



Thinking of Creating a Chatbot in Public Health?

Here are some tips and tricks for you

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What is a chatbot?

A chatbot is a software application that uses artificial intelligence (AI) and natural language processing to understand user questions and return automated responses, simulating human conversation via websites, application on mobile devices, etc.¹



What are examples of chatbots?

During the COVID-19 pandemic, many organisations used chatbots to communicate with their audiences, including on public health. For example, the World Health Organization (WHO) launched the WHO Health Alert² chatbot to combat misinformation on COVID-19.



Thinking of creating a chatbot?

What to consider beforehand

Objectives

Clearly define the objectives of the chatbot and ensure that these are identifiable to the user.

Platform

Chatbots that are hosted on social media sites, such as Facebook, can reach a large audience and are easier to promote, but also require collaboration with and approval by these companies. Other options include hosting on websites or an applications, such as a patient portal, which are useful when one has a specific audience.

Content

Start with identifying the questions or issues that you want to address and categorize them into different topics by e.g. searching issues in social media, employing social listening, etc. Ensure that information provided is accurate and comprehensive.

Scope

Providing information that is very broad may not be useful, but if it is too specific, it may be challenging to update the content regularly. Also consider how the scope matches the need of your target audience.

Style

Think about what the interface looks like, but also the tone of the chatbot e.g. professional, personable, or even use emotions. Consider using language that is user friendly and non-judgmental.

Format

Some chatbots allow users to ask questions via free form text, while others may use a predetermined list of questions that users can select from. Including the option to contact a representative for further help can be helpful! You might consider using contrasting colors, text font that is easy to read, text-to-speech and speech-to-text functions and capacity for multiple languages if relevant.

Promotion

Is your chatbot interoperable with multiple services or platforms to increase its reach? For chatbots providing any health-related information, it may be beneficial to have sponsorship or endorsement from a well-known and reputable health organization.

Ethics

Consider ethical aspects and be transparent about algorithms used as well as address any biases when developing a chatbot. Developers should review any regulatory requirements or refer to international guidance on chatbots³ as applicable.

Team

Having a multidisciplinary team is key, which should include roles such as IT, technical content development, communication, among others.

Assessing impact

How will you measure the success of your chatbot? Consider which data requirements should be addressed early on while ensuring privacy (e.g., number of users, number of messages, etc.). Also, consider conducting a Randomized Controlled Trial (RCT) if needed!

Keep track of the most popular app used by your target audience to make sure your chatbot is accessible.

Regularly train the chatbot as its skills will be improved by training, enabling it to respond to audience queries with precision.

Invest in advertising your chatbot to reach a broader audience!



Maintaining a chatbot

Tips and Tricks!



Make sure you and your team have the capacity to review and provide up-to-date information as needed over time.



Pay attention to the commonly asked queries by users and update the missing information as necessary.



Gather data on users' experiences and adapt the chatbot to address issues and improve uptake e.g. include a function for users to rate chatbot responses as 'useful' or 'not useful'.



About this document

In an effort to communicate and address questions about the COVID-19 situation, policies, and vaccination, the Ministry of Public Health and the Thai Health Promotion Foundation (ThaiHealth), Facebook Thailand, the International Health Policy Program (IHPP), and the National Vaccine Institute (NVI) collaborated with a company, Hbot.io, to develop a COVID-19 chatbot on Facebook called "ChatSure."⁴ Started in June 2021, this chatbot has reached over 40,000 Facebook users, with about 60% of users finding the chatbot beneficial among those who provided feedback. HITAP has worked in collaboration with ThaiHealth to update and improve the chatbot over time, by adding more content and new information about COVID-19 vaccines as part of a multi-country study to assess the effectiveness of such interventions in increasing vaccine confidence. This document is developed based on the experience of conducting the study.

¹ <https://www.ibm.com/cloud/learn/chatbots-explained>

² <https://www.facebook.com/WHO/>

³ WHO's guidance on the "Ethics and governance of artificial intelligence for health" <https://www.who.int/publications/i/item/9789240029200>

⁴ <https://www.facebook.com/socialmarketingth>