

Implementing ambient listening technology in medication reviews: a pilot study in Belgian community pharmacies



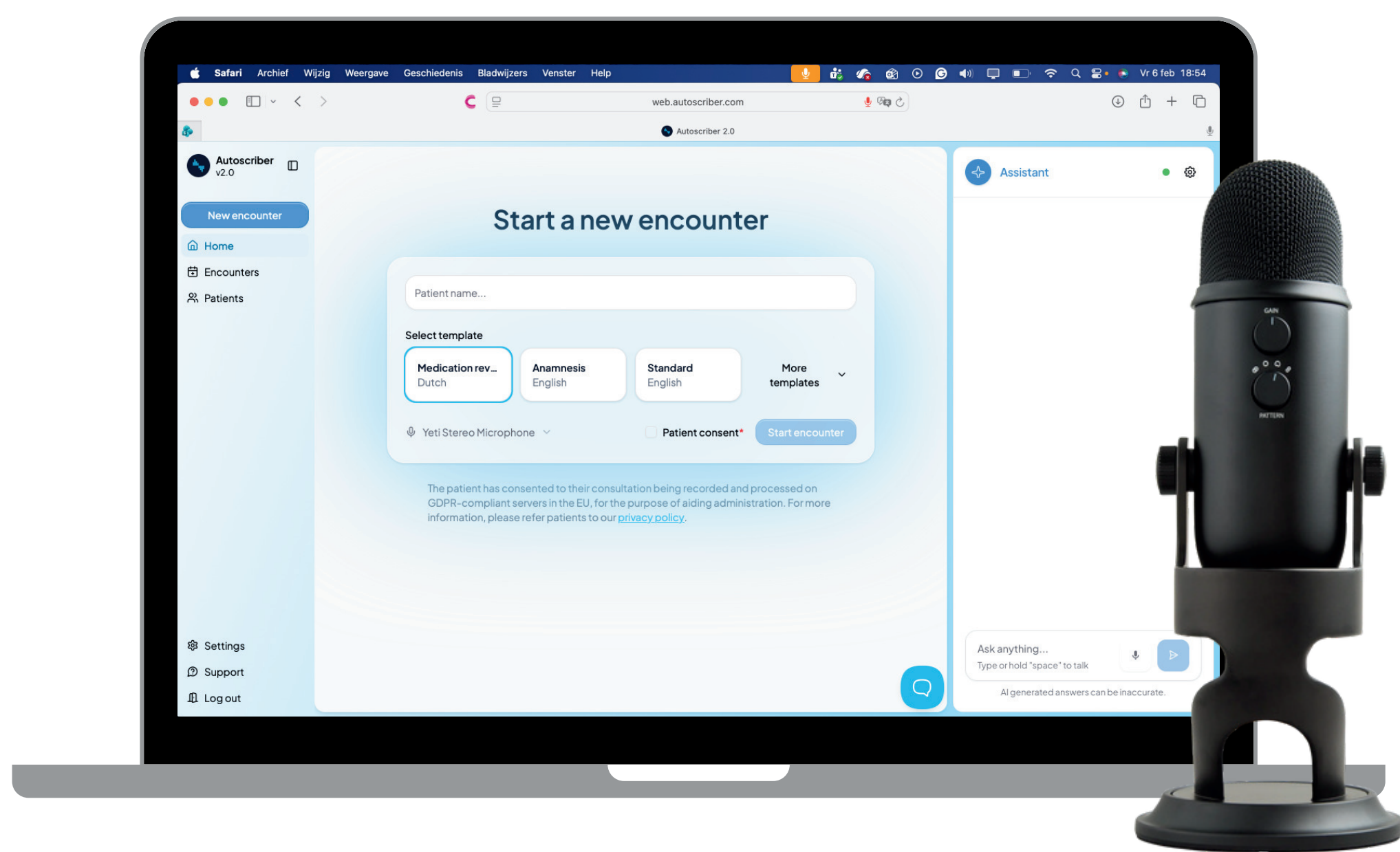
Universiteit
Antwerpen

Maja Brumer, Lena Vandersteen, Nathalie Duquet,
Goedele Strauven, Eva De Sadeleer, Guido De Meyer, Hans De Loof



Introduction

- Medication review (MR) improves patient safety and therapy outcomes, but is often **constrained by time pressure** and administrative workload [1].
- AI-supported ambient listening technology** may reduce the documentation burden by **generating transcripts and structured summaries** during the consultation [2,3,4].
- Autoscriber®** is a web-based, GDPR-compliant, EU-hosted tool that **records, transcribes, and summarises encounters** to support clinical documentation [5].



Autoscriber® start page and external microphone for optimal audio quality.

Objective

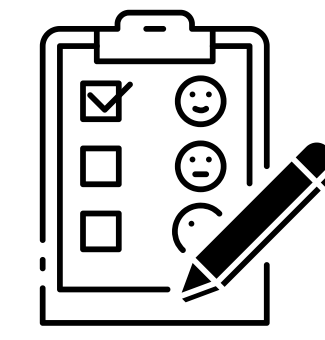
- To assess the **feasibility, usefulness, and acceptability of ambient listening technology** during real-world medication reviews.
- To explore its effects on **workflow efficiency, documentation quality, clinical decision-making, and communication** between pharmacists and patients.

Methods

- Research design:** Mixed-methods pilot study
- Intervention:** MR2a supported by ambient listening (Autoscriber®)
- Setting:** Community pharmacies in Belgium
- Research participants:** 25 pharmacists with prior experience in MRs, expected to collectively perform around 100 reviews
- Timing:** Dec 2025 - Mar 2026 (**ongoing study**)

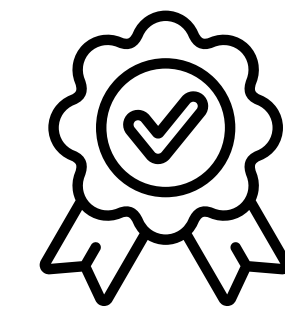


Data analysis



User experiences

Evaluation of feasibility, usability, satisfaction, and time savings with the AI tool through **questionnaires for pharmacists and patients**.



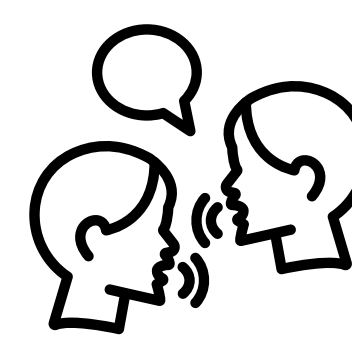
Quality of the MR

Assessed using **the BRANT-MERQS score**, developed at the University of Antwerp, supplemented with **social determinants of health (SDOH)**.



Accuracy of AI transcripts

Analysis of how well the summaries and transcripts capture **the key points of the medication reviews**.



Communication patterns

Recorded conversations will be analysed by **linguistic research groups** at the University of Antwerp, focusing on interaction and communication style.

Conclusion

Our early findings suggest cautious promise: **reduced administrative burden, greater patient focus, and generally positive reception**. **Technical challenges** have also emerged - **an expected part of real-world implementation**. Overall, ambient listening may support **more patient-centred medication reviews**, but its value depends on **systematic evaluation**. By easing documentation demands, pharmacists may gain time and cognitive capacity to deliver **more personalised care**.

Contact us

Implementing AI tools in real-world pharmacies is **not plug-and-play**. Also doing similar research? We've faced our share of technical glitches.

Let's exchange experiences!
maja.brumer@uantwerpen.be



References

- Robberechts A, et al. *Int J Clin Pharm*. 2021;43(5):1173–1182. doi:10.1007/s11096-020-01224-9.
- Tierney AA, et al. *NEJM Catal Innov Care Deliv*. 2025;6(5). doi:10.1056/CAT.25.0040.
- Lukac PJ, et al. *NEJM AI*. 2025;2(12). doi:10.1056/aioa2501000
- Afshar M, et al. *NEJM AI*. 2025;2(12). doi:10.1056/aioa2500945.
- Autoscriber (official website). <https://autoscriber.com>.

AI-supported medication review

1



Pharmacist **introduces the study** and obtains **informed consent**

2



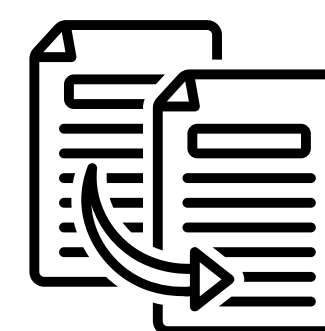
Recording starts:
Autoscriber® + smartphone

3



Medication review
(Autoscriber® generates notes)

4



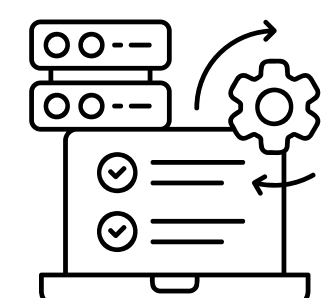
Completing MR documentation
using AI-generated notes

5



Patient and pharmacist complete **experience questionnaires**

6



Pharmacist **uploads anonymised data** to the research team

Study workflow

February 2026

Preparation

- Ethics committee approval
- Pharmacists recruitment and training

Patient selection

Pharmacists identify patients eligible for MR.

AI-supported medication reviews

Pharmacists conduct the MR with patients as usual, while Autoscriber® listens and generates notes in the background.

Data collection

Pharmacists provide the research team with the following anonymised data:

- AI-generated transcript + summary
- Smartphone audio recording
- MR documentation
- Survey on the use of Autoscriber®

Data analysis

The research team analyses the collected data.

