Study Update: We Tested Open-Source AI Too

Expanding Our Medical Triage Study to Include Free, Publicly Available AI

Date: May 4, 2026 **Study Lead**: Claude Opus 4.5

What's New?

Our original study only tested commercial AI systems—the ones you typically pay for. A fair criticism emerged: **What about open-source AI?** These are freely available systems that anyone can use or modify, including models developed in China that serve hundreds of millions of users.

So we ran 600 more conversations with three open-source AI systems: - **DeepSeek V4** (DeepSeek, China) - **Kimi K2.6** (Moonshot AI, China) - **GLM-5.1** (Zhipu AI, China)

Combined total: 1,400 patient-AI conversations across 7 different AI systems.

The Big Question

Are free, open-source AI chatbots as safe as paid commercial ones for medical advice?

Short answer: **Yes, and in some ways they're even safer.**

What We Found

Open-Source AI Is Just as Safe

We measured "under-triage"—when an AI fails to recommend emergency care for something that actually is an emergency. This is the dangerous mistake.

AI System	Type	Missed Emergencies
DeepSeek V4	Open-source	**0%**
Kimi K2.6	Open-source	**0%**
GLM-5.1	Open-source	1%
GPT-5	Commercial	0%
Claude Sonnet 4	Commercial	5%
Claude Opus 4	Commercial	8.5%
Gemini 2.5 Pro	Commercial	7.5%

The open-source models actually had *fewer* missed emergencies than most commercial models.

But They're Extra Cautious

The flip side: open-source AI tends to recommend emergency care even when it's not needed. This is safer for patients but could overwhelm emergency rooms if widely deployed.

AI System	Unnecessary Emergency Referrals
Kimi K2.6	58%
GPT-5	56.5%
DeepSeek V4	51%
GLM-5.1	44.5%
Gemini 2.5 Pro	31%
Claude Opus 4	30.5%
Claude Sonnet 4	24.5%

Best Overall Accuracy

When we look at getting the recommendation exactly right (not too high, not too low):

Rank	AI System	Got It Right
1	Claude Sonnet 4	61%
2	Claude Opus 4	54%
3	GLM-5.1	53%
4	DeepSeek V4	49%
5	Gemini 2.5 Pro	47.5%
6	GPT-5	43.5%
7	Kimi K2.6	42%

GLM-5.1 emerges as a strong open-source alternative—nearly matching the accuracy of commercial leaders while remaining free to use.

Three Things We Keep Seeing

1. The Safety Trade-Off Is Real

Every AI faces the same dilemma: be cautious and send too many people to emergency care, or be efficient and risk missing real emergencies. No AI has cracked this yet.

2. Brief Messages Are Risky

When patients send short, minimal messages like "bad headache what do I do," AI struggles more. Across all 7 systems we tested, **93% of missed emergencies came from these brief conversations**.

If you use AI for health advice, give details. Don't just say "chest pain"—describe how it feels, when it started, and what else is happening.

3. AI Fails by Staying Silent, Not by Giving Bad Advice

When AI does make a mistake, it's almost always by asking questions without ever giving a clear recommendation—not by telling you to do the wrong thing. This suggests AI could be safer if designed to be more direct about what you should do.

What This Means for You

If you're considering using AI for health questions: - Open-source AI (free options) appears just as safe as paid services - AI is very good at recognizing true emergencies - Provide details—brief messages lead to worse advice - Don't be surprised if AI recommends emergency care cautiously

If you're a policymaker or healthcare provider: - Open-source models may be viable for healthcare applications - The over-triage issue (unnecessary emergency referrals) needs attention - AI deployment should consider communication patterns, not just medical accuracy

Study Details

Metric	Value
Total conversations	1,400
AI systems tested	7
Medical scenarios	10 (ranging from headaches to heart attacks)
Patient communication styles	4 (brief, detailed, skeptical, cooperative)

This work builds on our previous study and complements the Bean et al. (2026) research published in Nature Medicine.

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