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The new model related to the application of communication technology in the national health insurance measure promotion through the online course among the dentists in Taiwan

KEYWORDS

Communication technology;
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National health insurance;
Dentist;
Medical safety

During the COVID-19 pandemic, in order to reduce the risk of virus infection due to the physical contact, the online classes or the online meetings were subsequently widely used in the school education to prevent the spread of COVID-19. There is no doubt that the dental education is no exception in this trend.¹ The online courses can be considered to be conducted synchronously or asynchronously using the online devices. Although the concept of the online learning has long been applied in the education, it is only during the COVID-19 pandemic that it has the opportunity to be widely used in the education at all levels.² However, even after the pandemic has passed, based on the advancement and convenience of the communication technology and the accumulation of experience in implementing the online classes, the online courses are still widely used in the various educational and training situations.³ This article reported a new model related to the application of the communication technology in the measure promotion of the national health insurance (NHI) through the online course among dentists in Taiwan.

Taiwan promoted a dental safety program for the patients with the specific diseases in the NHI dental

outpatient clinics in 2024. The purpose of this program was to formulate the corresponding dental treatment plans for the patients with the specific diseases and the long-term medication to reduce the risk of drug interactions between the dental treatment and the medication for the specific diseases, thereby to improve patients' medical safety. The implementation of this program required the cooperation and participation of all dentists, and the participating dentists were required to complete the course for the policy introduction and the medical safety. How to promote the policy and expand the participation of the dentists has become a major challenge.

Based on the popularity of the modern communication technology, the New Taipei City Dental Association (NTCDA) designed a new model for the NHI measure promotion through the online course among the dentists. First, the dentist used his or her mobile phone through the APP software of the NTCDA or scanning the QR code to enter the course link to complete the registration process (Fig. 1A). Moreover, the dentist provided his or her email address and the mobile phone number. Under this new

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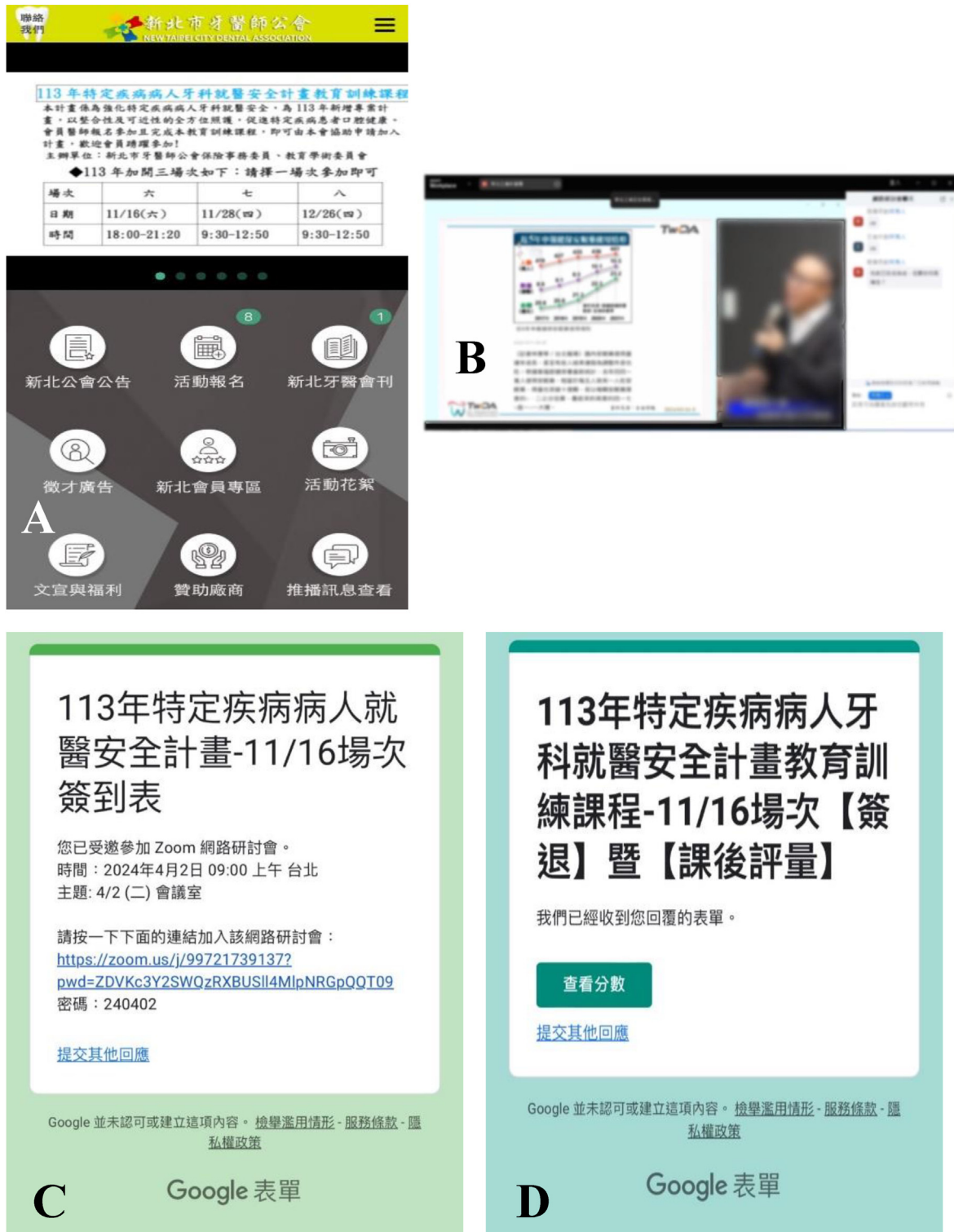


Figure 1 The new model related to the application of the communication technology in the national health insurance (NHI) measure promotion through the online course among the dentists in Taiwan. (A) The APP software of the New Taipei City Dental Association (NTCDA) installed on the mobile phone showed the course registration link. (B) The screen of an ongoing zoom conference on the desktop personal computer showed the course content (left), the synchronous video of the instructor's speech (middle), and the participants' chat room (right). This image was processed with the Gaussian Blur for de-identification. (C) The mobile phone screen showed the participating dentist completing the online course check-in through the Google Form. (D) The mobile phone screen showed the participating dentists completing the online course check-out and the post-class evaluation through the Google Form.

model, the dentist needed to download the zoom video software in advance. On the day before the class started, the NTCDA provided the participating dentists with the course link via the email and the mobile phone message. On the day of the class, the dentist entered the conference room with his or her full name to conduct a synchronous video course (Fig. 1B). The NTCDA also provided the Google Forms for the participating dentists to handle the online check-in, check-out, and post-class evaluation before and after the course. The dentist could use the desktop personal computer, the tablet, or the mobile phone to accomplish these tasks (Fig. 1C and D). Finally, he or she could be qualified to participate in this program.

The annual goal for this program was to have the number of the participating dental institutions, accounting for 30 % of the total. It should be noted that there were 16,285 practicing dentists among 7237 dental institutions (including 211 dental departments of the hospitals and 7026 dental clinics) in Taiwan in 2023.⁴ How to attract nearly 5000 dentists to participate in the dental safety program for the patients with the specific diseases and actually implemented the policy in a short time. It was a very difficult task or challenge. In the past, traditionally, the NHI policy statement was announced and notified through the paper documents, while the related training was conducted through the physical classes. Up to date, the electronic documents and the online classes were often used as communication tools for the new measure or policy promotion.

The online classes or the online meetings are the emerging profession that utilizes the evolving telecommunication industry combined with the information and the communication technology to provide the long-distance communication services. The long-distance conference using the computers or the mobile phones is an efficient and effective form for the remote teaching and learning with the experts, and it deserves the special consideration when promoting the NHI policies. The mobile phones can quickly and clearly access the digital videos sent by the communication software, and allow the clinicians to obtain the relevant professional information using the desktop personal computers, the tablets, or the mobile phones.⁵ This, in turn, can increase the effectiveness of the clinicians' involvement in the policy implementation, ultimately providing a better medical or dental care for the patients. Many people now own the mobile phones, and due to their convenience and connectivity, their use as the tools for the NHI policy promotion is expanding.

The main purpose of the design for this NHI policy promotion online course was not only to improve the efficiency of the dentists' participation, but also to give all dentists in Taiwan the opportunity to participate in the NHI program through the online courses that are not restricted by the geography. Considering the effectiveness of the online classes or the online meetings on the dentistry education and training, this new model shows the promise for the further use in the NHI policy promotion.

Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

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