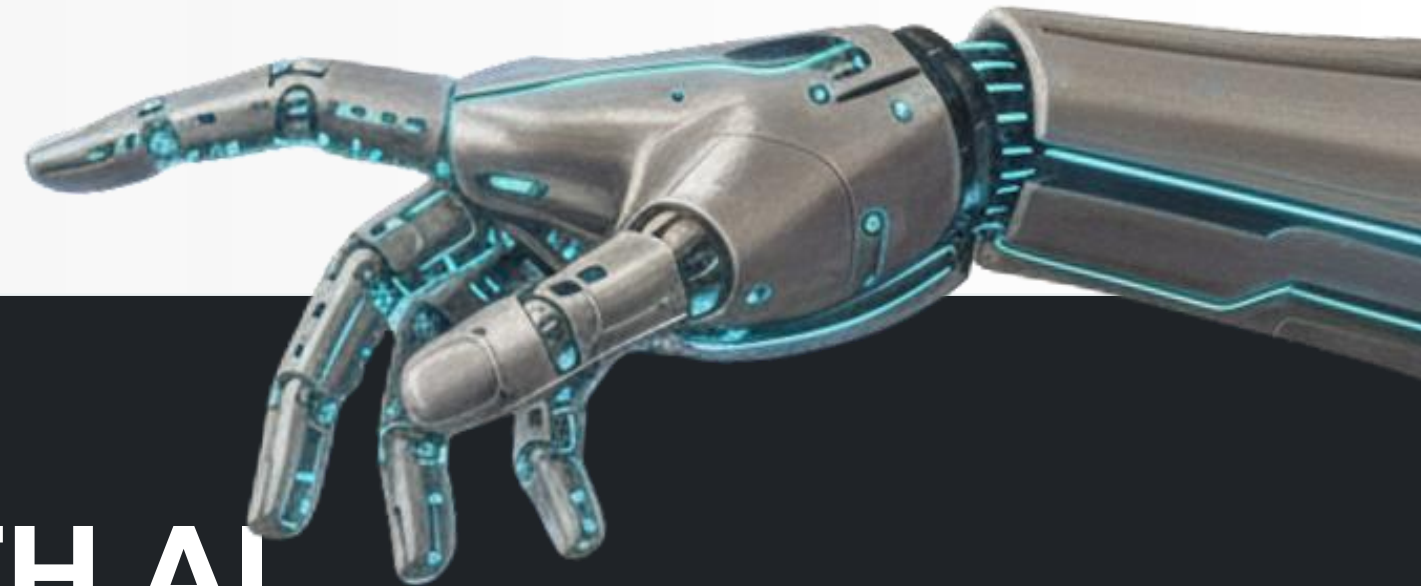




HOW TO INTERACT WITH AI

A guideline for neonatologists

Chloé Desmedt, KU Leuven

Roadmap

PART 1

01 Daily workflow

02 Effective prompts

03 Pitfalls

PART 2

04 AI assistants

05 Data governance

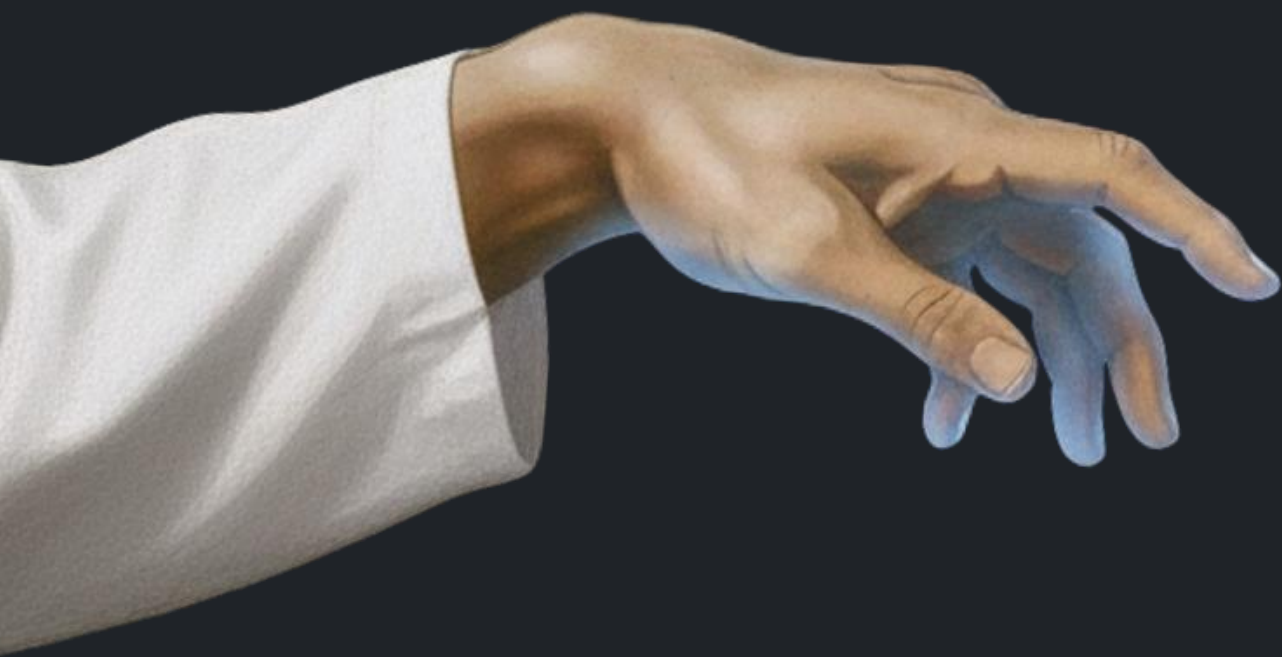
06 Settings

PART 3

07 AI literacy

08 Examples

09 Ambient AI



PART 1

Working with AI

01 Daily workflow · 02 Effective prompts · 03 Pitfalls & good practices

How AI assists your daily workflow

Create

Generate something new from instructions

Adapt

Transform something you already have

Summarize

Condense information

Extract

Retrieve specific information

Create

Brainstorm

- Topics for the next BVN/GBN meeting
- Presentation outline
- Titles for a manuscript

Cases

- A fictional case
- Simulation of a parent conversation for communication training

Education material

- Infographics, patient folders
- Checklist (e.g. before discharge)
- FAQ's

Literature search

See example

Adapt

Rewrite

- For (grand) parents, siblings
- For a professional mail, LinkedIn post

Translate

- (Discharge) instructions
- Infographics, patient folders

Critique

- *“Identify information that could be misinterpreted”*
- *“Identify information parents might not understand”*

Format

- Convert to a table, flowchart, checklist, pdf-file etc.
- Change the length of a text, while maintaining the content

Summarize

Minutes of the meeting

1. Record (Teams) meetings
2. Transcribe
3. Summarize

(Scientific) literature

- Research articles
- Guidelines
- Laws, policy statements

Extract

Study results

- Research question
- Methods
- Outcomes
- Limitations

Guideline recommendations

- Recommendations about...
- Sections about...

How to create an effective prompt

Prompt engineering

Designing and refining instructions to guide the AI system toward the desired output

Be specific

Context – Aim – Specifications- Expected output

- Reduce ambiguity -
AI should not “guess what you want”
- Better accuracy, fewer hallucinations

Context

Experience – Audience – Purpose

“I am a neonatologist at the NICU in a Belgian hospital who is reviewing education material for parents of premature infants”

Aim

Explicit verbs

“Evaluate the attached patient folder on breastfeeding”

“Compare the attached patient folder to the current evidence base”

Specifications

Length – Detail – Language – Sources

“Evaluate the following: structure, clinical accuracy, language and tone, illustrations and visuals, cultural sensitivity and inclusion”

“Use evidence-based sources”, “Provide citations or hyperlinks.”

Expected output

Format – Language

Table, bullet points, checklist, step-by-step instructions

Word, PDF, JSON, JPG

Prompting techniques

Iterative prompting

Prompt > Evaluate > Refine > Repeat

- Use follow-up prompts
- “The perfect prompt” does not exist

Structure your prompt

- CASE- structure
- ****bold text****
- Bullet points, numbered lists
- Delimiters [text], <html>

Language

- Model training + scientific literature = primarily English
- Don't sacrifice clarity – Use native language if necessary

Use AI

1. Create your own CASE prompt
2. Ask AI “Help me improve this prompt”
3. Evaluate prompt
4. Refine prompt if necessary

Pitfalls: Hallucination

Presenting plausible sounding information that is factually inaccurate

Fabrication

AI invents references, study findings, quotes etc.

Distortion

AI misinterprets or slightly changes the information from the source material

Omission

AI leaves out important information

Generalization

Evidence concerning a certain group or setting is applied to a broader group/setting

Fabricated references

Topaz M, Roguin N, Gupta P et al.

Fabricated citations: an audit across 2.5 million biomedical papers

The Lancet, 407, 1779-1781

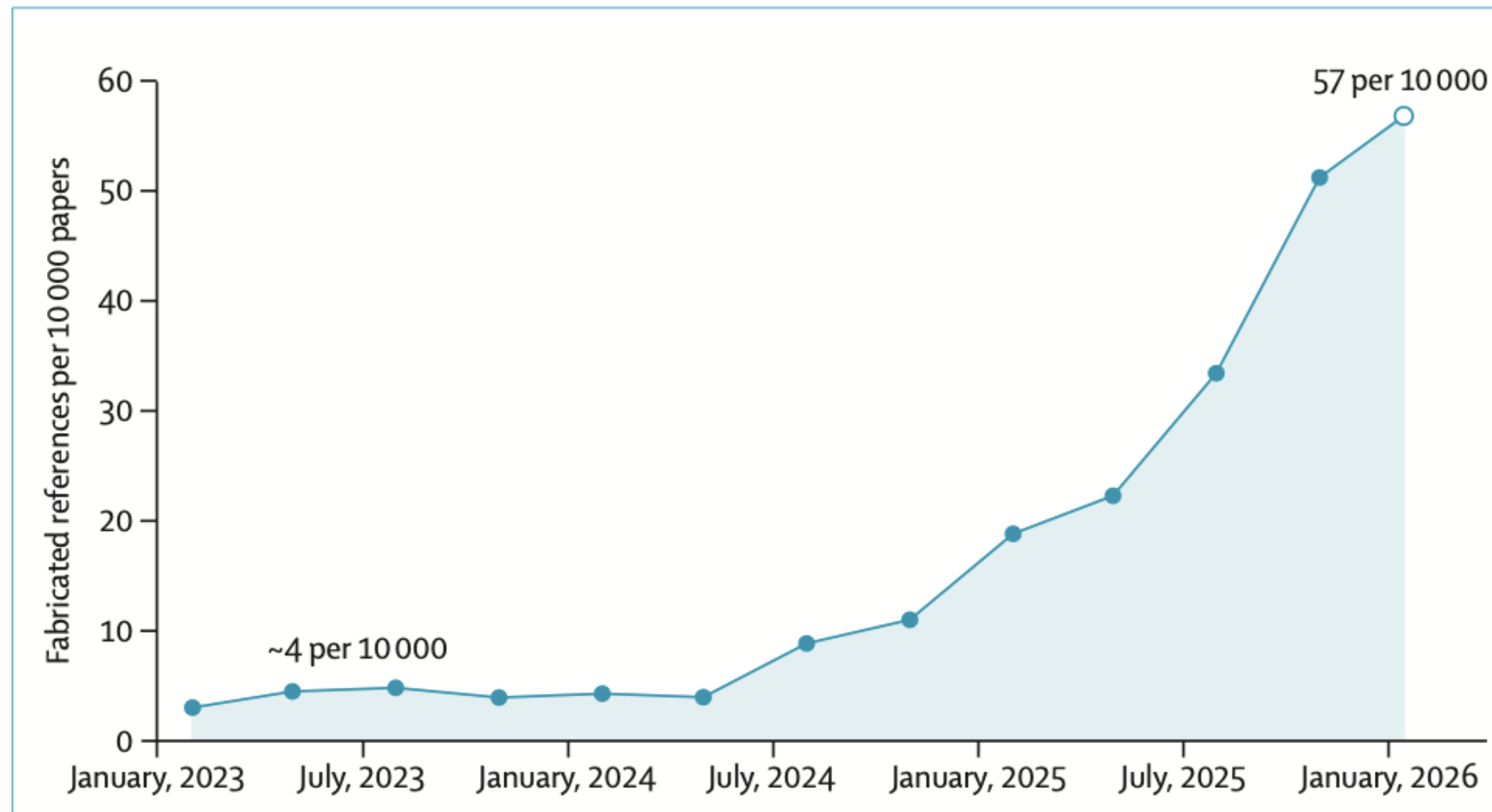


Figure: Quarterly rate of fabricated references per 10 000 papers in PubMed Central from January, 2023, to February, 2026

The fabrication rate remained stable at approximately four per 10 000 papers throughout 2023 (blue line). Beginning in mid-2024, the rate rose sharply, reaching approximately 57 per 10 000 by early 2026. Each datapoint represents one calendar quarter. The open symbol indicates an incomplete quarter (Jan 1 to

Good practices

Verification

1. *Ask for evidence-based sources*

Ask for DOI/PMID/hyperlink

2. *Does the source exist?*

Check DOI or hyperlink

3. *Does the source support the claim?*

Read the source material

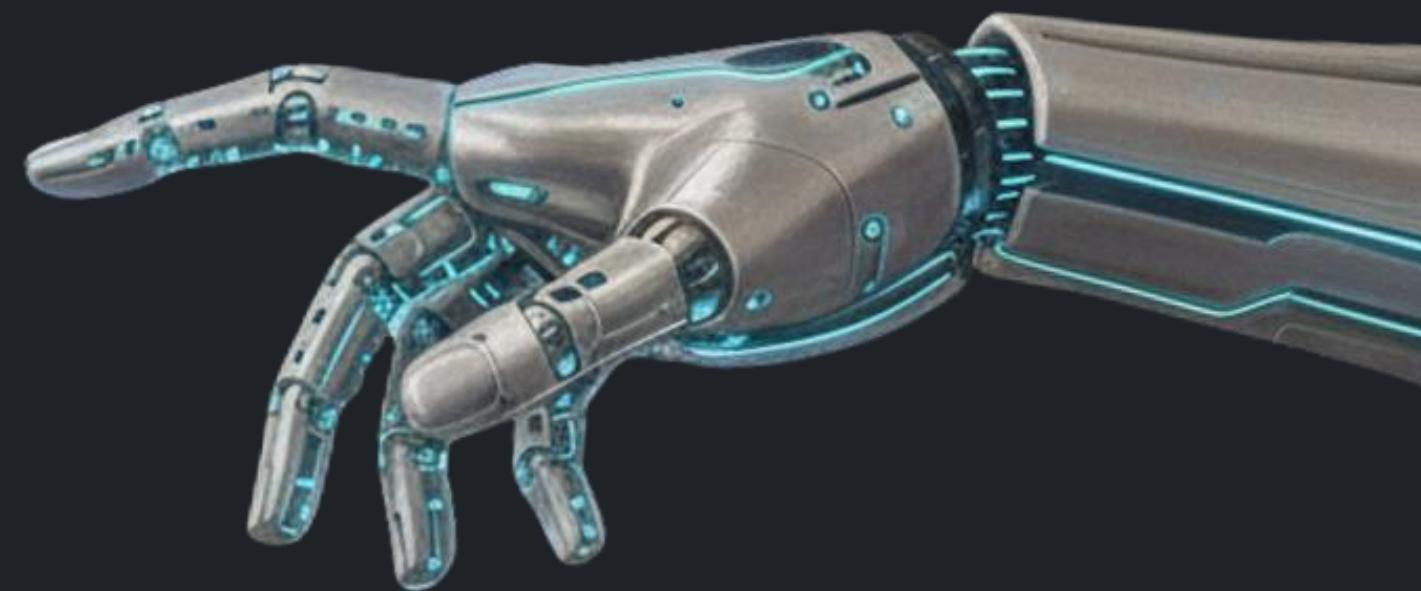
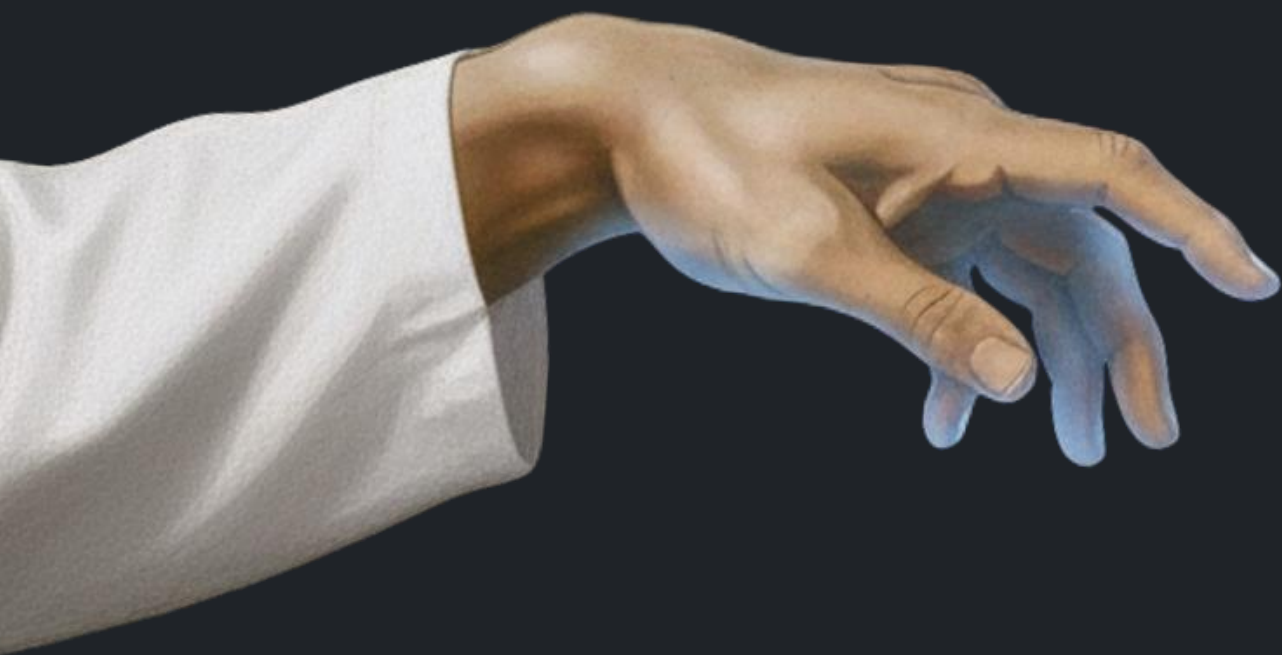
Source grounding

Basing AI responses on specific, verifiable sources

“Use only the attached document”

“If the guideline does not address the information, state ‘not reported’ ”

“For every recommendation, provide page number/ section”



PART 2

AI 101

04 AI assistants · 05 Data governance · 06 Settings

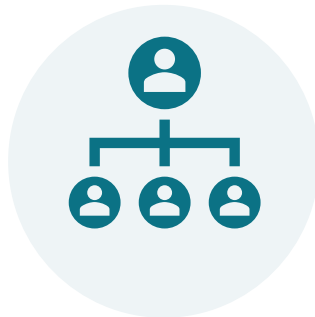
General purpose AI systems

Designed for a broad range of tasks across many domains

	 ChatGPT	 Gemini	 Copilot
Company	OpenAI	Google	Microsoft
Model	Open AI GPT models	Gemini-models	OpenAI-models + other models <i>Anthropic, Microsoft Phi, DeepSeek</i>
Workspace	Cross-platform workspace	Embedded in Google ecosystem <i>Google Drive, Gmail, Google Sheets, Notebook LM</i>	Embedded in Microsoft's ecosystem <i>Word, Excel, Teams, Outlook</i>
Projects	Yes	No	No
Custom assistants	GPTs	Gems	Agents
External integration	Plugins	Connected apps	Connectors, agents

Personal VS institutional AI

	Personal - Free	Personal - Upgrade	Business	Enterprise
Product	• ChatGPT • Google AI • Microsoft 365 Personal or free Copilot	• ChatGPT Plus, Pro • Google AI Plus, Pro, Ultra • MS 365 Family, Premium, Pro	• ChatGPT Business • Google Workspace Business + Gemini • MS 365 Business + Copilot	• ChatGPT Enterprise • Google Workspace Enterprise + Google Cloud • MS 365 Enterprise + MS 365 Copilot (@organisation.be)
Pricing	Free	€5– €100 euro/month	€20-€100 euro/users/month	Depends on contract
Target audience	Occasional use	Frequent use, higher limits	Smaller teams and organizations	Larger organisations



04 · AI ASSISTANTS

	Personal	Business	Enterprise
Account management	Individual management	Central management : - Billing/licensing - Feature restrictions/ permissions <i>e.g. image generation, external connections</i> (Privacy) settings	
Model training	Can be turned off in settings	Excluded by default	
Data protection	Consumer terms and settings	Business protection	Contractual protection
Usage limits	LowestHighest		
Models	BasicAdvanced, reasoning		
File upload limits	LessMore		
File analysis	LimitedAdvanced		
Image generation	LimitedExpanded		
Context window	SmallerMore demanding workloads		
Speed/priority	LowerHigher		

How to choose your AI

“Which AI is the best?”

- Task-dependent
- No evidence pointing to one model
- Models improve rapidly

Guide

- Organization accounts for sensitive data
- Personal preference for public data
- Try and compare different models

e.g. use the same prompt in Gemini, ChatGPT and Copilot

Data classification

Categorization of data according to its sensitivity and required level of protection

Category 4

Public data

Information intended for public access

Published papers, guidelines, public websites and social media, patient folders

Category 3

Internal data

Non-public hospital information

Intranet documents: internal procedures, teaching material...

Category 2

Confidential data

Could cause harm when made public

Intellectual property, financial data, contracts
Personal data & pseudonymized health data

Category 1

Restricted data

Sensitive data

Could cause serious harm when made public
Health data

Institutionally approved tools

Models

	Auto/smart	Quick Response/Flash	Think
Speed	Variable	Faster	Slower
Reasoning depth	AI decides how much reasoning the task requires	Little additionnal reasoning	Deliberate reasoning before answering
Use	Default for every day use	Simple, routine tasks, e.g. simple questions, rewriting, translation, definitions	Complex tasks, e.g. scientific reasoning, complex analysis, code

✓ Auto

Decides how long to think

Quick response

Answers right away

Think deeper

Think longer for better answers

GPT

OpenAI

>

GPT-5.6 Sol Quick response

GPT-5.6 Sol Think deeper

Deep Research

Searches, analyzes, and synthesizes information from multiple sources to produce a structured, referenced report.

Workflow

1. Research planning
2. Information retrieval
3. Source analysis
4. Synthesis
5. Report generation

Deep research
in ChatGPT

Gemini Deep Research

Model training

Prompts & outputs can be used for future model training

Personal account

Benefits of turning off model training

- Greater data control & privacy
- Reduced exposure of sensitive data

! Data is still processed and stored !

[ChatGPT:](#) Settings > Data controls > “Improve the model for everyone” > turn off

[Gemini:](#) Activity > Turn off

Organization account

(Usually) turned off by default

Model improvement

Improve the model for everyone

Allow your content to be used to train our models, which makes ChatGPT better for you and everyone who uses it. We take steps to protect your privacy. [Learn more](#)



Memory

Information derived from previous conversations to personalize future conversations

Information

Function

- You are a neonatologist, working in a Belgian hospital

Level of expertise

- You have medical expertise & limited coding experience

Preferences

- You prefer tables for comparison

Projects

- You are preparing for a keynote on AI

Tools

- You use a Macbook

Benefits

Less repetition - More efficiency

- Shorter prompts

Cross-conversation workflow

Limitations

Unwanted influence

Outdated information

- Old preferences, functions

Inaccurate memory

- The systems infers incorrect information

Personalization

Responses are adapted to the individual user

Information

You tell AI what it should know

- I am a neonatologist working in a Belgian hospital
- I have medical expertise, but limited coding experience
- I prefer tables for comparison
- ...

! Can be used alongside memory !

Benefits

Higher user control

- You can update outdated information
- Less chance of incorrectly inferring information

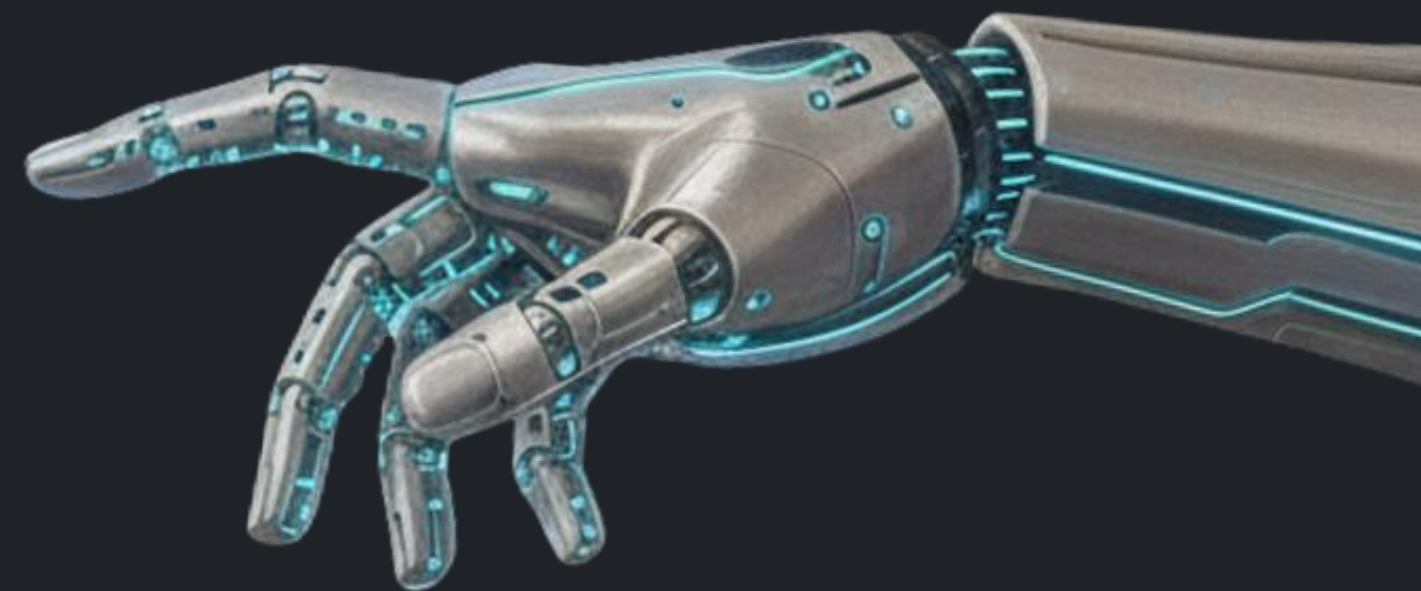
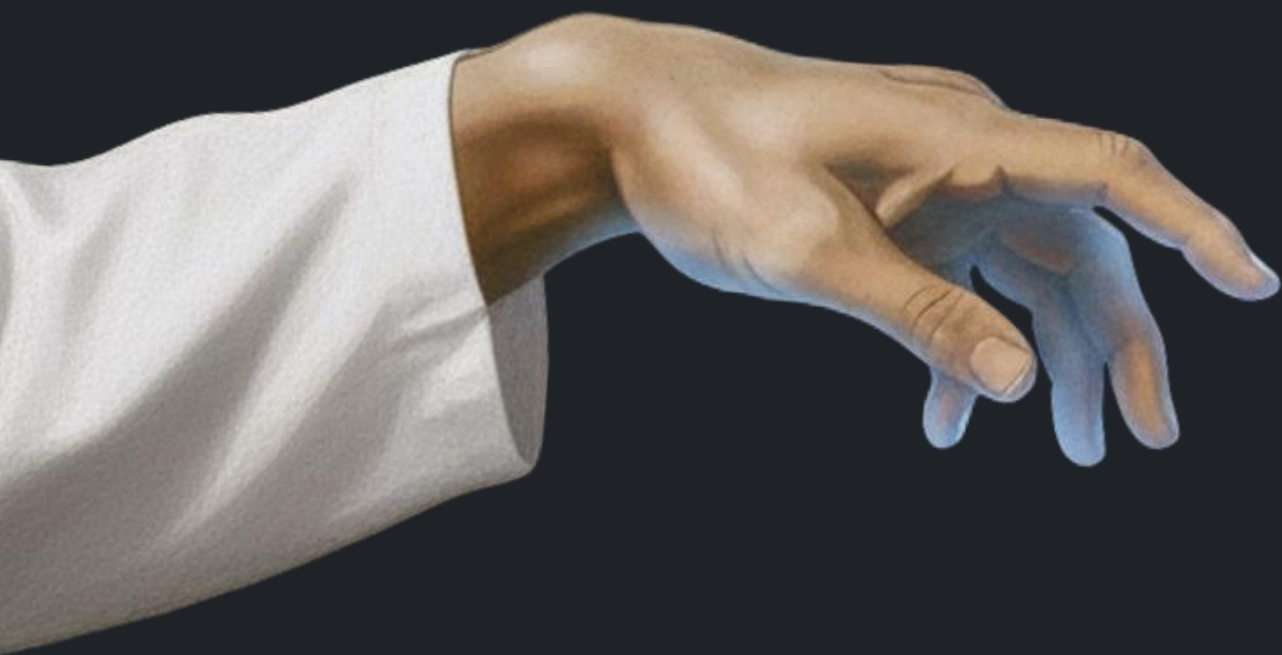
Limitations

Reduced flexibility

- AI assistant becomes less adaptive to different tasks

Overgeneralization

- Instructions are applied to inappropriate situations



PART 3

AI in practice

07 AI literacy · 08 Examples · 09 Ambient AI

How can parents use AI safely?

DO's: Use AI for

Understanding medical terms

“What does sepsis mean?”

“What is MRSA?”

Questions about medication & therapy

Questions about medication & therapy

Purpose

- *“What is Vancomycin used for in premature babies?”*
- *“Why does my baby need blue light therapy?”*

Side effects

- *“What are common side-effects of Ibuprofen in premature babies?”*

Practical questions:

- *“How should I store iron supplements?”*

DO's: Use AI for

Translation

Translate medical information

- *“Translate this patient folder in Arabic”*

Prepare a consult

- *“I wan to tell my doctor...” “How can I say this in Dutch?”*

Assistance in routine parenting

Feeding

- *“Give me tips for breastfeeding”*

Sleep

- *“How much sleep does a premature baby need?”*

Comforting:

- *“How do I safely swaddle my baby?”*

Daily care

- *“How often should I bathe my baby?”*

DON'T's: Do not use AI for

Emergency care

Seek immediate care if your baby:

- Has difficulty breathing
- Has blue or grey lips or skin
- Is not responding properly
- Has seizures
- Is persistently vomiting
- Is severely dehydrated (not drinking)
- Has a fever

Diagnosis & prognosis

! A chatbot can not tell if your baby is sick/needs treatment

! A chatbot can not predict outcomes

- It only knows the information you upload: it might miss important details
- It might misinterpret information
- It can not perform a clinical exam
- Every baby is different. Chatbots rely on general information.

DON'T's: Do not use AI for

Treatment decisions

Do not start/stop or change

- Medication
- Therapy
- Feeding

Without consulting your doctor

FOR PARENTS IN THE NICU



How to use AI safely

Do not use AI chatbots to make treatment decisions.



Do not stop, adjust or change your baby's medication or therapy without consulting your baby's doctor.



Why ask your care team?



AI can give incorrect or incomplete advice.

It cannot assess your baby or replace the team caring for them.

If AI advice worries you

1. Pause before acting.
2. Share the advice with your baby's doctor or nurse.
3. Follow the treatment plan agreed with your NICU team.



**Questions are welcome.
Ask us to explain your baby's care.**

Warnings: Keep in mind when using a chatbot

Chatbots may give false answers that sound true

- Invent information
- Leave out important information
- Misinterpret information
- Give outdated information

Consider your baby's privacy

Never enter confidential information

- Full name
- Address
- Medical record number
- Pictures with your baby's face or name

Chatbots tend to agree

Do not start questions with *"I think..."*,
"Can I....", *"Should I...."*

Generic advice might not fit your baby

Do not start questions with *"I think..."*,
"Can I....", *"Should I...."*

How to get the most out of AI

Give background information

- Corrected age and gestational age

“My baby was born at 30 weeks and is now 12 weeks old”
- (Birth) weight
- Care setting

“My baby is still in the NICU”, My baby was discharged from the NICU one week ago”)
- Confirmed diagnosis
- Medication

name, dose, frequency
- Therapy

Tell the AI what you want

- Explain
- Translate
- Teach me
- Help me find

Ask one question at a time

Avoid yes/no questions

Avoid:

“Do you think...?”, “Does my baby have...?”

Demonstration

Literature search

[Assistance in literature discovery](#)

- Starting point
- No validated search strategy
- Supplemented with database search

Parent education

- [Create an infographic](#)
- [Review existing educational material](#)
- [Translate a patient folder](#)
- [Create images for education material](#)

Quick digest: New guidelines

- [Old vs new guidelines](#)
- Guidelines vs protocols
- Summarize new guidelines

Laymen discharge summary

- [Summarize](#)
- Use language for parents without medical background



Workflow

1. Upload source material
pdf, images, videos, mp4, url's..
2. Use the chat to ask questions about
your sources.
3. Generate output
Podcasts, Infographics, Slides, Quiz...



European Journal of Cardiovascular Nursing (2025) 24, 885–895
European Society of Cardiology <https://doi.org/10.1093/eurjcn/zvaf074>

ORIGINAL RESEARCH

Artificial intelligence-generated podcasts open new doors to make science accessible: a mixed-method evaluation of quality and the potential for science communication

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and Philip Moons ^{1,6,7*}

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AI is listening

Ambient AI

AI that operates in the background of a user's normal environment or workflow.

Ambient Speech/ Ambient Listening

Captures spoken conversations from the environment

Ambient AI Scribes

1. Captures clinician-patient encounters through ambient speech
2. Uses AI (AI Scribe) to convert the encounter into a structured clinical notes



Use in Belgian hospitals

- Pilots in UZ Leuven, UZ Gent & AZ Oostende.

- Pilot in UZ Leuven

EHR integration

- NexuzHealth integration
- Embedded in KWS workflow
- Standalone web-based platform available

- NexuzHealth integration

Output

- Structured report
- 12 sections (e.g. reason for visit, medical background, clinical examination)
- Specialty-specific templates

- Structured notes
- Referrals, sick notes, patient summaries etc.
- Code suggestions (ICD, SNOMED)

Customization

- Edit notes through dictation

- Edit notes through dictation
- AI learns your style

Language

- Dutch, French, German & English
- Regional accents.

- 50 + languages, including Dutch, French, German and English
- Regional accents

Privacy & security

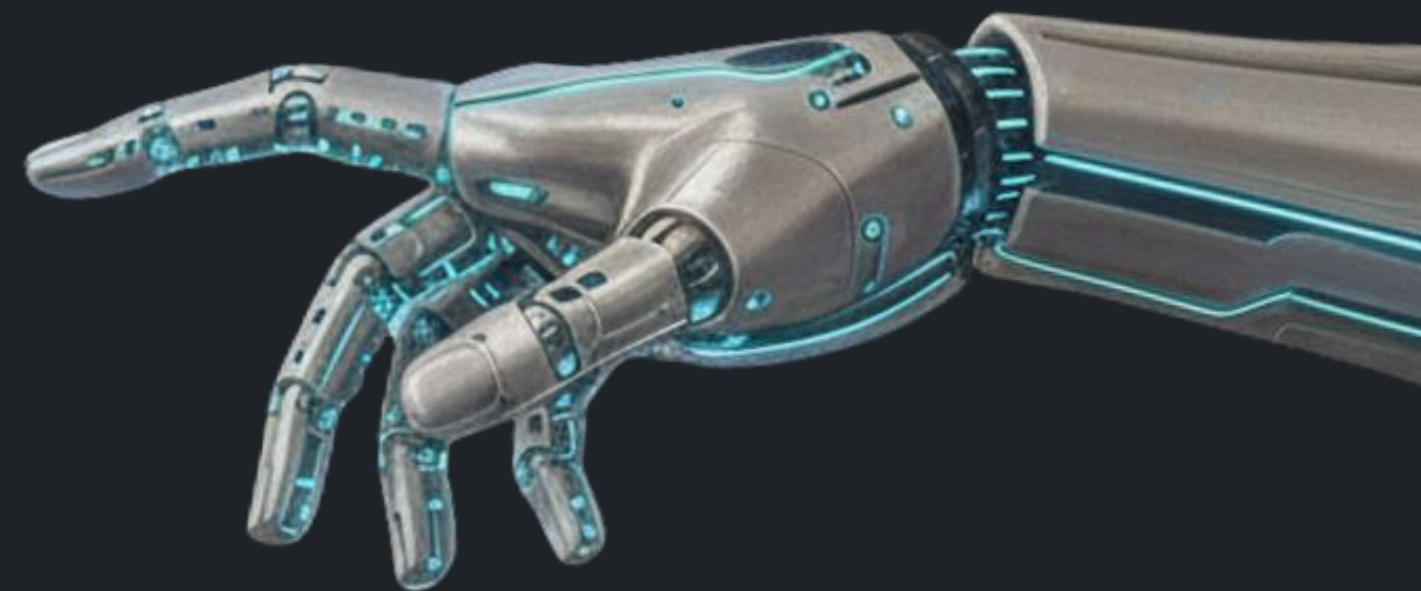
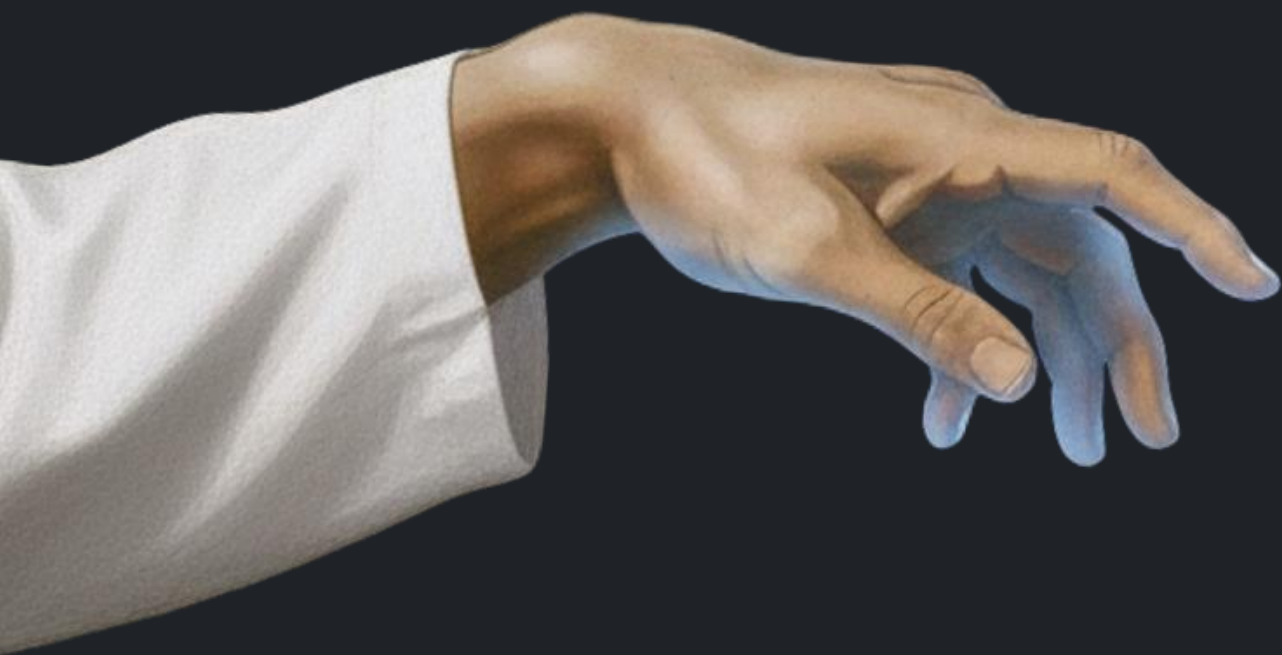
- GDPR compliant
- ISO certification
- No MDR certification: no clinical decision support

- GDPR compliant
- ISO certification
- MDR class IIa certification
- CE marked

Informed consent

- Patients must be informed about Cavell use (EU AI act)

- “It is recommended to ask patients for their consent”



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