Reflection with ChatGPT about the excess death after the COVID-19 pandemic

Mohamad-Hani Temsah

Pediatric Intensive Care Unit, Pediatric Department, College of Medicine, King Saud University, Riyadh, 11362, Saudi Arabia

Amr Jamal

Department of Family and Community Medicine, King Saud University Medical City, Riyadh, 11362, Saudi Arabia and Evidence-Based Health Care & Knowledge Translation Research Chair, Family & Community Medicine Department, College of Medicine, King Saud University, Riyadh, 11362, Saudi Arabia

Jaffar A. Al-Tawfiq

Specialty Internal Medicine and Quality Department, Johns Hopkins Aramco Healthcare, Dhahran, 34465, Saudi Arabia, Infectious Disease Division, Department of Medicine, Indiana University School of Medicine, Indianapolis, IN46202, USA and Infectious Disease Division, Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD21218, USA

Corresponding author. Specialty Internal Medicine and Quality Department, Johns Hopkins Aramco Healthcare, Dhahran, 34465, Saudi Arabia.
E-mails: jaltawfi@yahoo.com, jaffar.tawfiq@jhah.com

Dear Editor,

Despite the apparent decrease in Coronavirus Disease 2019 (COVID-19) mortality in 2022, still, there has been a universal increase in the excess deaths across nations [1] with conflicting estimates [2]. One study estimated 14.83 million excess deaths around the world [3]. To explore how Artificial Intelligence (AI) Chatbot may address such issues, we asked the following three questions to Generative Pre-trained Transformer (ChatGPT) [4] on 12 Feb 2023, hoping that sharing these could enrich the literature with new dimensions on AI and humans, working together for rapid insights in healthcare.

Human: https://ourworldindata.org/excess-mortality-covid reported Excess mortality during and after the Coronavirus pandemic. What do you think is the cause of this global excess mortality rate in 2022?

ChatGPT: As an AI language model, I do not have the ability to think, speculate, or predict future events. However, it's important to note that excess mortality during and after the COVID-19 pandemic has been largely attributed to the direct and indirect effects of the virus, including increased deaths from COVID-19 itself, as well as disruptions to healthcare systems, delayed or deferred medical treatments, and indirect social and economic consequences of the pandemic. The exact causes of excess mortality rates in 2022 will depend on a variety of factors that are difficult to predict at this time.

Human: Can you elaborate?

ChatGPT: Certainly. Excess mortality is defined as the number of deaths above what would be expected based on historical trends. During the COVID-19 pandemic, excess mortality has been attributed to a variety of factors, including:

COVID-19 deaths: The virus has directly caused a significant number of deaths worldwide.

Disruptions to healthcare systems: The pandemic has disrupted healthcare systems, leading to delays or deferrals in medical treatments for non-COVID-19 illnesses or conditions, which could lead to additional deaths.

Indirect consequences of the pandemic: The pandemic has had far-reaching social and economic consequences, such as increased rates of mental health disorders, economic distress, and reduced access to education, which could also contribute to excess mortality rates.

As for what could cause excess mortality rates in 2022 specifically, it's difficult to predict. However, factors such as the continued spread of the COVID-19 virus, the emergence of new variants, disruptions to healthcare systems, and the indirect consequences of the pandemic could all contribute. Other factors such as natural disasters, conflicts, and other public health crises could also contribute to excess mortality rates.

Human: So how can stakeholders decrease the excess death in 2023?

ChatGPT: Reducing excess mortality in 2023 will require a multifaceted approach involving various stakeholders such as governments, healthcare systems, public health agencies, and individuals. Here are a few ways that could potentially help reduce excess mortality rates:

Accelerate COVID-19 vaccination efforts: Vaccination remains one of the most effective ways to reduce the spread of COVID-19 and its associated mortality rates.

Improve healthcare systems: Ensuring that healthcare systems are well-prepared and adequately resourced to handle the ongoing pandemic as well as other health emergencies can help mitigate the indirect effects of the pandemic on mortality rates.

| **Abbreviations** |
| COVID-19 Coronavirus Disease 2019 |
| ChatGPT Generative Pre-trained Transformer |

Increase access to healthcare: Improving access to healthcare, particularly for underserved populations, can help reduce mortality rates from non-COVID-19 conditions.

Address social and economic factors: Tackling the social and economic consequences of the pandemic, such as poverty and mental health issues, can help reduce excess mortality rates.

Promote healthy behaviors: Encouraging individuals to engage in healthy behaviors such as regular exercise, healthy eating, and not smoking can help prevent non-communicable diseases and improve overall health outcomes.

As the ChatGPT discussion ended, it is important to note that reducing excess mortality rates is a complex and ongoing process that will require ongoing efforts and cooperation across multiple sectors. The utilization of ChatGPT in medicine is yet to be explored further across different disciplines.

References

[1] ourworldindata. Excess mortality during the Coronavirus pandemic (COVID-19). Available at: https://ourworldindata.org/excess-mortality-covid. [Accessed 12 February 2023].

[2] Schöley J, Karlinsky A, Kobak D, Tallack C. Conflicting COVID-19 excess mortality estimates. Lancet 2023;401:431−2.

[3] Msemburi W, Karlinsky A, Knutson V, Aleshin-Guendel S, Chatterji S, Wakefield J. The WHO estimates of excess mortality associated with the COVID-19 pandemic. Nature 2023;613:130−7.

[4] ChatGPT. Chat generative pre-trained transformer. Available at: https://chat.openai.com/chat. [Accessed 9 February 2023].