

AI-Assisted Medical Underwriting

Evidence for disclosure, truthful reporting, automated collection, and claims-dispute mitigation.



58% / 39%

Truthful self-reporting: recorded vs. unrecorded

39% → 41%

Claims disputes linked to non-disclosure, 2018–19

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Layers of evidence: comfort, recording, structure, follow-up, audit trail, CX control

- 01 Disclosure** — AI interviewers carry none of the social cues that make applicants under-report to a person.
- 02 Recorded** — awareness of a reviewable record lifts truthful self-reporting from 39% to 58% (Dinges et al., 2023).
- 03 Claims risk** — non-disclosure-driven disputes rose from 39% to 41% in two years in one major market.
- 04 Automation** — structured capture and dynamic follow-up remove the transcription gaps of manual interviews.
- 05 Reinsurance** — a consistent, video-backed file is the evidence reinsurers price treaty capacity around.
- 06 Customer experience** — outsourced tele/video MER sits outside the insurer's control; AI keeps CX consistent and owned.

01 Disclosure

Medical underwriting relies on the accurate collection of an applicant's medical history, making the disclosure phase fundamental to the underwriting process. Applicants are often required to discuss sensitive medical conditions, lifestyle habits, and personal health information, and the interview environment can significantly influence the completeness of their responses.

Research over the past two decades shows that computer-assisted self-administered interviews (ACASI) encourage individuals to disclose sensitive information more readily than traditional interviewer-led methods, reducing social desirability bias and creating a less judgmental environment for sharing personal information. Turner et al. (1998) found that participants disclosed significantly more sensitive personal information using ACASI than traditional paper-based questionnaires, and similar results were reported in clinical settings across Zimbabwe, Nigeria, and Malawi (Des Jarlais et al., 1999; Gregson et al., 2000; Hewett et al., 2008).

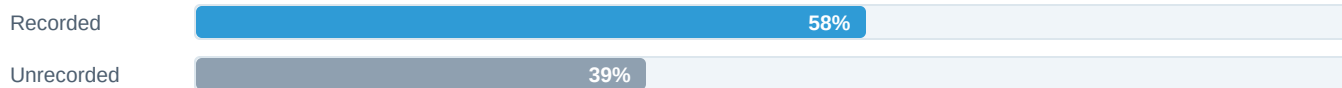
This effect is strongest precisely where it matters most for underwriting: the original ACASI research was validated on stigmatized topics such as substance use and sexual health — the same category of conditions applicants are most likely to underreport on a life or health insurance application. A less judgmental interview format does not just improve comfort; it targets exactly the disclosure gaps that create risk exposure later.

Recent research suggests that conversational AI builds upon these advantages. Patients perceive AI-powered healthcare chatbots as less judgmental than healthcare professionals, enabling more comfortable discussions of sensitive health concerns (What Patients Want from Healthcare Chatbots, 2025), and privacy concerns, AI literacy, and perceived health stigma influence willingness to engage with AI-assisted healthcare interviews (Exploring the Influence of Privacy Concerns, AI Literacy, and Perceived Health Stigma on AI Chatbot Use in Healthcare, 2025).

02 Recorded Interviews and Truthful Disclosure

A separate body of research shows that people disclose more truthfully when they know they are being recorded, independent of who or what is conducting the interview. Dinges et al. (2023) found that when participants knew their responses were being recorded and could later be reviewed, the proportion who reported completely truthfully rose to 58%, compared with 39% under unrecorded conditions — evidence that awareness of a reviewable record encourages people to give more accurate answers rather than risk a later, verifiable contradiction.

For medical underwriting, this suggests that conducting the interview on video, with the applicant aware that the session is recorded, is itself a disclosure-supporting design choice, separate from and additive to the comfort effects of AI-assisted interviewing described in Section 1. This evidence is directional rather than conclusive — it comes from a financial reporting task rather than a medical interview — but it points to a plausible, evidence-based mechanism by which recording an AI interview can reduce under-reporting relative to an unrecorded, non-standardized interview.



SHARE REPORTING COMPLETELY TRUTHFULLY · DINGES ET AL., 2023

03 Claims Disputes and the Cost of Weak Underwriting

Incomplete or inaccurate disclosure at underwriting does not only affect risk pricing at the point of sale — it is also a leading driver of disputes at the point of claim, when the insurer discovers that material health information was missing, understated, or never followed up on.

Isa and Ismail (2022) note that in the Malaysian life insurance market, medical and hospitalisation claims disputes rose from 39% of claims in 2018 to 41% in 2019, and attribute much of this increase to non-disclosure or misrepresentation of material facts at the application stage. Christodoulou and Samuelli (2020) found that customers screened with the assistance of a financial adviser under-disclosed considerably compared with customers screened directly by the insurer, and argue that advisers, who are commonly paid on commission when a policy is accepted, may have an incentive to under-elicited disclosures — leaving the customer exposed to a later claim dispute or cancellation for non-disclosure.

Read together, these studies point to the same underlying problem: underwriting quality is uneven whenever the interview process is inconsistent, intermediated, or dependent on what an individual applicant happens to volunteer — and that inconsistency shows up later as claims disputes and cancellations.



04 Better Information Through Automated, Structured Collection

A further advantage of AI-assisted underwriting is distinct from applicant comfort, recording, or truthfulness: it changes how the information is captured, not just how it is elicited. In a conventional interview, a human interviewer listens, takes notes, and later writes up a summary report — a process with several points at which detail can be lost or misremembered between what the applicant said and what ends up in the file.

An automated interview captures each response directly into a structured, machine-readable field at the moment it is given, and applies conditional branching logic with dynamic follow-ups based on applicant responses, so completeness no longer depends on which interviewer conducted the session or how thorough they happened to be that day. Industry reporting on video-based medical examinations for insurance describes similar gains from digitizing the exam process, including more consistent data capture and faster availability of a structured report for the underwriter (QuicSolv, 2024; ZEGOCLOUD). Structured data can also be fed directly into underwriting rules engines without manual re-keying, reducing transcription error and turnaround time.



Structured Capture

Direct to machine-readable fields
— no transcription step.



Dynamic Follow-Up

Right question triggered every
time, for every applicant.



Rules-Engine Ready

Structured output feeds straight
into underwriting rules.



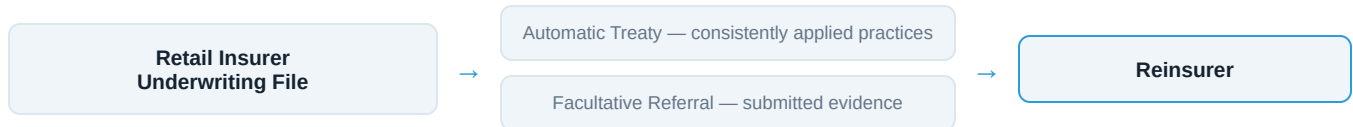
Auditable File

Same fields, same way, every
applicant — reviewable book of
files.

05 Why This Model Strengthens a Retail Insurer's Position with Reinsurers

These benefits are not limited to the retail insurer's relationship with its own policyholders — they also matter to its relationship with reinsurers, who accept a share of the risk on larger or higher-risk cases and depend on the quality of the ceding insurer's underwriting evidence to do so. Once the sum assured on an application exceeds the insurer's retention limit, the excess is generally ceded to a reinsurer, either automatically under a treaty or, for larger or non-standard cases, on a facultative basis where the reinsurer reviews and prices the case individually (LegalClarity, 2026). Automatic treaty coverage is typically conditional on the ceding company applying underwriting practices that are consistently applied, while facultative submissions require the ceding company to furnish the underlying evidence for the reinsurer's own review.

A recorded, structured AI interview is well suited to both requirements: it gives the reinsurer a consistent, reviewable record of what was actually asked and disclosed for every case, rather than a variable-quality summary. This supports the kind of underwriting-quality signal that reinsurers price and structure arrangements around (Milliman, Reinsurance as a Capital Management Tool) — and can make automatic coverage easier to maintain and facultative or disputed-claim evidence faster to assemble.



06 Customer Experience: Keeping the Buying Journey in the Insurer's Control

Many insurers outsource the medical examination step — tele-MER or video-MER — to third-party vendors. This solves a logistical problem, but it creates a different one: the customer's actual experience during one of the most sensitive moments of the buying journey, discussing their own medical history, happens entirely outside the insurer's control and visibility. The insurer does not set the tone, control the pacing, or see how respectfully a sensitive topic was handled in the moment — yet the applicant's impression of that conversation still becomes part of their impression of the insurer.

An AI-based, insurer-owned interview closes that gap. Because the script, tone, pacing, and escalation logic are configured and owned by the insurer rather than a third-party call center, every applicant receives the same standardized, on-brand experience, case after case — not one that varies with whichever vendor agent happens to take the call. And because every session is already captured as a video and structured record (Sections 02 and 04), the insurer has full visibility into what actually happened in each interview, rather than depending on a vendor's own internal quality assurance to know.

OUTSOURCED TELE/VIDEO MER

- CX is shaped by a third-party vendor, not the insurer
- Tone, pacing, and professionalism vary case to case
- Insurer has limited visibility into what was actually said
- Quality depends on the vendor's own QA, not the insurer's standard

AI-BASED, INSURER-OWNED SYSTEM

- Same interview experience for every applicant, every time
- Script, tone, and escalation paths owned by the insurer
- Every session is visible as a video and structured record
- Consistency is built into the same system that creates the audit trail

✓ Conclusion

The reviewed evidence points to AI providing its greatest value during the disclosure phase of the healthcare journey, with compounding benefits once the interview is recorded and automated. Decades of research on computer-assisted self-administered interviewing, and more recent research on healthcare AI chatbots, show that digital and AI-led interviewing reduces perceived judgment and encourages more complete disclosure than traditional interviewer-led approaches. Separately, people disclose more truthfully when they know they are being recorded, and because the interview is automated and structured, the same complete question set and follow-up logic is applied to every applicant — reducing the risk that a material item is simply never captured.

At the same time, the insurance-specific literature shows that weak or inconsistent underwriting, including adviser-intermediated screening and incomplete follow-up, is measurably linked to higher rates of claims disputes. A video-recorded, AI-administered interview is designed to close these gaps at the point of sale, and to leave the insurer better positioned if a dispute nonetheless arises, since the original interview can be reviewed as evidence of what was and was not disclosed. The same qualities extend this advantage into the insurer's reinsurance relationships, where a consistent, auditable, video-backed underwriting file is the kind of evidence reinsurers look for when assessing a cedent's underwriting quality.

Finally, keeping the interview AI-based rather than outsourced to a third-party tele-MER or video-MER vendor keeps the customer experience itself inside the insurer's control. The same brand-consistent tone, pacing, and standard of care apply to every applicant, and every session is visible to the insurer as it happens — rather than being run, and experienced, entirely outside its view.

BOTTOM LINE

AI-assisted interviewing can be effectively integrated into the medical underwriting process as a disclosure-support, claims-defensibility, and customer-experience tool — standardizing interviews, improving applicant comfort, capturing information through automation rather than manual transcription, preserving a video record of what was actually disclosed, and keeping the customer experience consistent and fully owned by the insurer, to help reduce claims disputes and give the retail insurer a stronger file to stand behind with both policyholders and reinsurance partners.

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