

HCP Training for the AI Clinical Era

What we need to get right



RCSI

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↑↑↑ **AI Capabilities**

↑↑↑ **AI Accessibility**



The Future???

**Novel Care
Models
& Workflows**



**Increasing
Automation**

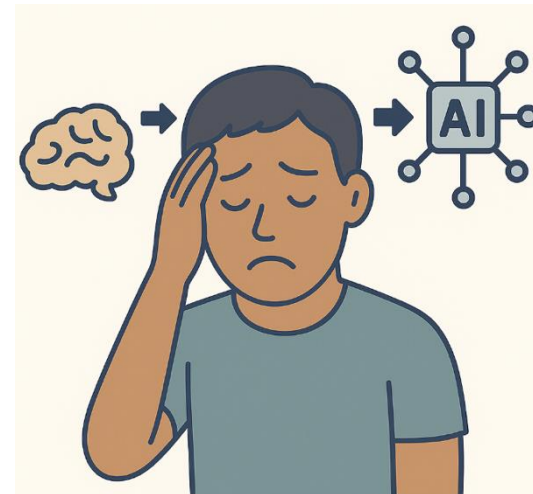
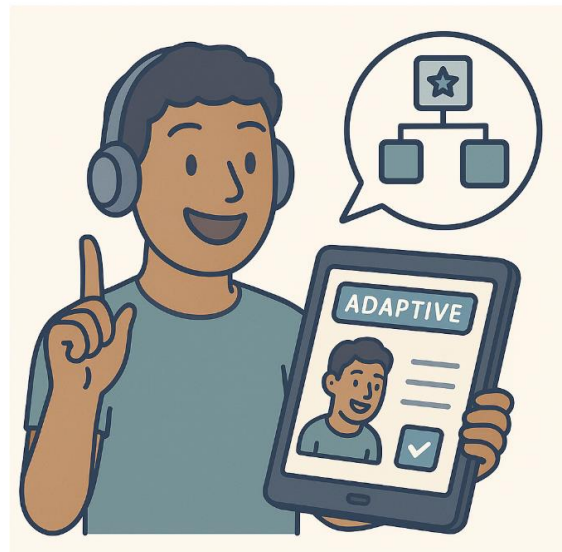
**AI powered healthcare
professional**

AI as a General-Purpose Technology

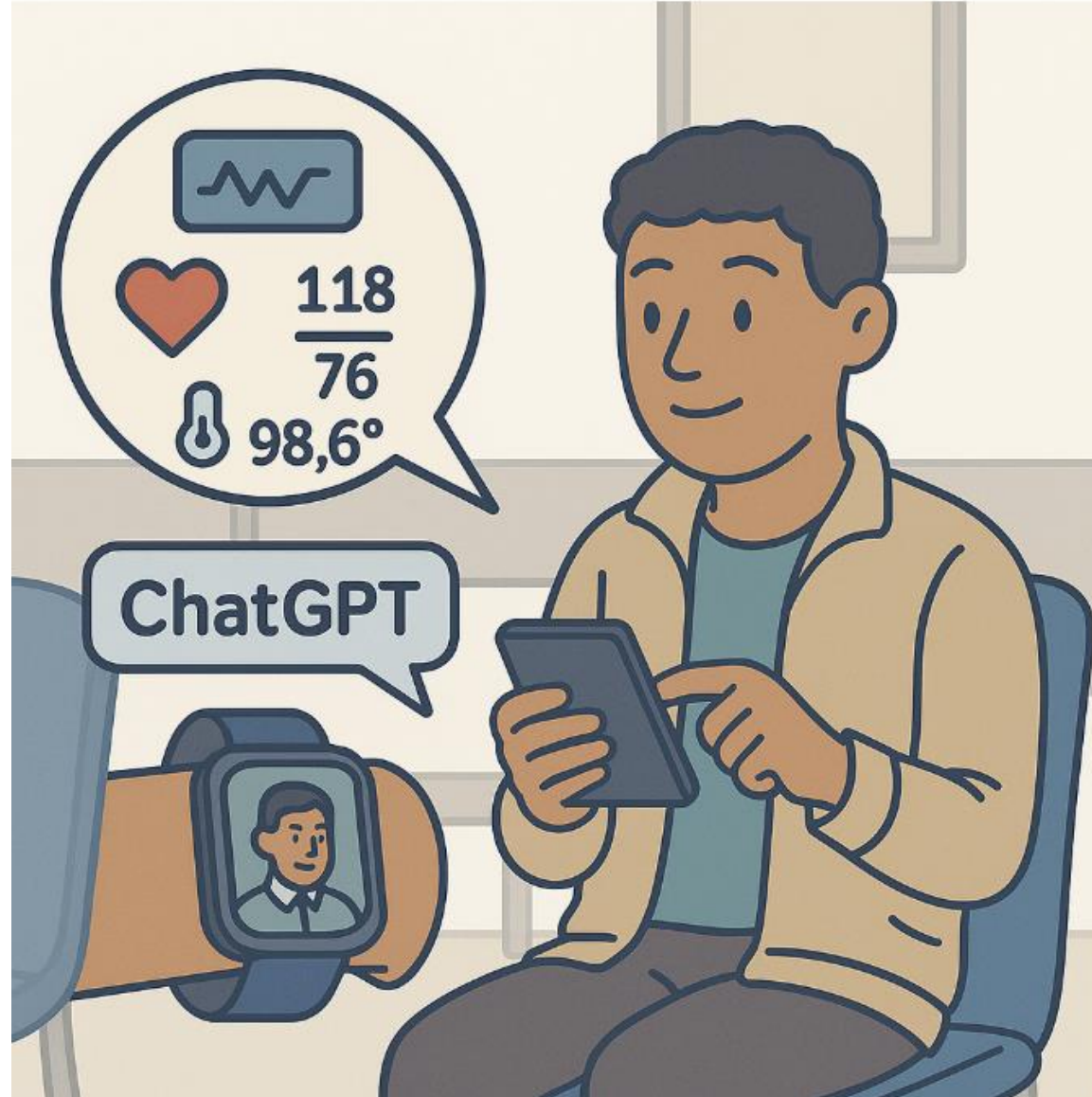
The real meaning of “GPT”



Medical Students 2.0



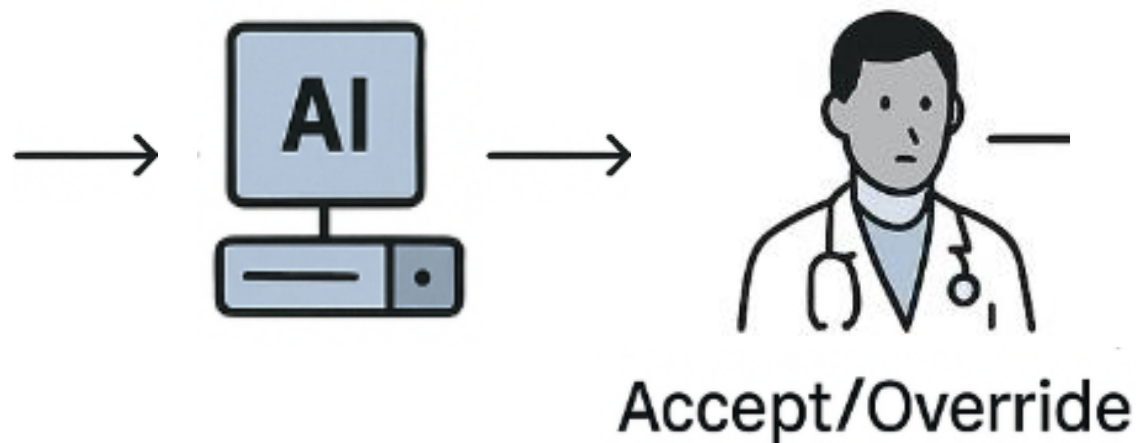
Patients 2.0



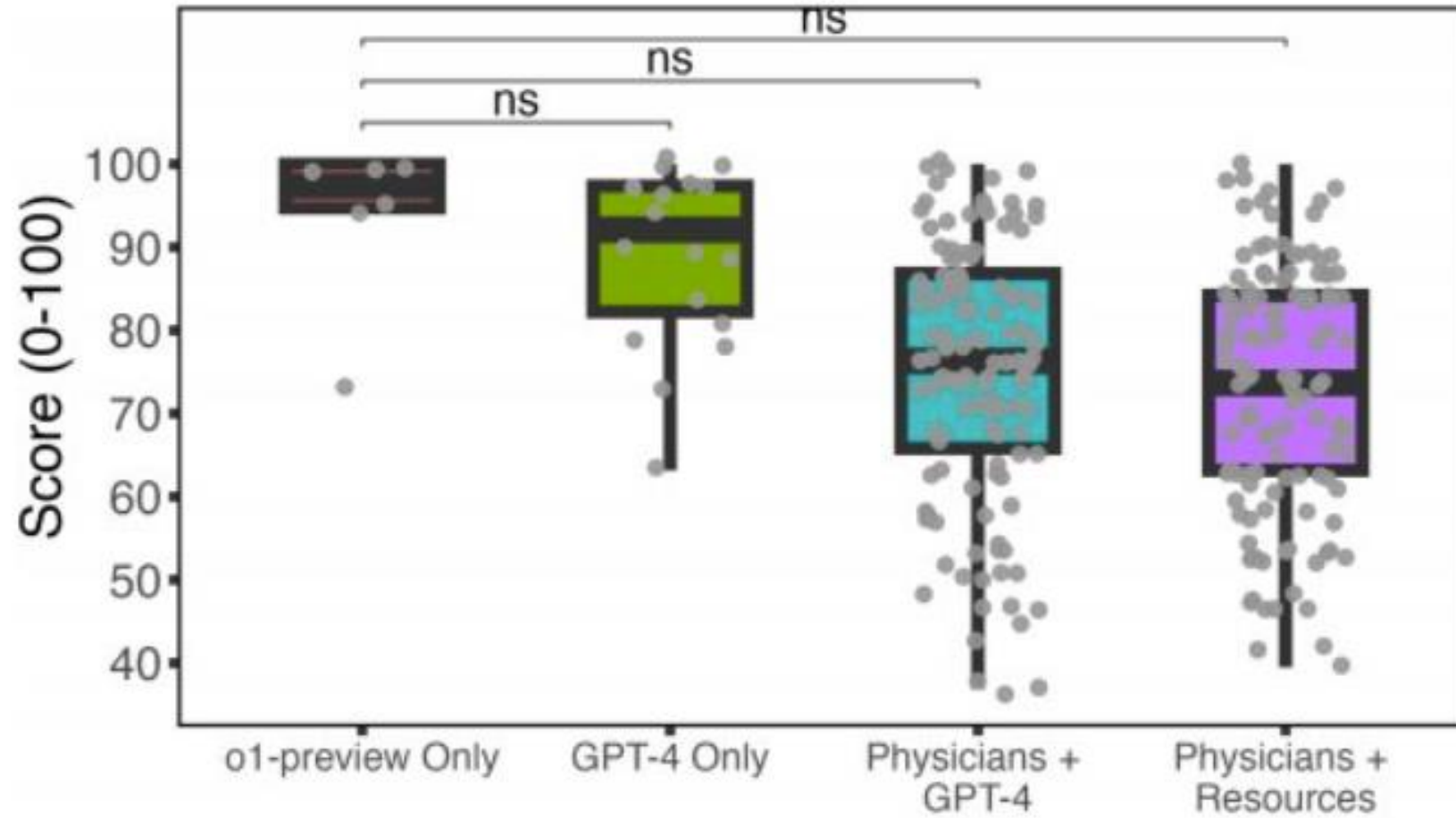


AI- Human Collaboration Models

Human in the loop

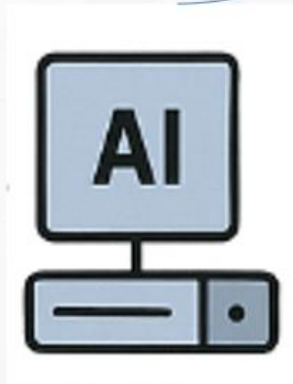


Human in the loop



Joint Cognitive System Model

3. Orders additional labs



1. Continuously visualize
patient trajectory
Summary: Escalating
Vasopressor requirements



2. Examine Patient

3. Show parameters most
changed in the past 4 hrs.
Compare to similar cases

4. Decision emerge from shared evolving picture of the case

MODEL 1: DELEGATE TO AI

Low Risk • High Confidence • Repeatable
AI performs end-to-end



RISK QUESTION

Is the task low risk if AI is wrong?
Can it be easily verified or reversed?



Examples

Image analysis, flagging
abnormal labs, scheduling



AI Strength

Speed, pattern recognition,
consistency



Human Role

Oversight, exception
handling

MODEL 2: HUMAN-IN-THE-LOOP

Moderate Risk • Shared Decision • Augmented
AI supports, humans decide



RISK QUESTION

Could AI be wrong in a way that
matters, but humans can catch it?



Examples

Treatment recommendations,
risk scoring, triage



AI Strength

Risk prediction, data synthesis,
evidence retrieval



Human Role

Clinical judgment, context,
shared decisions

MODEL 3: HUMAN LEADS AI SUPPORTS

High Risk • Human Judgment Critical
AI informs, humans lead



RISK QUESTION

Is the decision high stakes,
nuanced, or ethically complex?



Examples

Diagnosing complex cases,
surgical decisions, goals
of care



AI Strength

Contextual insights, literature,
probability estimates



Human Role

Diagnosis, empathy, value-
based decisions

MODEL 4: DYNAMIC ROLE-SWITCHING

Uncertain/Variable Risk • Context-Driven
AI and humans adapt in real time



RISK QUESTION

Is the situation evolving or uncertain
so roles may need to shift?



Examples

ICU monitoring, sepsis
management, emergencies



AI Strength

Continuous monitoring, anomaly
detection, prediction



Human Role

Adapt, intervene, guide,
reassess

HOW TO DECIDE THE RIGHT MODEL: ASK THESE QUESTIONS



What's the Risk of Harm?

If AI is wrong, what's
the worst that could
happen?



How Verifiable is the Output?

Can humans easily check
or validate the result?



How Nuanced is the Decision?

Does it require empathy, values,
or complex trade-offs?



How Stable is the Context?

Is the situation predictable
or rapidly changing?



Who is Accountable?

Who takes responsibility
for the outcome?

Med Ed 2.0: Competencies for the AI Clinical Era



Three Tiers of AI Competency

for healthcare professionals



Everyone needs AI literacy · fewer build · fewer still specialise



9:41

Case 001

Case information:



Abdullah Makki

48
Age

Male
Gender

System:
Pulmonology

Main Symptoms:
Chest Pain Shortness of Breath Diaphoresis

Number of Attempts:
Junior 02 Intermediate 01 Senior 00

Choose Level:
Junior Intermediate Senior

Instructions:
1. Aim to finish the history-taking in 12-15 minutes.
2. Press "Finish" when you have enough information for a diagnosis.
3. After submitting the interview, list your possible diagnoses.

Start Voice Chat

Start Chat

9:41

Case 001

Pause

02:23

Done

Can you describe the chest pain?

It's a crushing pain, right in the center of my chest. It feels like someone is sitting on me. It also radiates down my left arm.

When did the chest pain start?

About an hour ago. It came on suddenly while I was watching TV.

Do you have any other symptoms?

Yes, I'm also short of breath and sweating a lot. I feel clammy.

Have you ever had chest pain like this before?

Type your question here...

9:41

Evaluation



Abdullah Makki

48
Age

Male
Gender

System:
Pulmonology

Main Symptoms:
Chest Pain Shortness of Breath Diaphoresis

Overall Performance

Case Title:
Case 001 - Fever & Cough

Time:
11:31

Case Level:
Junior

Attempt Number
01

Grade
Good

You correctly diagnosed the patient's condition and gathered most of the relevant information. However, you missed a key question about smoking history, which slightly lowered your grade. With attention to detail, you can achieve excellent results.

taken on 13/02/2025

Diagnostic Accuracy

Correct Diagnoses

Pneumonia

Pneumonia is a lung infection that often presents with symptoms such as cough (often producing phlegm), fever, chills, shortness of breath, and chest pain when you breathe or cough. The severity of symptoms can vary.

Other Possible Diagnoses

Bronchitis Influenza (Flu) COVID-19 Respiratory Syncytial Virus (RSV)

Incorrect Diagnoses

Asthma

Overall Comment

Your diagnosis of pneumonia was correct. You identified the key symptoms of fever, productive cough, and shortness of breath. However, you initially considered asthma, which is a reasonable differential. Remember to carefully weigh the evidence to arrive at the most likely diagnosis.

History-taking Completeness

Introduction & Rapport
Good

Open Inquiry
Average

Focused Inquiry
Good

Diagnosis Development
Very Good

Communication & Professionalism
Average

Motivation & Counseling
Not yet competent

Area of improvements

Remember to always ask about smoking history in patients presenting with respiratory symptoms.

Practice differentiating between asthma and pneumonia based on clinical findings and history.

Consider using a checklist to ensure you cover all relevant areas during history-taking.

Re-attempt

Thank you !

“Beyond Human AI collaboration, the path to drive innovation is Human to Human cooperation.”