HealthBuddy+: Access to trusted information on COVID-19 in local languages using an interactive web- and mobile-based application

Summary of the initiative

HealthBuddy+ is a multilingual interactive solution developed by the UNICEF Regional Office for Europe and Central Asia and the WHO Regional Office for Europe to provide access to up-to-date and evidence-based information on coronavirus disease (COVID-19). It is available as web- and mobile-based application. The application uses artificial intelligence and machine learning to answer questions and concerns about COVID-19 from users of all age groups. It consists of three features:

1) a chatbot, which can be used to ask questions and access information on COVID-19;

2) a rumour reporting tool to which users can report misleading information that will be fact-checked against accurate information and reported to a central system, and to help users take part in mitigating effects of the infodemic by reporting commonly circulating rumours in their area/language; and

3) a polling system in which users can share their opinions and experiences related to the pandemic, which helps the project team to identify and address emerging issues in a timely manner.

The content is continuously updated to reflect new findings about the virus, and public health and social measures. Furthermore, the application is available for adaptation to national authorities in the WHO European Region, which enables them to embed the chatbot on their preferred messaging platforms as well as contribute locally relevant information such as hotline numbers, links to referral services for mental health, and so on. This also equips the local COVID-19 pandemic response authorities with real-time social listening and user data to identify information gaps and adjust their responses accordingly. The application is available in 20 languages from the WHO European Region.

Context and relevance of the project

Towards the end of 2020, data from the user poll (collected via the HealthBuddy+ mobile app on iOS and Android), showed that while people in the European Region had remarkable trust in WHO as a source of COVID-19 information, they most frequently used their country’s Ministry of Health websites to obtain information. This finding validated the WHO and UNICEF project team’s approach of embedding the web-based chatbot in national health authorities’ websites, to answer people’s questions with trustworthy content based on the latest WHO guidance.

Although the polling sample at that stage was too small to extrapolate this finding (500 participants across all languages), these kinds of data points are a rich qualitative starting point for further research and triangulation with other data sources, and as the user base grows, sample size and thus validity of polling and other user data is expected to increase as well.

Initially, the project was launched as a web-based chatbot only. However, based on its success, HealthBuddy+ added a mobile-based application (available on Apple and Google Play application stores). Recent expansions have featured integrations into additional platforms, including WhatsApp, Facebook Messenger, VK and Telegram in five countries so far. Two new features were also included: a rumour reporting tool and a poll functionality. As a result, the application provides COVID-19 response authorities with live information on in-demand topics; gaps in messaging and content; and specific tailored poll results.

Summary of the analysis

Innovation factors

The innovation of HealthBuddy+ lies in its interactive, multilingual nature. The chatbot feature provides reliable, localized and specific answers to the questions of the users in their own languages. The rumour tracking feature ensures that misleading information is identified, and consequently, it enables the organization and participating stakeholders to track and report sources of mis- and disinformation. The results of the polling feature can be used to inform the local authorities on information needs, user perceptions on risk, and vaccine confidence. The project uses the latest technology such as machine learning, natural language processing, and predictive text to deliver a natural experience to the user.

The project team has identified valuable lessons throughout the development and implementation of HealthBuddy+, which can serve as a blueprint for similar future initiatives. One key lesson is that improving and continuing to innovate new science communication tools is an important component of health emergency preparedness.

Accuracy of scientific information

Sources include WHO’s technical guidance, and UNICEF’s guidance for specific topic areas such as children and adolescent health, gender-based violence, and mental health.

For the chatbot feature, the content is rewritten in question-and-answer format in easy-to-understand language. In order to allow for varying country-specific recommendations, the team has included a disclaimer to alert the audience to refer to local COVID-19 guidance. This disclaimer is automatically received when the user accesses the chatbot. Another important message that the user instantly receives is the necessity to contact a medical professional for personal health advice, as the chatbot is an automated service.

The HealthBuddy+ team at WHO and UNICEF regional offices work in close collaboration with experts of country offices and, through them, national authorities. This enables the team to obtain feedback and suggestions and to incorporate content that is locally relevant.

As 20 languages are featured, focal points of the project conduct quality assurance for accuracy of translations and technical content at regular intervals.
Gender equality, equity and human rights considerations

The team has promoted access to essential, accurate and comprehensible information in 20 languages.

Analysis of user data has repeatedly indicated gender and human rights-related information gaps. This has prompted the team to develop additional content on topics such as gender-based violence and pregnancy/breastfeeding during COVID-19.

Limitations

The medium of delivery limits the project to users who have access to the required technology and the digital literacy to use the applications.

Public demand for information via HealthBuddy+ outpaces the speed of new guidance production and subsequent new chatbot content based on that guidance. Risk communication and community engagement best practices like speaking in uncertainty offer a partial solution to this limitation.
Looking forward

The project team envisages to further increase the reach by supporting ongoing advocacy activities at the country level and conducting public launch events for the application. Expanding the scale of the project will subsequently improve the volume and quality of data and analytics flowing back to national authorities to strengthen their response.

The HealthBuddy+ team also plans to introduce additional languages to the application and embed the chatbot in other public health websites in the region.

Finally, engaging with Civil Society Organizations at national and subnational level is set to introduce the tool to additional audiences. For example, a training of trainers workshop on using HealthBuddy+ with older people in Kyrgyzstan.

Useful links


Illustrations by Sam Bradd

Disclaimers

The World Health Organization (WHO) has invited individuals, institutions, governments, non-governmental organizations or other entities to submit case studies of good practices and innovative solutions in the area of communicating public health science during the COVID-19 pandemic through a public call for submission. WHO has selected a few cases based on a pre-defined rating system and makes such publications publicly available on the WHO website (the “Website”).

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