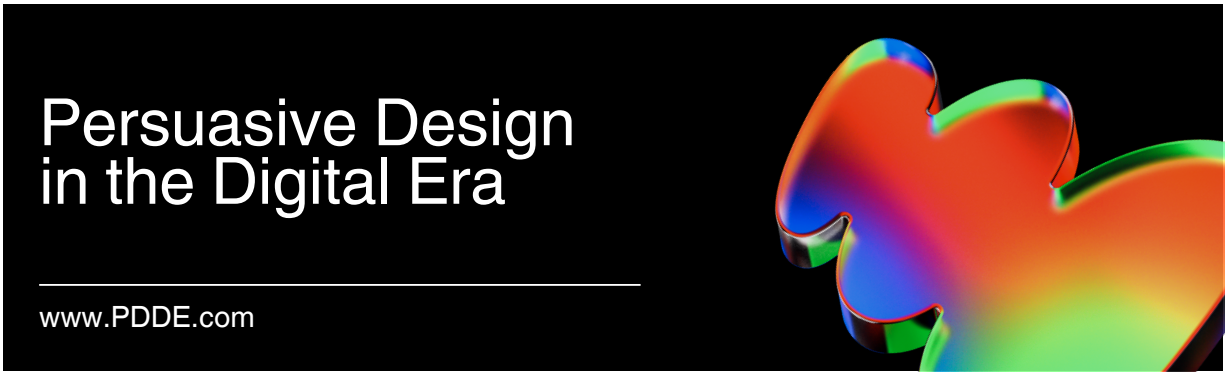

Healthcare at Your Fingertips: ChatGPT as Your GP

ChatGPT proves to produce more accurate medical advice than your general practitioner (GP), if so, should the health industry be concerned?

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Written by: Helge Moes, 11348801

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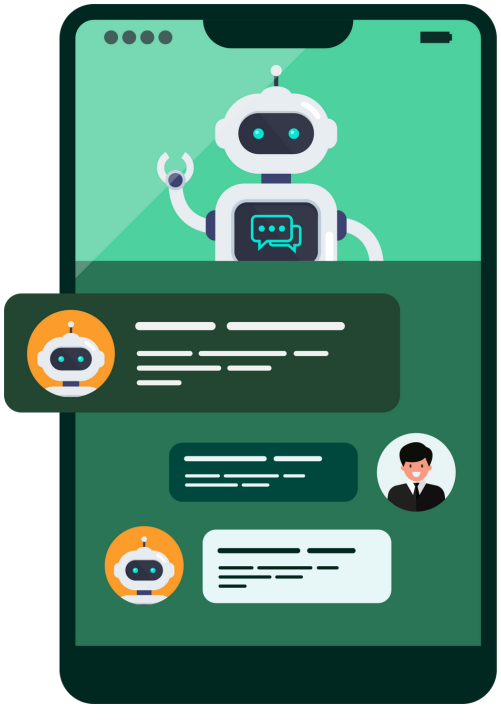
What started as a day of joy soon turned into a nightmare when her four-year-old son, Alex, began complaining of excruciating pain. Without Motrin, an ibuprofen-like medication, he couldn't get through the day, leading Courtney to reluctantly administer the painkiller to quell his meltdowns.

In a desperate attempt to solve the cause of Alex's agony, Courtney visited seventeen different doctors in the past three years. Each medical professional had their own theories and diagnoses. Alex's chronic pain and baffling symptoms remained an unsolved puzzle until Courtney, in a moment of frustration and desperation, turned to ChatGPT for help. Courtney shared all the symptoms and information from previous medical examinations with this powerful AI platform. To her astonishment, she received a diagnosis in return: Tethered Cord Syndrome.

With this newfound knowledge, Courtney scheduled an appointment with a neurosurgeon and shared her suspicions about Tethered Cord Syndrome. The doctor reviewed Alex's previous MRI results and immediately identified the issue. Thanks to ChatGPT and Courtney's determination, Alex finally received the correct diagnosis and the treatment he had desperately needed. The solution to Alex's three-year mystery of chronic pain came from an entirely unexpected source – artificial intelligence (1).

What GPT?

In the ever-evolving landscape of technology, few innovations have made as profound an impact as ChatGPT. It is a Large Language Model (LLM) based on the GPT (Generative Pre-trained Transformer), which means that it is designed to understand and generate human-like text in response to given text (2). Since its launch in November 2022, this particular AI has ignited a global conversation across the digital sphere, setting social networks abuzz, sparking heated debates on web forums, and earning headlines in not only the media (3). It's potential to reshape entire industries and revolutionize our daily lives has become a hot topic of discussion.



Yet, amidst all the conversations about ChatGPT's transformative capabilities, a crucial question looms over the healthcare sector: Is it prepared to embrace this formidable chatbot? As the healthcare industry races to keep pace with the rapid advances in technology, the question of ChatGPT's readiness takes center stage from our general practitioners. Why book an appointment with your GP, when you have one always ready at your fingertips?

Why people use ChatGPT instead of going to their GP

Seeking medical advice online has been a common practice, since the introduction of the internet. Based on the unified theory of acceptance of use of technology (UTAUT), low effort appeals to general users, since the effort expectancy is associated with a level of ease while using it (4). Therefore, it comes as no surprise that a growing number of people

started to ask ChatGPT for medical advice regarding their conditions and symptoms. With a short textual input, the user shares the symptoms they are experiencing and the AI generates advice that might resolve the illness. It can be done from the comfort of your own living room, you receive your advice immediately and it will not break your bank.

According to Fogg's Behavior Model, behavior is a product of three factors: motivation, trigger and ability (5). In the case of Courtney, the fear of not finding an answer to Alex's pain plays an important role as motivator. The pain Alex was experiencing for a period of time was the trigger to solve it. Courtney performed the target behavior to seek for medical attention to the best of her ability, yet she found her answers not in the traditional fashion by visiting her GP, but by turning to ChatGPT for help. The behavioral change of resorting to an AI rather than a GP may have disastrous repercussions for the health industry, since the AI gives advice where GP's do not. Nevertheless, one can still question how an inanimate AI is able to advise a human being on their experience without understanding how pain might feel.

Why ChatGPT should be regarded as a double-edged sword

A recent study has tested ChatGPT and how accurately it could diagnose 50 clinical case studies, which also included 10 rare diseases (6). The AI was able to solve all common cases within 2 suggestions and for rare diseases it needed at least 8 suggestions in order to solve 90% of the cases. Although the AI was able to determine an accurate answer for a health issue, in addition to the health guidance, the AI consistently includes something along the lines of:

“I’m not a doctor, but I can offer some general suggestions”

“Your healthcare provider can provide you with specific guidance and treatment recommendations based on your individual situation”

Indicating the fact that ChatGPT itself acknowledges that it cannot replace the expertise of a human physician and is not capable of offering medical diagnoses, treatments, or advice. Furthermore, natural language models, including ChatGPT, have been associated with various limitations and deficiencies. One noteworthy concern is their inclination to generate text based on non-existent information, posing

a risk of misguiding medical professionals or patients if such text is misinterpreted. Furthermore, when these models are utilized for data interpretation, such as analyzing medical test results or findings, there exists a possibility of harm, given that inaccuracies or misinterpretations could jeopardize patient safety and treatment effectiveness (2).

Who do we ask for medical advice: our GP or ChatGPT?

While ChatGPT generates advice that closely resembles a healthcare professional, they may not always be entirely accurate. Some information could potentially pose a risk to patients if not reviewed by healthcare professionals. Thus, it is crucial to rigorously validate ChatGPT outputs within suitable contexts to safeguard patient well-being. It is important to note that ChatGPT can serve as a valuable complement to, rather than a replacement for, expert healthcare knowledge. Nevertheless, with enhanced accuracy and validation, ChatGPT could offer a swift and cost-effective means of communication among healthcare providers and patients. Until this becomes a reality, we would advise you to keep visiting your GP. Since an apple a day keeps the doctor away, and ChatGPT does not.

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Nieuwe Achtergracht, 166, 1018WV Amsterdam

EMAIL

info@PDDE.com

CONTACT

(020) 123 45 67

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