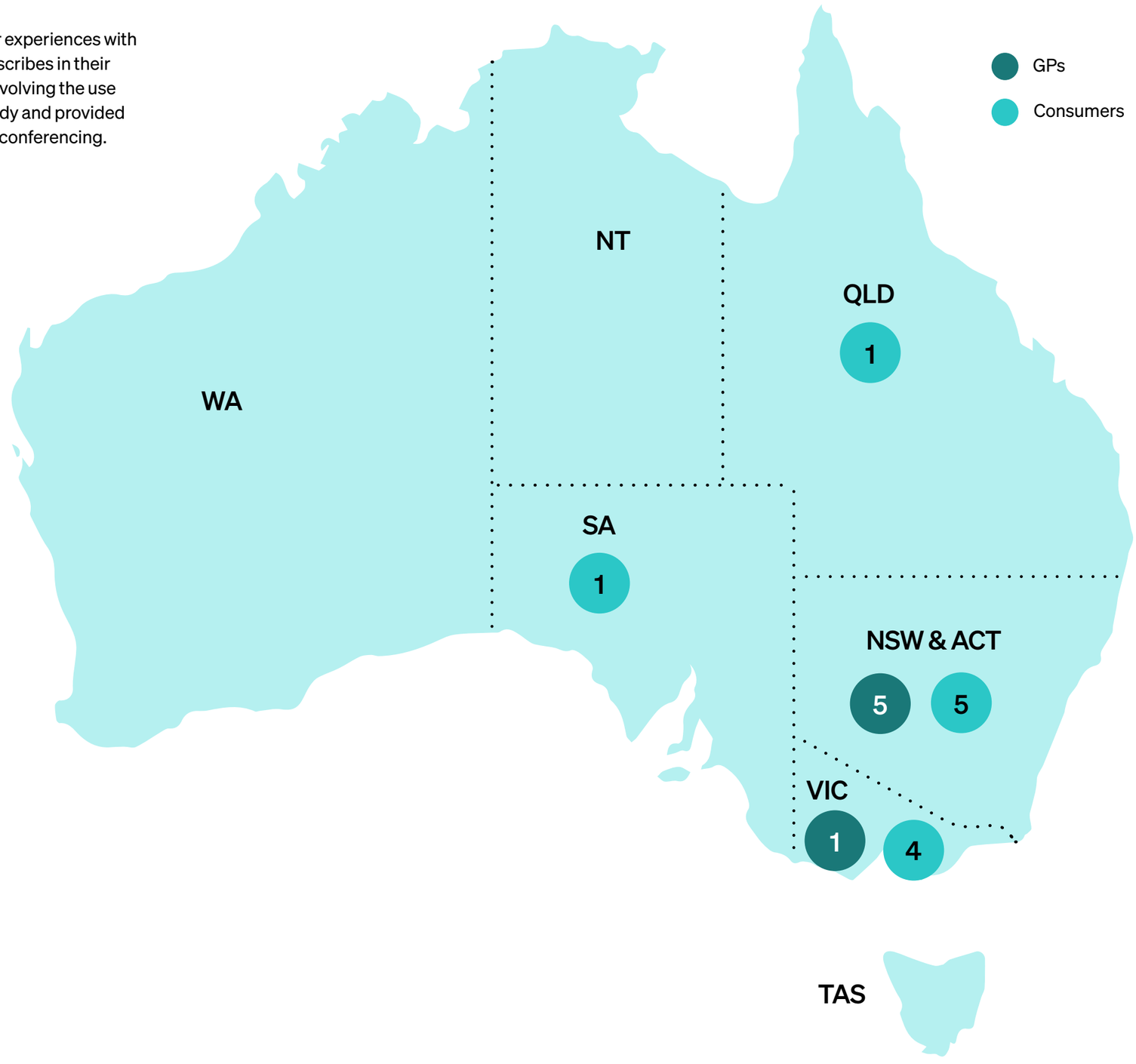
5 Male

6 Female

Six GPs from NSW and VIC, practicing both full-time and part-time, were interviewed as the clinician cohort. Twelve healthcare consumers from NSW, VIC, QLD, and SA were interviewed, with only eleven included in the analysis, as one participant's experience involved the use of a scribe that was not technically an AI medical scribe. Seven consumers had encountered one use of an AI scribe, and the remaining four had between 2 to 5 encounters. The consumer participants were aged 30-65, with diverse occupations.

The interviews were analysed to identify high-level themes, and to uncover challenges and benefits.

The study faced limitations such as participation rate, cohort diversity, restricted timeframes and geographic concentration in NSW and Victoria. These were largely due to the limited use of AI scribes in Australia, making participant recruitment challenging. Eligible participants were those over 18 with recent AI medical scribe experience in GP consultations. The AI scribes mentioned by participants were recorded during the study but were neither specifically recruited nor identified by name in the report.



Report overview

In the following pages this research report will guide readers through an exploration of participants' experience with AI medical scribes. We utilise a narrative journey titled The Care Encounter, visualised through a high-level journey map, to highlight the different touchpoints of engagement between GPs, healthcare consumers and the AI scribe. It describes the interactions with, and impact of, AI scribes including the change in GP-consumer relationship.

A thorough exploration of the GP-consumer relationship in the presence of AI scribes investigates how their use influences communication and the quality of care provided. This is followed by an investigation into the consent process, focusing on informed consent practices for AI scribes and the consumer perspective on providing consent.

Finally, in the conclusion, we discuss potential next steps for the future of AI scribe integration in healthcare, instilling a sense of optimism about how the technology can serve as a valuable aid in the future of healthcare within the general practice setting.

The care encounter

In this section we follow the journey of a consumer attending a GP appointment and highlight their interactions with the AI medical scribe that may occur at each stage of their journey.

The care encounter journey

This five step narrative journey examines the different stages of the care encounter from the pre-appointment stage of preparing and booking the appointment through to concluding the appointment.

1. Pre-appointment

The consumer decides to schedule an appointment with their GP. They book the appointment online or by phone. If booking online they may be exposed to information about the use of the AI scribe at the practice. However, the majority of consumers are unaware of the AI scribe at booking if they have no prior experience.

2. Arrival at the appointment

On arrival to the clinic the consumer checks in with reception or a check-in kiosk. At this point they may be introduced to the use of the AI scribe by the receptionist who may also ask for their consent which, if obtained, is recorded in their files. Few clinics display any signage noting the use of the AI scribe, leaving consumers largely unaware until they join the GP in the consultation room.

3. Beginning the appointment

Once the consumer has joined the GP in the consultation room they are immediately informed of the use of the AI scribe and asked for verbal or written consent, (if not obtained by the receptionist on arrival). The majority of consumers give consent without being provided with anything more than a concise verbal outline of the AI scribe and what it does for the GP's workflow. Consumers are asked to confirm consent at every subsequent appointment with the AI scribe. Once consent has been obtained, the GP activates the AI scribe.

4. During the appointment

The AI scribe transcribes the conversation during the appointment but struggles with complex narratives, medication names, and tasks like entering observations into charts. It also faces limitations during examinations or when consultations move between rooms. The 'invisibility' of the AI scribe allows its presence to go largely unnoticed while the reduced reliance on the GP to type notes allows the GP and the consumer to engage in a much more natural and fluid manner.

5. Concluding the appointment

GPs can review and edit the AI-generated summary either immediately after the appointment or later as needed. In some cases, GPs and consumers initially review the notes together to enhance transparency and build trust, though this practice varied and may not be consistently adopted long-term.

The following discussion details how the integration of AI scribes into healthcare settings can enhance the GP-consumer relationship for each of the outlined steps.

Pre-appointment

During the pre-appointment phase, consumers schedule their health appointments either online or by phone. When booking online, they might encounter information about the use of a AI medical scribe at the practice however most consumers remain unaware of the AI scribe's role unless they have previous experience. At this stage, consumers often gather and organise personal health information they believe will be beneficial to share with their GP.

Value-conscious consumers welcome tools that support appointment efficiency

Preparing for an appointment with a GP can increase the sense of value a consumer will get from the visit in comparison to length and cost of the session. This willingness to prepare demonstrates the various approaches consumers take towards getting value from their healthcare appointment and may align with a welcoming of time-saving tools that are seen to increase the productivity of the GP within the appointment itself.

Consumers had a variety of reasons for visiting their GP including addressing an immediate health concern, attending regular health checks or living with a chronic condition. The reason for their visit to the GP significantly influenced how much preparation the consumer did before the appointment.

For managing health concerns some consumers reported keeping detailed notes, previous pathology results, or creating a list of questions so that they could refer to during the appointment. Others made no preparation and totally relied on the ability of the GP to address their health concerns including understanding their current situation, and symptoms and previous history.

Opportunities

There is scope for AI tools in healthcare to help consumers prepare for their health appointments. This may be in the form of providing appointment summaries to consumers at the end of each session which would allow them to review the session and next steps in their own time. Encouraging consumers to be engaged in their health journey may lead them to feeling more cognisant of their health status and better prepared for follow up appointments.

"I want an effective use of time with the time I have for the GP."

Consumer

"I feel that [the appointments] are rushed and if I don't have enough questions to ask ... I still pay the same."

Consumer

Introducing a new tool such as an AI medical scribe into the GP-consumer relationship requires careful preparation to avoid prioritising convenience over thoughtful implementation

The healthcare environment is increasingly digitised with common consumer facing tools, including the use of online booking systems. The use of such tools offers a convenient means for consumers to engage in health planning 24/7 while also offering practices an opportunity to inform and educate the consumer about events and services specific to their practice.

Introducing and providing information about the AI scribe at the point of booking provides the consumer with the opportunity to learn more about the AI scribe prior to providing consent. However, this information or consent request may be compromised. It may be viewed as just another privacy tick box, or may make the consumer feel they have to consent to the AI scribe to continue the booking online.

"[On the booking engine] It pops up with some consents and one of the consents specified the scribe tool ... It was that the practice now uses a scribe tool and you know, details on ... your standard privacy stuff ... Admittedly, I didn't read it more than having a glance at it."

Consumer

"I feel like it was if you didn't (consent to the use of the AI scribe when booking online), you had to contact reception and they would have probably gone through it with you or whatever. And I'm not that person. So as little contact with phones as possible is good for me."

Consumer

Overall, the majority of consumers were unaware of the AI scribe use by the GP before attending the appointment, meaning their first time being informed about and experiencing such a tool was embedded within their appointment time.

An exception to this was reported by consumers who used online booking systems. During the booking process consumers were informed that the practice with which they were making the booking had commenced the use of AI scribes. The information outlined the benefits of the AI scribe and simultaneously asked the consumer to provide consent for the use of the AI scribe in the upcoming appointment.

"But you know, if it can retain and update my records in a better way than previous, well, yeah, I'm all for it. So I think more of the GP for using it than not using it."

Consumer

Opportunities

Online booking systems offer an accessible avenue to inform and educate consumers about the use and function of an AI scribe. Embedding information at this point of service provides the consumer with the freedom to engage and explore the information in their own time, prior to providing consent.

Furthermore, this not only supports the consumers drive to prepare more fully for their healthcare appointment but also adds value to the booking process by saving time that would otherwise be spent during the appointment itself.

Arrival at the appointment

On arrival to the clinic the consumer checks in with reception or a check-in kiosk. At this point they may be introduced to the use of the AI medical scribe by the receptionist who briefly describes the tool, its purpose and may also ask for their consent. Signage in waiting rooms noting the use of the AI scribe is rare, leaving consumers largely unaware of the tool and its use until they join the GP in the consultation room.

The absence of visible and accessible information in clinics presents a missed opportunity to educate and raise awareness about AI medical scribe tools

After arriving to the clinic and checking in, the consumer is usually referred to a waiting room where they are essentially a captive audience. In light of this, general practice waiting rooms are generally awash with health information in all forms from digital media to pamphlets and posters.

Consumers did not observe any form of signage or information regarding the use of AI medical scribes in appointment within their clinic waiting room or reception area.

Similarly, GP's reported a lack of signage in their workplaces though did not report any positive or negative impacts of this deficit. One GP suspected that their medical waiting room digital signage system provided some information however could not confirm this with confidence.

> The RACGP guidelines[4] and some AI scribe providers suggest displaying signage to inform consumers about the use of AI scribes at the practice. However, widely advertised statements of use regarding the AI scribes in the general practice setting was not something that the GPs were aware of for their practice.

Opportunities

Displaying information to consumers prior to meeting their GP gives an opportunity to consider what the AI scribe use might entail, essentially providing the groundwork for an informed discussion. Displaying signage may also prompt questions to the receptionist for further information such as brochures or other, reducing the questioning that may take time from the GP appointment. It also provides an opportunity for the consumer to take information away from the point of care to explore or share at a later time.

Medical receptionists have the capacity to perform a crucial role in the process of informing consumers and obtaining their consent for the use of AI medical scribes during consultations

Receptionists are often the first point of contact for consumers and may be responsible for initiating the consent process. If the medical practice has attributed the consent process to the receptionist at the point of check in, the receptionist will inform consumers that their doctor would like to use AI scribe technology to assist with note-taking during the consultation. This initial interaction sets the stage for a smooth consent process.

By handling the consent process, receptionists help to ensure that the use of AI scribes and associated consent process does not disrupt the flow of the consultation. Their role is to make the process as seamless as possible, allowing healthcare providers to focus on consumer care and alleviating any sense of expected consent on the part of the consumer.

GPs reported that receptionists may inform the consumer on the use of the AI scribe with a brief explanation of what AI scribes are and how they function. If consumers had questions or concerns about the use of AI scribes, the receptionist was prepared to provide additional information or direct them to written materials that explain the technology in more detail. Despite this responsibility most GPs did not believe their receptionist were provided with any training about how or what to say to consumers who had more complex questions about the AI scribes' functions.

Some receptionists were also reported as collecting consent from consumers, with the response documented in the consumers' record.

Opportunities

GP practices have the opportunity to improve workflow efficiencies by allocating the education of consumers and the obtaining of consent to the role of the medical receptionist. Simultaneously, AI scribe providers could offer training for this staff cohort to ensure they are equipped to support consumers during the education and consent process.

In addition, practice management systems could embed a feature on the consumer profile page that allows the clinician to easily see if consent has been requested and obtained. This would include the date of consent to ensure currency and indicate when verbal confirmation is sufficient to confirm ongoing consent.

The combination of task allocation to medical receptionists, staff training, and visual recording of consent in the PMS interface provides the opportunity for consumers to be informed prior to providing consent and removes the process of consent from the clinical encounter.

"The sentence is always done by reception, not by me. Because if a doctor's trying to get the consent, then that's not really valid because people might find it much harder to say no to the doctor than they do to the receptionist."

General Practitioner

"[Use of AI scribe] was just mentioned to me and I overheard [the receptionist] saying it to the other patients too, but I don't remember seeing anything ... [The first time the receptionist said] the doctor's just testing out this new one ... and then the next one he said he will be continuing with the scribe if you're happy to go ahead. And I said, yeah that's fine."

Consumer

Beginning the appointment

On joining the GP in the consultation room the consumer is keen to explain the reason for their visit and make the most of the time available in the session. The GP needs to predict and interrupt this natural urge to respectfully inform the consumer about the AI medical scribe and request their for consent for using the tool immediately in that session.

A rapid introduction to the AI medical scribe, its use and required consent is essential in avoiding conflicting priorities for time use during the appointment

The beginning of an appointment can often feel rushed for both consumers and clinicians, with time pressures and a focus on immediate concerns. During this initial stage, consumer may be unfamiliar with the role of AI medical scribes. The urgency to address health concerns, combined with the assumption that the doctor would only use the AI scribe if it were safe and beneficial for both the clinician and consumer, may lead consumers to consent without fully understanding the tool's purpose or implications.

GPs reported that the majority of consumers give consent despite being provided with only a short verbal outline of the AI scribe and what it does for the GP's workflow. This general provision of consent was also supported by consumer reports.

Consumers reported understanding that the AI scribe as primarily being of benefit to their GP and that the GP would handle accurate note taking as part of their professional role, and gave consent accordingly.

> **"The way privacy is managed, the way it's processed on shore, the way that transcripts are not kept somewhere on the server but encrypted ... All of that was very reassuring to me that this was a safe process that would fit with [any] sort of privacy concerns. And advising patients who are interested about that aspect of it has been very reassuring for them."**
>
> General Practitioner

Opportunities

Developing a precise and succinct explanation of the purpose and use of the AI scribe that aligns with information provided either at the point of booking (online) or printed materials (such as in the waiting room) supports the consumer in connecting the information to the experience of the AI scribe in action.

If prior education has been provided, the brevity of discussion at this point of service will be an addition to an already developing awareness and knowledge of the AI scribe and its purpose. As such the brevity may act to minimise the time burden on the clinical appointment itself.

During the appointment

If the consumer has provided consent for the use of the AI medical scribe, the GP activates the AI scribe and they carry on the appointment as usual. The GP may make some changes to the way they talk about the consumers presenting complaints but the most significant changes appears to be in the forward facing body language which increases the felt sense of engagement for both consumer and clinician.

The ‘invisibility’ of the AI medical scribe allows its presence to go largely unnoticed while the reduced burden on the GP to type notes allows the GP and the consumer to engage in a much more natural and fluid manner

The capacity of the AI scribe to function as a non-intrusive and essentially ‘invisible’ tool frees the clinician up to focus on the consumer with a more empathic approach. The changes in the clinicians’ approach were primarily focused on physical positioning with the GP turning to face the consumer rather than the computer. This allows for a distinct change in the quality of the therapeutic relationship, both from the consumer and clinician perspective.

The importance and value of the improved GP-consumer relationship is paramount and emphasises the major benefit of the AI scribe outside of workflow efficiencies.

Consumers did not notice the presence of the AI scribe during the appointment unless a microphone was visible on the GP’s desk. For some consumers a sound was heard, signalling the start and end of the AI scribe’s work. In some cases, the activity of the AI scribe was shown or the GP asked the consumer to adjust their speech.

Consumers reported a distinct change in the GPs manner during this appointment. This change included the GP turning to face the consumer rather than the computer, increasing the quality of the therapeutic relationship, both from the consumer and clinician perspective.

An in-depth analysis of this relationship outlining the ways the AI scribe facilitates positive improvements is covered later in this report in an exploration specifically focused on the GP-consumer relationship.

Opportunities

Consumers and GPs predominately understand AI scribes to be clinical tools that primarily benefit the clinician. However, there is an undeniable positive impact on the therapeutic relationship.

This component could be promoted to both consumer and clinicians as a benefit that has potential for improved therapeutic engagements and consumer care outcomes.

In complex appointments, the AI medical scribe has trouble distinguishing between essential dialogue and general niceties, leading to summaries that require extensive review and editing

As the appointment progresses the conversation between the consumer and the GP may vary from exploring the reason for the visit, to social matters, to discussion around a physical examination to general chit chat about one's family or pets.

The importance of these topics varies depending on the reason for the visit. In this situation the AI scribe captures the conversation verbatim then creates a summary that may either be considered too heavy in peripheral information or may be highly valued for its simplified representation of the complexity described by the consumer.

It is the responsibility of the GP to review the notes for accuracy, decide what is relevant to each individual session and edit the notes accordingly.

Most GPs adapted and developed an approach over time to editing their notes that aligned with a final product they were happy to use. However, some GPs found the process of editing notes too arduous and considered the time required to be greater than the benefit.

"[The AI scribe] would do the presenting complaint but you would miss out or misinterpreted some of this suicidal kind of stuff or lack of and just repeat itself again. And then the actual plan I just feel like it just repeats what the previous stuff was written. It was just a lot of repetition."

General Practitioner

Consumer autonomy may be challenged if they are asked to adapt their behaviour or speech for the sake of the AI medical scribe

AI scribes appear to have adequate capacity to capture speech despite variations in tone, volume or clarity. Despite this, both consumer and clinicians may feel the need to speak louder, more clearly or in the direction of the microphone. Clinicians may even request the consumer to change the rate or volume of their speech in events where they believe the AI scribe may have difficulty capturing a consumer's story.

In these situations it is crucial for the request to be made with consideration for the individual and the autonomy associated with the consumer's way of presenting themselves.

The use of the AI scribe prompted slight changes in communication for GPs. These changes were focused on the use of descriptive terminology which essentially performed like the eye of the AI scribe. For example, the GP stating the side of the body the consumer is pointing to when describing their symptoms so that the location of the issue is captured by the AI scribe.

Some consumers were advised by their GP to modify their speech patterns. They were instructed to speak slower and more deliberately to ensure their conversations were accurately captured.

Initially, one user felt offended the GP's request, but later came to appreciate how their measured speech facilitated more structured conversations. Additionally, these consumers reported speaking at a higher volume. It remains unclear whether the GP's request was specifically related to the use of the AI scribe or for other clinical reasons.

Some consumers noted that their GP adapted their speaking style, slowing down for improved clarity. Others maintained their already clear and easy to understand communication.

"How dare you [tell me to slow down]. Like, no, I'm talking the way I want to talk. But then I was way more mindful about what I was saying and making sure that I'm not just raving on, like I'm saying clear points of what I want to say, so it helped me just get to my point quicker and whatnot."

Consumer

Seeing the AI medical scribe in action and viewing the outputs supports transparency while also providing reassurance to those consumers who are uncertain of its capability

Allowing consumers to view consultation notes is not common practice with GPs. As such they may not intuitively think to demonstrate the AI scribe in use to the consumer.

Consumers reported mixed reactions to the viewing of the outputs of the AI scribe during GP consultations. Some found it reassuring and valuable to see the tool in action, while others were indifferent, focusing more on their conversation with the GP than on the tool itself.

Many consumers felt comfortable and reassured when they could observe the AI scribe outputs during consultations. The transparency of the process boosted their confidence, as they were able to see their input being accurately recorded. For consumers who felt anxious, seeing the AI scribe in action provided a sense of involvement and helped to alleviate some of their anxiety, making them feel more engaged in the consultation.

On the other hand, some consumers were indifferent to the presence of the AI scribe. Their main concern was their interaction with the GP, and they did not feel the need to watch the tool being used.

Additionally, there was a curiosity among consumers who had not had the chance to see the AI scribe in action. These individuals were interested in understanding its capabilities and how it contributes to the consultation process.

Overarchingly, consumers were comfortable with the use of the AI scribe during the consultation.

Opportunities

Consumers feel more engaged and collaborative when they can see the AI scribe in action. Clinicians can enhance transparency and build trust by offering consumers the opportunity to observe the AI scribe during consultations.

> **"I'm happy to see what's being captured I guess. I'd rather see it than not see it."**
>
> Consumer

> **"Maybe I sit more in the generation that's a bit more comfortable with disclaimers and privacy and the use of these tools, but I had no issues with them using it."**
>
> Consumer

Concluding the appointment

In finalising the appointment, the GP confirms the appointment is concluded and stops the AI medical scribe. The GP may access the AI summary of the session. They may review, share and make edits to the summary then or after the appointment.

The immediate availability of the AI medical scribe summary improves GP-consumer collaboration and workflow efficiencies

The immediate availability of the AI scribe summary is a key driver in the tools ability to improve clinician workflow. The ability to rely on the AI scribe for documentation reduces the time GPs spend on administrative tasks, contributing to lower cognitive load and a more sustainable work-life balance. With a reduced workload, GPs can spend more time with each consumer during appointments.

The shared review of the AI scribe summary between the GP and consumer can contribute to an increased sense of collaboration. This may be especially felt by the consumer if they also receive a copy of the notes, contributing to an increased sense of value from the appointment and overall level of comfort with the use of the AI scribe.

“I think it felt good because I’ve actually never had that [the summary] before … Now that’s something that I can add to my list of notes and I can also go through that next time I’m there with [my GP].”

Consumer

At the end of the appointment, some GPs utilised the opportunity to share the AI scribe outputs with the consumer. They saw this as a mix of sharing the learning experience with the consumer and building trust and confidence in the AI scribe as a clinical support tool.

Consumers who were shown the summary notes, or had an opportunity to view the AI scribe in action with their GP, expressed appreciation for seeing them, with one consumer asking to be emailed a copy to add to their personal health notes.

Consumers who had more time to discuss their concerns generally reported consultations to be more productive. They reported the presence of an AI scribe meant that all letters and documentation are prepared by the end of the session, removing any previous necessities for follow-up emails.

GPs retrieved the summary either at the conclusion of the appointment while the consumer was still there or once they had left the room. While some GPs edited their summaries in the AI scribe itself most transferred the file to their practice management system making file edits there. Editing was reported to be time-consuming in the initial stages of use, but the process was expedited with continued use leading to time saved overall.

Opportunities

AI scribe providers have an opportunity to develop a consumer friendly summary that can be shared with the consumer at the end of the appointment in either printed or digital format. This could additionally include an outline of any next steps the consumer may need to take.

The care encounter conclusion

The journey of the care encounter outlines the GP-consumer interactions with the AI medical scribe demonstrating the subtle yet impactful role this technology is able to play in general practice appointments. The unobtrusive handling of documentation by AI scribes enables GPs to shift their attention to meaningful consumer engagement. This change not only improves the flow of the appointment but may also reinforce the consumer's sense of being heard and involved.

While the integration of AI scribes into the care encounter appears seamless, it is important to look deeper into the practices surrounding their implementation and consumer perception regarding their use. In the following sections we cover two key themes from the care encounter narrative, including an exploration of the role of AI scribes in the GP-consumer relationship and an investigation into the associated consent processes.

Exploring role of the AI medical scribe in supporting the GP-consumer relationship

Sitting at the core of the care encounter, the GP and the consumer are united in what may be the hardest or happiest moments of the consumer's life. Their engagements forms a unique relationship that requires trust, transparency, and open communication yet these elements are often challenged by the realities of overburdened clinicians and compromised workflows.

The quality of the GP-consumer relationship is crucial for delivering effective, high-quality healthcare and must be prioritised in order to optimise consumer health outcomes and support clinicians in their daily tasks.

Clinical tools such as AI scribes uplift the capacity of the clinicians by way of reducing the administrative burden and mechanical task of clinical note taking. Such tools offers not only a way to improve the daily workflow of clinicians but, perhaps more importantly, a tool that enables them to engage more effectively and meaningfully with the individuals they care for.

The following discussion explores the unexpected role that AI scribes appear to play in supporting the GP-consumer relationship, particularly in amplifying the sense of validation and value associated with general practice appointments.

The discrete nature of AI medical scribes enables GPs to concentrate more on meaningful engagement with consumers, resulting in nuanced improvements in therapeutic interactions

Consent and transparency about the AI scribe's purpose, accuracy, and implications are vital. During a brief consent process, GPs explained that the AI captures and summarizes the appointment conversation for supporting comprehensive documentation. The aim of this explanation was not only to inform the consumer about the AI scribe's function but also to reassure consumers about confidentiality and compliance. This explanation is crucial for consumers unfamiliar with digital healthcare tools, clarifying that the AI is a supportive tool, not a replacement, for care.

When the GP briefly explained the AI's role, consumers gained confidence that they are informed participants in their own care process. This transparency around the use of technology reassured consumers, especially those concerned about privacy essentially fostering collaboration and trust. It also highlighted the GP's respect for consumer autonomy, as consumers know they have been given the choice to accept or decline the AI scribe's involvement.

By keeping the AI scribe unobtrusive and fully under the GP's control, the interaction reinforces that technology is an aid to, not a replacement for, the GP's expertise. This approach subtly emphasises the supportive role of technology in enhancing care. This positioning subtly emphasises that the GP's judgment remains paramount, alleviating any consumer concerns that technology might compromise the quality of human care. This balance helps consumers in feeling valued and supported by both the GP and the technology, which serves a secondary, supportive function.

When managed transparently and efficiently, an AI scribe can lead to notable improvements in consumer satisfaction and care quality. With GPs less focused on manual documentation, consumers experienced more personalised attention, translating into better communication and understanding. For consumers, the invisibility of the AI helped in retaining the "human" element of their care while subtly enhancing the GP's efficiency.

"(Since the use of the AI scribe) I feel like it's less transactional ... It's just become more like a conversation ... My doctor has become more at ease and less stressed ... I feel like over this last year, my doctor's taking more time ... slow down, way more engaged, more like listening to me instead of just writing, typing ... definitely way more relaxed."

Consumer

Sense of surveillance

Despite the 'invisibility' of the AI scribe, a small number of GPs reported a sense of being observed when using the AI scribe. This sense aligned with a feeling of surveillance or monitoring which impacted their experience and ability to carry out the session with a normal level of comfort. This experience was noted by some consumers however the majority appeared to largely forget the AI scribe was in use.

"I didn't really notice it (the AI scribe), apparently. But if I can reflect on that, I think that's probably also a good thing because it's not a distracting thing."

Consumer

"I'm fine [comfort with use of the AI scribe] ... I guess that could grow over time as I have more experience with [the AI scribe], to realise it's not some Big Brother thing [that's] spying on you, what you say at the doctors or the conspiracy theories..."

Consumer

Consumers noticed that their GP was more engaged and attentive, with fewer distractions related to note-taking or computer work

Enhanced GP focus and consumer-centered communication

The experience of interacting with the GP was considerably enhanced for some consumers who noted increased eye contact, forward facing body language and more engaged listening.

When a GP was not preoccupied with a screen and manual note taking, they could engage more naturally, which made consumers feel truly heard and understood. This encouraged consumers to share more details about their symptoms, concerns, or lifestyle factors relevant to their health, ultimately leading to a more holistic and accurate understanding of their health needs.

For consumers, this increased presence signaled that the GP was more focused on them, and this heightened engagement may translate into a sense of being prioritised and respected, fostering trust and openness.

"It made him also I think connect better to me as a GP to patient... I think a better experience for me as well."

Consumer

Reduced interruptions lead to improved conversational flow

The absence of frequent pauses to document information created a more conversational atmosphere. Consumers could explain their symptoms or ask questions without the worry that the GP might be momentarily distracted by documentation tasks. This helped maintain a consistent narrative in the consultation, allowing the GP to grasp the full context of the consumer's story needs.

This was noticed particularly in the more complex appointments such as those relating to mental health concerns. Utilising the AI scribe in these appointments allowed the GP to be more attuned to the complexities of the consumers experience enabling them to explore those experiences in greater depth. This environment can help consumers feel comfortable sharing sensitive information, knowing that the GP is fully attentive to their concerns.

"I think there's just a higher level of engagement and maybe a bit more care or thoughtfulness, because they're (GPs) actually looking at you and engaging with you versus just staring at the screen typing away."

Consumer

Supporting a balanced exchange and better understanding

Consumers often feel more engaged in the process when they see that the GP is fully present. This presence can prompt them to ask more questions about their diagnosis, treatment options, or lifestyle adjustments. Consumers feel empowered to participate actively in their own care, transforming the consultation from a one-sided evaluation to a collaborative health discussion.

Since the GP's attention is not split between note-taking and consumer interaction, they can focus on verifying consumer understanding. For instance, the GP can pause to clarify any complex medical terms, check if the consumer has any questions, or provide further explanation as needed. This mutual comprehension is vital for consumer adherence to medical advice and for ensuring that they leave the consultation with a clear grasp of their health and next steps as well as empowering them as a collaborator in their individual health journey.

"Typically it's kind of, you sit there, you tell them what's wrong, they type up the notes, then they say, hey, I think you have this. Then they go back on, type up more notes. So this feels more like you're going to a psychologist or you're actually having a consultation versus, you know, this is what's wrong with me and they type away."

Consumer

Reinforcing the human element through efficiency and quality of care

With the efficiency brought by the AI scribe, consultations may become less rushed and more responsive to consumers individual needs. This ease in pace and responsiveness fosters a supportive atmosphere, making consumers feel cared for and understood. Consumers are likely to leave the consultation feeling more satisfied, confident in their care plan, and connected to their GP.

Some GPs noted that time saved by the use of the AI scribe allowed for additional health concerns to be addressed in the appointment. This supports the consumer desire for value from their appointments with their GPs and recognises consumers presenting with more than a single symptom in a single appointment.

Other GPs reported that the time efficiencies associated with AI scribe use allowed them to have a moment's pause between appointments or to finish their work day on time. Such efficiencies suggest that GPs are likely to experience lower levels of burnout and fatigue, enabling them to approach each consumer interaction with renewed energy and empathy. This freshness in approach benefits consumers directly, as they experience a more present, engaged, and empathetic GP.

"I feel like it's (the AI scribe) made me feel like continuing to be a GP is a little bit more sustainable."

General Practitioner

"I've been doing this a long time and I guess you can get a bit of fatigue ... Most days I come home from work feeling like I've climbed a mountain. But I feel slightly less like that the last few weeks since [the AI scribe is] working better for me."

General Practitioner

The GP-consumer relationship conclusion

The exploration of the role of AI medical scribes in the GP-consumer relationship outlines key benefits for both clinician and consumer. These benefits include potential increased value during the appointment for consumers with a greater number of issues addressed in each appointment to a richer and more meaningful engagement with their provider. For clinicians the benefits extend beyond reduced administrative burden and time efficiencies with potential to play a protective role in promoting greater work-life balance, enhancing the engagement with consumers and potentially prolonging engagement in the field.

The findings, within research limitations, demonstrated positive to neutral experiences for both consumer and GP and did not demonstrate any negative impacts on the GP-consumer relationship.

The following section examines the process of obtaining consumer consent for using an AI scribe during GP appointments. It highlights the significance of informed consent, explores various approaches taken, and discusses the broader implications for integrating AI scribes into healthcare practices.

“I feel like it may improve my relationship with my patient within certain situations where otherwise I’d probably feel a bit stressed. And I’m sure patients know [and] are aware when you feel like that and that doesn’t benefit the relationship.”

General Practitioner

Examining the consent process for using an AI medical scribe

Obtaining consent for AI scribes is vital for maintaining trust and a strong therapeutic relationship between consumers and their GP. Informed consent ensures consumers feel included, respected, and assured that their autonomy and privacy are protected, helping them view AI as a supportive tool rather than a threat. This section examines the importance of consent for AI scribes in general practice and explores current practices for obtaining it.

Contents

In healthcare, obtaining consent is standard practice but not a standardised practice when it comes to the use of AI scribes. This means the approach to informing the consumer and obtaining consent varies between clinicians and clinics.

The trusted relationship between the GP and the consumer played a crucial role in obtaining consent. The consumers' appreciation of the GP's time and workload, along with their understanding that the AI scribe would improve the GP's efficiency during the appointment, made it easier for them to accept the use of the tool.

Outside of the trust they place in the GP, consumers cited various reasons to support their decision to consent to the use of AI scribes. These included:

- The potential to improve the GP's efficiency and save time, indirectly allowing for greater engagement and attention during consultations
- Willingness to embrace any solution that would aid the GP in addressing their health concern
- Assurance of comprehensive documentation that captures all aspects of the conversation and the trust in the GP to maintain accuracy
- A perception that adopting new technology is a prudent and natural step, along with prior familiarity or exposure to AI.

Trust in their GP overrides any concerns that consumers may have in consenting to the use of an AI medical scribe

Consumers' comfort with new practices, including the use of AI scribes, was strongly influenced by their relationship with their GP. Most consumers expressed willingness and gave consent for AI scribe use, citing their trust in their GP to act in their best interests.

This trust was often built over years of consistent and positive interactions. Some consumers expressed reluctance to consent to AI scribe use if with an unfamiliar GP. This highlights the importance an established relationship can play in facilitating consent and consumer uptake.

"If I didn't have that relationship and trust, I would have been really way more skeptical and to the point where I probably would have said no."

Consumer

The GP's demeanor and approachability also contributed to the consumer's' decision to consent. A consumer described their GP as "a very like modern, cool doctor, I guess you would say, so I trust him" meaning their perception of the GP to be credible with technology additionally contributed to trust and acceptance of the AI scribe.

"Mainly because I trust [my GP]. I don't know how comfortable I would be, to be honest, if I didn't have that relationship with her ... the trust or just the whole recording thing and whatnot ... I don't think I'd be real happy, say, if she wasn't available and someone else was sitting in her seat. I'm not sure I'd say yes."

Consumer

Open and transparent communication between the GP and the consumer further strengthened trust. Consumers appreciated being asked for their consent and being informed about the process, which reinforced their comfort with the decision.

A sense of indifference regarding method of data collection by the GP was a contributing factor to some consumers consenting to the use of the AI scribe, meaning the method of data capture by the trusted GP (typing notes themselves or the AI scribe providing notes) was not perceived of importance to the purpose of the consultation, which is, of course, to receive healthcare.

"From my point of view, anything that I said that day or that's being transcribed would be on their record anyway, that she would be in the old days typing it in."

Consumer

"I mean, it's the same, like they're still taking data regardless, right?"

Consumer

What is consent in relation to the use of an AI medical scribe?

Consumers are unlikely to be aware of the difference between the consent to receiving treatment and the consent to the handling of health information.

Consent in the healthcare sector is generally understood as the consumer's provision of consent or refusal of a treatment, process or procedure. However, consent for the use of an AI scribe is not about receiving treatment but about the handling of health information use and implications (including the potential for inaccuracies and how these will be managed), and how the consumer's data may be collected, processed, stored and shared. In this context the core of consent is about the process of acknowledging the tool is recording the conversation during the appointment.

Both forms of consent should involve a dialogue between the provider and consumer, ensuring that sufficient information and education are provided to enable informed consent or refusal. However, consumers are often unaware of the distinct differences between these forms of consent and their implications. This is largely due to the context and proximity in which consent is sought, as well as a lack of understanding about health information management in an increasingly digital world.

GPs must make sure key elements of consent for handling of health information are addressed in the AI scribe's consent process which means:

1. Sufficient information is given to the consumer before providing consent
2. Consent is provided voluntarily (willingly and without coercion)
3. There is the ability to comprehend and express consent by the consumer
4. Consent is current (up-to-date)
5. Consent is for a specific and clearly defined purpose.[5]

Why does consent matter?

Obtaining consent underpins the integrity of both professional standards and the therapeutic relationship, acting as a protective mechanism for both clinician and consumer.

In the Australian healthcare landscape, obtaining consumer consent for the use of an AI scribe is a critical step for a GP [4]. The process of gaining consent ensures compliance with various state and territory laws regarding recording private conversations and Australian privacy legislation, respects consumer rights, supports the transparency essential to trusted healthcare relationships, while aligning with the professional standards required of practitioners in Australia.

Key reasons why gaining consent is important include:

Trust, ethical integrity and the therapeutic relationship

Trust between a GP and consumer is foundational to effective healthcare delivery[6]. By seeking informed consent, GPs uphold ethical integrity and reinforce the transparency that is fundamental to the therapeutic relationship.

Establishing consent as part of best practice in digital health

As the use of AI tools in healthcare grows, establishing informed consent as a best practice is key to responsible AI adoption in Australia. Obtaining consent for AI scribes reinforces the idea that technology is being integrated thoughtfully and with consumer interests at the forefront, setting a precedent for ethical AI use in clinical settings. It may even be suggested that a standardised practice should be agreed.

Transparency about AI capabilities and limitations

AI scribes are not perfect, and there can be gaps in capturing context or nuances, especially with complex medical language. Transparency about these limitations is a crucial part of the informed consent process. When consumers are aware that the AI serves a supportive role (subject to human oversight) they are more likely to trust the GP's use of the tool and to understand that the final responsibility for accuracy lies with the practitioner.

Consumer autonomy and informed decision-making

Australian healthcare emphasises consumer autonomy, a core principle reflected in the Australian Charter of Healthcare Rights[8], which supports consumers' rights to be informed and to make decisions about their care. GPs must ensure that consumers are aware of and comfortable with the AI scribes involvement in recording and processing consultation details.

By obtaining consent, the GP respects the consumer's right to control how their health information is managed.

Compliance with regulation

Under the Privacy Act 1988 and the Australian Privacy Principles[7], healthcare providers in Australia are obligated to obtain consent if sensitive information will be accessed or processed by third-party technology, such as an AI scribe.

Many AI systems process data in ways that could potentially involve third-party processing or remote, overseas servers. Additionally, recording a conversation without the consent of those involved may be illegal, with different laws per jurisdiction. Obtaining consent demonstrates the GP's compliance with these laws hereby reducing risks associated with unauthorised data access or sharing.

Risk mitigation and professional standards

The Australian Health Practitioner Regulation Agency (AHPRA) and the Medical Board of Australia expect practitioners to uphold privacy and confidentiality standards[9], which align with seeking consent for AI tools in consultations. If a GP implements an AI scribe in a consultation but does not obtain consent and a consumer raises concerns, the practitioner may be at risk of legal or regulatory complaints. Informed consent documents the consumer's understanding and agreement, helping the practitioner adhere to professional standards and mitigate potential legal risks.

Timing and time of the consent process are key in driving efficiencies and protecting the consumers right to consent

AI scribes enhance care efficiency by capturing and summarising clinical appointments, saving valuable time for clinicians both during and following consumer consultations. However the extent of these efficiencies depended on the time required to address the key elements of consent.

GPs noted the timing of the consent process as two-fold. Firstly, there was the consideration of the time of the consent process such as whether consent is sought before or during the consult. Secondly, is the duration of the consent process which related to the time required to obtain the consent itself.

"I wasn't sure when I first started using it ... how much would be involved in getting consent, but it's actually been a lot easier than I thought."

General Practitioner

Time of consent process

Obtaining consent from consumers occurred at differing points in time, from the point of booking, to check-in, through to the beginning of the appointment itself.

The timing of when consumers were asked for consent affected how much time they had to review and consider the information provided, to ask questions and to provide consent without any sense of pressure.

The variations in when consent was requested was related to varying formats, and the collection methods which was further influenced by whether or not the consumer had previously provided consent at the same clinic.

Examples of these variations included:

1. Digital consent every time when booking online
2. Written consent for the first time and verbal consent after, via the receptionist
3. Written consent for the first time and verbal consent after, via the GP
4. Verbal consent every time, via the GP

Duration of consent process

When starting the consent process, it is important to consider the time needed to inform the consumer about the tool, explain its purpose, and request their consent. This consideration is closely linked to how these requirements might affect the efficiency and effectiveness of the appointment.

GPs reported that the consent processes varied in length, depending on the individual's awareness of, knowledge about and capacity to comprehend the use of AI tools both in general and within the health context. The extent of these variables and the education required to enable consumers to make an informed decision on their consent pose significant risk to the efficiencies proposed by the initial service offering.

While both aspects of timing need to be considered for their individual merits and implications, they are closely associated in how consent was sought. Assigning the consent process to the receptionist or online booking systems (prior to seeing the GP) allowed for the appointment time to be optimised and focused on the reason for the appointment. In addition, separating the consent process from the appointment allowed consumers to be introduced to the concept and use of the AI scribe outside of the therapeutic setting. The later essentially alleviates any potential sense of obligation to provide consent.

"But to be fair, if [consumers] ever ask that many questions (about the AI scribe) and it's going beyond 30 seconds, which is just kind of wasting the purpose of the consult time, I will just say, look, don't worry about it. We'll just do it the old fashioned way.

Probably 95% of people will just get that first, oh yeah, yeah, we'll talk so you don't type and that they're very happy to proceed with that."

General Practitioner

Providing the consumer with a clear and concise explanation of the AI medical scribe's role and purpose streamlines the consent process by reducing confusion and questions

When requested by a trusted source such as their GP or medical receptionist, consumers' comfort with the decision to provide consent is reinforced.

The GP typically addressed the request for consent, either verbal or written, at the start of the consultation immediately after exchanging initial greetings. However, some practices had embedded this step into the check-in process. In these instances the receptionists registered the consumers attendance and also provided information about the use of the AI scribe by the practice/GP, seeking consent for the use of the AI scribe prior to the consumer entering the GP consultation room.

To begin the process of obtaining consent for a consumer's first-time experience with the AI scribe, the clinicians or receptionist provided a brief description of the function of the AI scribe as a tool that:

- Records, transcribes and summarises their conversation
- Knows medical terms
- Integrates with the practice software
- Provides notes that will have to be reviewed for accuracy, and;
- Is being explored or trialled by the GP

While benefits to the consumer were not explicitly outlined, some GPs shared more details of the qualitative benefits of the tool on the consultation and found it useful to increase consumers' comfort with the tool. GPs independently reported qualitative benefits of the tool on the consultation including being able to face consumers and engage more, and also having more time and energy for a better conversation due to not having to concentrate on typing notes. Some GPs noted these benefits when introducing the AI scribe which helped increase consumer comfort with the tool.

Overall the brevity of the explanation was seen to expedite the consent process, essentially adding to overall efficiencies. This was important for two reasons:

1. It avoided placing too much emphasis on the AI scribe's use and thus prevented the consumer from feeling overwhelmed or concerned about the use.
2. It reduced the time required to explain or qualify the concerns raised.

"I just was not thinking about what's happening with my data or anything. I was just like, great, it's more time to chat because we've got this 15 minute window and I've got to speed talk."

Consumer

Although the brevity of a verbal description was valued by clinicians, not all consumers who received verbal information about the AI scribe were informed, or could recall being informed, about the data management practices for the AI scribe (processing, storage and sharing). More than half the consumers were unaware of where the data for the AI scribe would be processed or stored, which highlights a lack of consumer knowledge regarding data management practices for the AI scribe. This indicates that any implications or potential risks from the collection of the consumers data could potentially be missed from the consent decision.

Consumers who received written information and consent forms on the other hand were able to confirm that they had been informed of the data management practices for the AI scribe use. While they were not able to clearly recall the specific details of the information, the provision of physical information and consent forms indicates a potential method for ensuring necessary information is provided to the consumer.

Expectations varied as to whether consent should or would be asked again at the next consultation. For some it was a assumed that they would provide consent confirmation each time, for others they felt signing a written consent should be sufficient to assume ongoing use, knowing they can opt out with their GP if desired.

Overall consumers expressed low concern from the consent process. Only one consumer expressed thinking of possible concerns during the consent process with this concern focused on data security and the potential for data leak. This limited expression of concern reported by consumers underscores the extent to which trust in the GP and clear communication played a pivotal role in consumer acceptance.

"One of the consent things did talk about privacy and said, you know, your information is protected and [the] standard thing. But did I dig deeper as to what server and who's the third party managing that? I didn't. And am I concerned with that? I'm not."

Consumer

Keeping consent up to date in the fast-paced environment of general practice is essential for safeguarding the GP-consumer relationship, ensuring legal compliance, and maintaining confidence in AI medical scribes

All consumers expressed a sense of comfort and confidence with the GP to ask more questions or opt out if they desired. The exception to this was with one consumer who booked online. This consumer felt like that if he didn't provide consent online then he would have to call the clinic to make the booking which he didn't want to do.

Just over half the consumers had no questions after they were informed about the AI scribe. For those who did, they asked about the name of the AI scribe, the accuracy of the notes, how it works, and how or what the GP uses it for. GPs were forthcoming when asked and described the efficiency benefits and the need for reviewing the notes for accuracy, and additional uses such as the suggestion of billing code.

Consumers reported the length of time taken to explain and provide consent was appropriate, with the longest length of time taken for this reported as 5 minutes.

If not a first time experience, it would take less than a minute for the GP to confirm their consent was still current.

Expectations varied as to whether consent should or would be asked again at the next consultation. For some consumers it was a assumed that they would provide consent confirmation each time, for others they felt signing a written consent should be sufficient to assume ongoing use, knowing they can opt out with their GP if desired.

"I think the receptionist have become very good at boiling it down to one sentence saying Doctor X's using an artificial intelligence app to write his medical notes. And I think that very simple description is very, very assuring for people."

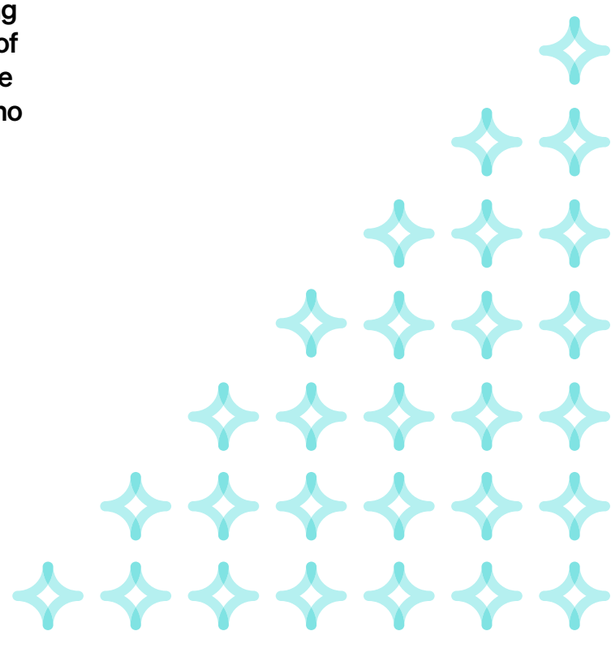
General Practitioner

"[My GP] automatically each time I go there, since she's been using the scribe, she just does a sort of a reminder thing - you're ok if we use this? I say yeah, that's fine, no problem."

Consumer

"So it's kind of like a chicken and an egg scenario where you need to get all the patients to accept the disclaimer. Then once they have ... Then in the future, I think you'll see the value add, but probably at the start you're spending the first five minutes going through the patients to try and get them to commit consent."

Consumer



Consent conclusion

The examination of consent practices for AI medical scribes highlights the importance of ensuring consumers are informed about how their data is being used and that maintaining clear consent procedures aids transparency and is essential to supporting responsible practice. The findings, within research limitations, show that consumer concerns around the provision of consent, being recorded and data handling practices are generally low and they are comfortable with AI scribes in consultations, as the feeling of trust with their GP is maintained.

Conclusion

AI medical scribes in general practice

Where to from here?

The adoption of AI scribes in primary healthcare marks a significant evolution in the GP-consumer relationship. This technology has shown potential to enhance the quality of interactions by allowing GPs to engage more with consumers and provide more attentive care. The non-invasive nature of AI scribes means it functions as a silent partner to the GP in consultations without disrupting the flow of communication or the natural dynamics of the encounter. This leads to some consumers feeling a greater connection with their GP in consultations.

Remarkably, while consumers have different levels of understanding of AI and what AI scribes provide, their concerns around the use of an AI scribe appear minimal when introduced in the general practice setting. Additionally, consumers report a high level of comfort with their use. GPs report that most consumers agree to the use of AI scribes when their consent is requested. This indicates a widespread acceptance of the tool. Consumer trust in their individual GP, responsible practices regarding transparency and consent, and the idea that the tool was for GP effectiveness were all key factors that contributed to consumers providing consent and comfort. While this study has limitations, it suggests that use of the AI scribes in Australia will be readily accepted by consumers when introduced in a conscientious manner by a trusted GP. Clear and ongoing consent procedures, including the GP maintaining active responsibility for accuracy, will remain essential for continuing confidence in AI scribe use.

Such acceptance is reassuring for those with concerns regarding AI scribe use in primary health care, as it indicates perceived potential barriers, such as consumer resistance to AI scribe use, are low. Additionally, the benefits reported, such as increased engagement for consumers and time-savings for GPs, while very minimal, suggest positive outcomes from use for both consumer and clinician. Taken together, these suggest adoption of AI scribes, especially by GPs who find typing up notes burdensome, will continue in the primary healthcare landscape.

The continued acceptance of AI scribes by consumers depends on the trust they place in their GPs to use these tools responsibly. Consumers expect their GP to ensure that privacy, accuracy and the process of consent are upheld. Any breach of this trust through unclear practices or perceived riskiness could discourage consumer confidence, slow adoption and crucially, hinder future uptake of AI tools.

Building of consumer confidence through the responsible management of AI scribe use, with smooth and secure integration into the GP-consumer consultation, creates an environment in which future integration of AI tools for assisting diagnosis and disease detection may be more readily accepted. This is critically dependant on the consumer being involved and feeling empowered through the asking of consent and the transparent communication of the AI scribe functioning, including it's inaccuracies, and sharing of outputs. The outcomes of adopting AI scribes and carefully managing the involvement of consumers in the journey, may be transformative for healthcare.

We invite you to contact us for recommendations for consumers, clinicians, and developers on putting these important insights into action. Let's collaborate: hello@designtobias.com.

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To maintain transparency and integrity we acknowledge the assistance provided by AI for text enhancement in this work on AI medical scribes. We confirm that any text suggested by AI was checked for possible errors and bias. No private or identifiable information was involved. Any wordings or refining suggested by AI were reviewed and iterated on to ensure the work and conclusions are still our own.