# Health Promotion Using YouTube: The Experiences and Preliminary Findings from the Indonesian INAHEALTH Channel

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## Abstract

**BACKGROUND:** The YouTube channel is a promising platform to deliver health promotions because it can reach a large population. However, few studies report experiences delivering health promotion on the YouTube channel especially in Low-and-Middle-Income Countries. In 2017, we established a digital health promotion program named INAHEALTH YouTube channel.

**AIM:** We aim to report the experiences and lessons learned on how to develop a health promotion program using the YouTube platform.

**METHODS:** The steps of developing a health promotion program using a YouTube channel started from assessment, designing working system, piloting the system, implementing, evaluating, and revising the system regularly. The performance of the INAHEALTH YouTube channel and its videos needs regular monitoring not only by considering the appropriateness of health message to the target audience but also how to engage the audience.

**RESULTS:** There are 16 playlists with 399 videos, about 100K subscribers per June 30, 2021. The characters of viewers are 18–34 year (55.3%), more men (54.8%) and comes from Indonesia (93.4%). The word cloud analysis, found that audience were concerned about their/their family sickness and looking for information. The traffic sources of INAHEALTH channel were dominated by suggested video (46.7%). However, the engagement of the videos was still low. Some recommendations to develop a health promotion channel on YouTube: Understanding the audience, delivering video content suitable to the audience, encouraging enjoyable interactions, and managing the online experience.

**CONCLUSIONS:** Health organizations can use these experiences of developing and improving the performance of YouTube channel promotions in delivering health information.

## Introduction

Providing accurate information in health promotions is important to combat wrong information. The World Health Organization (WHO) indicated that an infodemic, an overburden of information, was suspected to have killed 800 people during the first three months of the COVID-19 pandemic because of misinformation [1]. In this Web 2.0 era, everyone can share and can get health information through social media, regardless of the credibility of the health information. As seen in many Low and Middle-Income Countries (LMIC), people with low health literacy, with low ability to access, understand, appraise, and apply health information to maintain their health [2], are among the most vulnerable to be the victim of wrong information [3].

Indonesia is an LMIC and an archipelagic country. With more than 250 million population living on over 17,000 islands [4], communicating health information is a major challenge. YouTube provides an excellent opportunity to reach people. A digital consumer survey in big cities in Indonesia showed that 83% of Indonesians were watching videos online in 2021 [5], and YouTube is the most used platform (68%) [6].

Although the effectiveness of social media to change behavior requires further studies [7], there are growing numbers of health communication channels on YouTube. If we typed "kesehatan" (health in Bahasa Indonesian) or "health" on the YouTube platform, in 2017 there was no health channel, in 2019 there were six channels, and on June 30, 2021, there were 11 channels that promote health.

The experiences of developing a health promotion in social media primarily come from systematic reviews on the theoretical level [7], [8], and only a few are conducted as an original research on a practical level [9]. This paper aims to report the

experiences and lessons learned on how to develop a health promotion program using the YouTube platform, named INAHEALTH channel. We present the experiences starting from what is the INAHEALTH channel, how was the development of INAHEALTH channel, key outcomes and recommendations from the INAHEALTH channel and finally, some conclusions and recommendations.

## Methods

### *INAHEALTH YouTube channel*

To address challenges in health promotion and the current communication problems, we started a YouTube channel, called INAHEALTH, which stands for Indonesia Health. This internationally available health promotion registered as the INAHEALTH channel (https://www.youtube.com/channel/UCVFXIRBBIPQjMcRWLyhKZFA) is dedicated to broadcasting credible health information to lay people who are looking for health information in Bahasa, the official language in Indonesia (Figure 1). The Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada (FK-KMK UGM), Indonesia, initiated this program as part of its community service activities. We launched the program on November 13, 2017, during a ceremony of the Indonesia Health Day 2017.

To report this routine program as a scientific paper, we proceeded with the ethical consideration of INAHEALTH channel to the Medical and Health Research Ethics Committee Board FK-KMK UGM, Indonesia and received approval with the number: KE/FK/0905/EC/2021.

### *Theoretical considerations*

We developed the INAHEALTH channel based on the community empowerment theory that emphasizes the process of people working together and the broadcast of health information to people to increase control over their problems [10]. This development approach was in line with the social media characteristics of user generated content [11]. The edutainment theory was also used to explain how audience seeking educational experience with enjoyment [12] that fit with the motives for people watching YouTube for entertainment, information seeking, sharing, and for social interaction [13].

### *Development process*

We arranged the development of the INAHEALTH channel in six steps (Figure 2).

### *Assessing the program feasibility*

The assessment included several activities including desk review and benchmarking, and applying the Delphi methods involving the experts. First, we did a desk review by scientific paper searching and benchmarking to a local TV station to assess how to develop a health TV channel. The teamwork involved two researchers in economic and health promotion background who assessed how to manage a TV channel, two other researchers in medicine and health promotion who assessed how to develop a video to address an issue. Some important lessons were: We should develop a video suitable to certain segmented audience, the need to involve a multimedia person, preparing enough video for 3 months before the launching time and monitor input from the viewers' feedbacks. The learning output was an outline plan on how to develop a Health TV channel.

Second, we conducted two rounds of the Delphi discussion approach. The first Delphi was in a workshop that invited ten experts from mass media and social change, social media communication, and TV program developers. Some important considerations were: The future trend of broadcasting is internet based platforms, ensure to assess the audience (most Internet user are 12–34 year), assess and manage the competitor, and beware of keeping the credibility of the channel. The team revised the business plan and shared it on the second Delphi discussion involving ten experts from communication, economic and business, and TV program developer practitioners. The points of discussion included: Type of content, legal and administrative considerations, resources needs, and planning sustainability.

### *Designing production plan*

The production plan includes: Deciding the delivery channel and production strategy, developing a roadmap and designing the workflow. First, we decided the delivery channel on YouTube, both the on-demand system and on streaming system, following the assessment that Internet television will be the future platform for information seeking.

Second, the production strategy involved: Created videos based on the trending health issue, decided the quality of the picture in a high definition (HD) format to make interesting and entertaining video, and grouping the videos on a playlist similar to TV programming. We arranged a routine and non-routine playlist on INAHEALTH YouTube channel. There are thirteen routine playlists comprising: (1) Healthy tips program with seven playlists, (2) talk shows with four playlists, and (3) news and documentary with two playlists.

Among the healthy tips programs, for example, we have: Hai Dok (Hi Doc), a question-and-answer
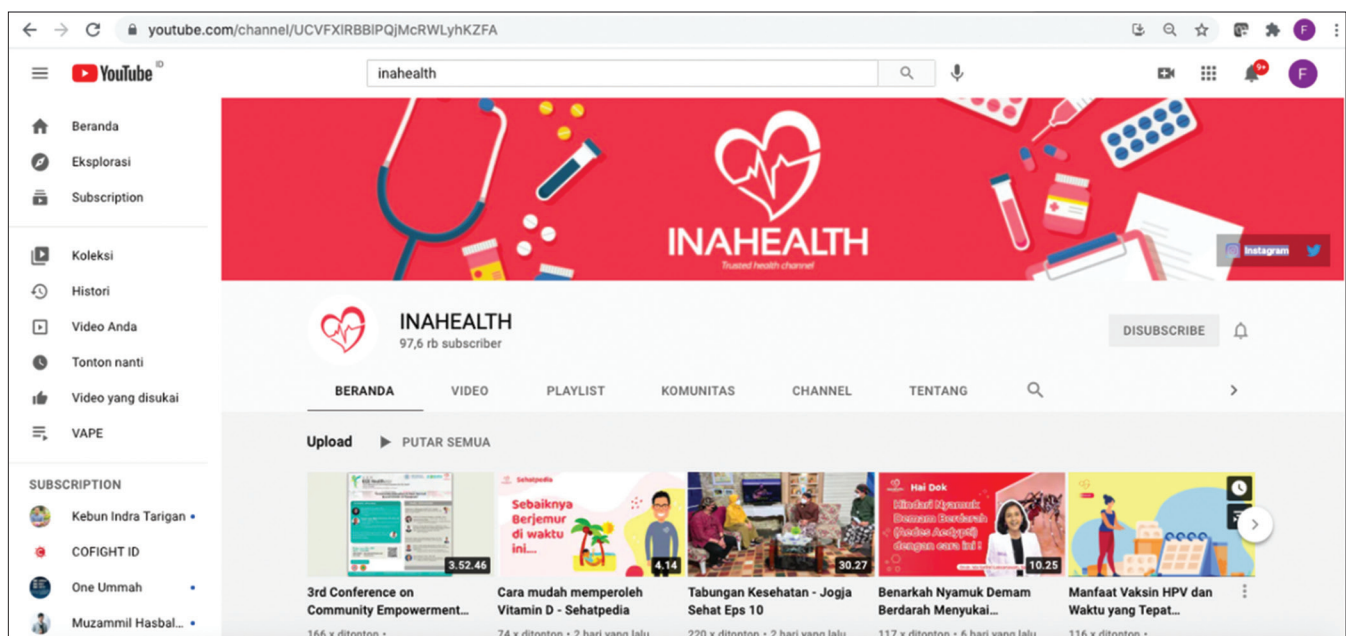
Figure 1: The screen capture of INAHEALTH channel in YouTube

format content, lasting about 5 min long, hosted by a doctor who reads the question and answers it directly in an easy-to-understand explanation. First Aid, an educational program shows a simple guide by a medical expert on what to do when experiencing a health emergency event. Sehatpedia (Healthy Tips), a computer animation video (1–7 min) that contains health information given in short and easy-to-understand language lead by a narrator. My Meal, a cooking show (2–10 min) that presents a healthy menu for particular disease conditions, in an attractive and appetizing appearance accomplished with expert explanation.

For the Talk Shows programs, for example, we have: Mitos versus Fakta (Myths vs. Fact), a talk show (3–12 min) discussing myths issue that is spread in the public by a credible source person to clarify the fact. Among the News and reports programs, for example, we have: We Care, a documentary program lasting about 5 min and depicting the existence of certain healthy communities, their activities and how to gain better health conditions.

Other than those routine programs, there are also non-routine programs, such as: Short Film Festival, where there were three non-routine playlists



Figure 2: The INAHEALTH channel development process

of competition arranged by INAHEALTH to encourage citizens to participate in video making.

Next, we developed a roadmap to guide and monitor the performance of INAHEALTH channel activities during the medium terms (5 years) from the initiation. Gradually from the 1st year to the 5th year, we set a target on the organization system, collaboration, audience involvement, and on the financial independence up to 50% of needed operational fund.
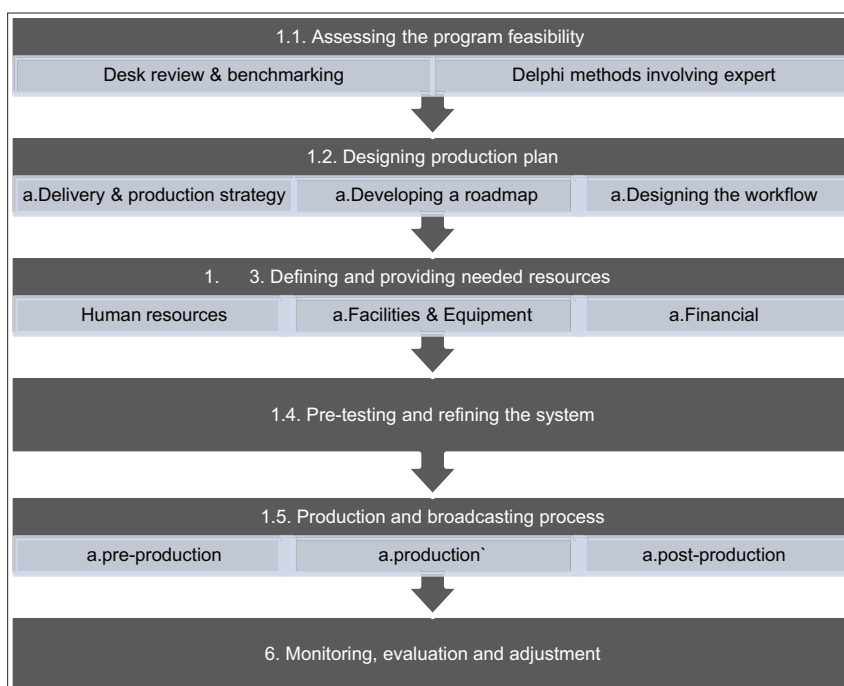
Finally, we designed the workflow to guide the activities. We designed each playlist feature, how to capture and determine the trending health issue for each video, and how to perform the pre-production, production, and post-production. The standard operating procedures for each activity in pre-production, production, and post-production were clearly described to delineate the roadmap.

### Defining and providing needed resources

Human resources comprise management and technical positions. The management positions included director, project manager, consultant, secretary, treasurer, and marketing person. A part timer director designed the strategic plan of INAHEALTH channel and monitoring the implementation of the strategic plan. The project manager, a full timer, detailed the strategic plan into activities: Assigns technical staff, coordinates the production, and monitors and evaluates the activities. A consultant answered the technical and managerial problems at the requests of the project manager. The secretary and treasurer managed the administrative and bureaucracy requirement; the marketing persons broadcast the videos, monitoring their performance, and exploring possible collaborations with potential stakeholders.

For technical staff, we recruited creative person, producers, camera persons, and editors. The creative person was responsible to design the creative idea, explore the trending topics and provide the answer, plan and lead the videos production. The camera persons took the videos and maintain of the equipment. The editors edited the video following the creative team and project manager direction, saving the picture, audio materials, and the final videos copy.

Needed equipment was camera, microphone, tripod, external hard disk, printer, hard drive and computer for editing. The expensive equipment were rented at the initiation of the program and gradually acquired following the procurement mechanism. The facilities needed included a 50 m$^2$ working room, internet connection to upload and monitor content (minimum of 3 Mbps). We identified financial resources for each activity to pay the salary of the human resources, procurement of equipment, production, broadcasting, and evaluation. We started the program with a modest annual budget of US$ 18,200 in 2017.

### Pre-testing and refining the system

We conducted a broadcast trial in the YouTube streaming format for three months. With this approach, we aimed to pilot human resources capacity, content of video quality, technical of video quality and infrastructure capabilities such as internet connection. We conducted an evaluation workshop and made appropriate adjustments.

### Production and broadcasting process

Principally, we produce short videos, using modest equipment, in an HD picture quality. The short videos attempt to better engage people, with modest equipment to enable participation from our audience, and provide a qualified picture to entertain the audience. The production and broadcasting process includes the cycle of pre-production, production, and post-production. First, the pre-production includes: (1) Exploring creative ideas, (2) preparing treatment, and (3) discussion with source person; second, the production step: (4) Taking footage materials and (5) preparing voice over, and third, the post-production step: (6) Editing, (7) quality control and revision, and (8) broadcasting.

The pre-production starts with designing a creative idea, by selecting a trending issue on media survey, group discussion and testing its potency. Weekly, the creative persons explore trending topics from popular social media (Twitter, and Instagram), website of popular telemedicine providers, and online news. The findings are discussed in a meeting to select potential issues and define the keywords. Finally, we test the potency of the issue and refine the keywords using keywords searching apps.

In the process, the team discusses the treatment (answering materials) and decides the suitable playlist for the video. The creative team then plans the storyboard (a sum of a list of shots/picture/ anime that will be required), talent, related experts or guest, location, wardrobe, equipment, and schedule of the treatment. Next, the creative person meets the health expert or invited guests to discuss the issue, the treatment and invite specific people as the source person. This discussion allows for quality control of the treatment during pre-production.

The production step comprises footage materials preparation, including video shooting, audio recording, animation designing, and picture taking following the storyboard. Those footage are downloaded to a central storage directly.

The post-production starts with the editor editing the video to follow the storyboard to produce a preliminary video. Then, a medical or related health expert checks the content quality of the preliminary video, and revision was done as necessary to increase

the quality concern which are usually lacking in social media [7]. Finally, we broadcast the videos on YouTube channel (INAHEALTH channel), with the goal that at least two new videos are released weekly.

To expand the impact of the videos, we use multiple social media marketing. To enhance the reach of potential viewers, we provide the graphics, video teaser and captions of the videos on popular social media (Facebook, Twitter, Instagram, Spotify, and podcast).

### Monitoring, evaluation and adjustment

Weekly, we monitor the INAHEALTH channel performance using parameters provided on the YouTube Analytics on the number of viewer, comment, such as like and dislike that reflect the audience engagement [14]. We monitor the channel performance (the watch time, average time duration, impressions, and impressions click-through-rate) and the viewer's characteristics (age and country of location) on a monthly basis. Overall evaluation performance is conducted yearly.

## Results

This section illustrates the INAHEALTH channel performance. Because of the dynamic YouTube statistics parameters, we presented the INAHEALTH outcomes based on the observation on June 30, 2021, for this paper.

### Viewers' characteristics

There are 16 playlists with a total of 399 videos which were published per June 30, 2021. YouTube provides an analytics dashboard that enables the account owner to analyze their channel performance. It could analyze the reach, interaction, viewed, and revenue of a video or channel in a defined time frame.

According to the analytics dashboard, the performance of INAHEALTH channel has watched time of 432,272.5 h, 8,886,446 views, 84,936 likes, 46,910 shares, and 98,827 subscribers. Watched time is a total number of minutes viewers watch a video or all videos on the channel. Views count is number of viewers who watch a video, similarly, the likes count, dislikes count, shares count, and subscribers count are the total number of those variables of all of the videos [15].

YouTube analytics dashboard showed the characters of viewers of INAHEALTH channel are 18–24 year (25.9%) and 25–34 year (29.4%), indicating more than half of the viewers are Y and Z generations. More men (54.8%) are watching INAHEALTH than women (45.2%), and most of the viewer comes from Indonesia (93.4%) and few from Malaysia (4.1%) since there is the language similarity between those countries. Most viewers are non-subscribed viewers, and increasing views from non-subscribed viewers have been happening between 2019 and 2021 (76–98%). The peak times of watching are around lunch hours (11 am–14 pm) and dinner hours (18 pm–22 pm), also during weekends and holidays.

### Channel performance

Figure 3 shows the views count was increasing rapidly after 2020, possibly related to number of published videos, number of comments counts or because of the COVID-19 pandemic. At the end of 2018 and 2019, there were two spikes of the number of video published when there were two video championships to promote the channel. An increased viewing in several videos published was followed by an increase in views count and then by comments count. Figure 4 shows a higher number of videos published after 2020, with higher views count and higher comments counts after 2020.

View counts are significantly correlated to dislike counts, like counts, and all comments count. Using the comment function, viewers are able to communicate textually with the creator, thus the comments count reflecting the audience engagement. A study argued that the YouTube algorithm prioritized to show a video related to the high frequency of published video, engagement of users, genre, how old the channel is, and typical situational demanding certain information [14].

### Analyzing the content of comments

We analyzed descriptively all comments using Word Cloud ran in R, version 4.1.0 (R Core team) [16]. The Word Cloud of comments in Figure 5 shows that the words with the biggest size are from different types of words:

| | |
|---|---|
| Adjective | :sakit (sick) |
| Verb | :kasih (give), sembuh (get well), mohon (ask) |
| Noun | :dokter (doctor), anak (child), obat (medicine), saat (while) |
| Adverb | :tidak (not) |
| Conjunction | :apakah (whether) |

Those biggest words reflect that the audience is concerned about their/their family sickness and looking for information and asking for further suggestions for solutions. They frequently mention the doctors as "respectable source persons" (quotes from the comment).
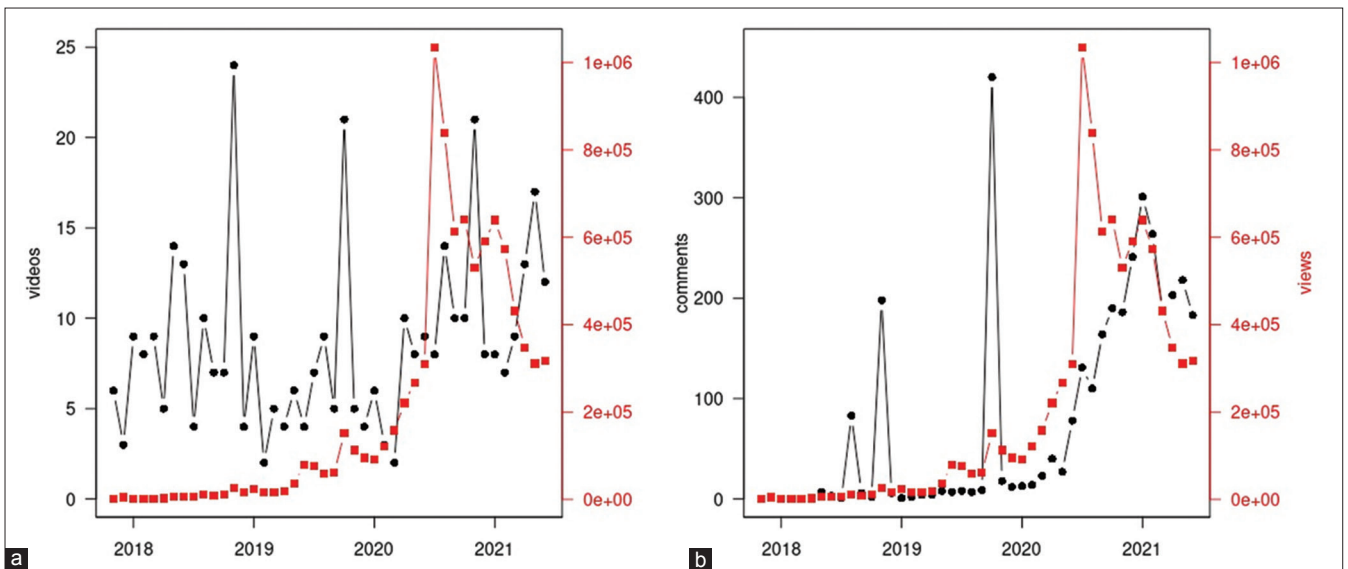
*Figure 3: (a) Published videos and view counts from 2018 to 2021; (b) Comment count and view counts from 2018 to 2021. Data source: YouTube analytics collected on June 30, 2021*

### Videos performance

Table 1 shows ten videos with the highest views count on reach and engagement. Reach parameters are impression and impression Click-Through Rate (Impression CTR). Impression measures how well a video is appealing to a potential audience by counting how many times video thumbnail are shown on YouTube. Impression CTR measures how often viewers watched a video after seeing a video in impression. The engagement parameters are average view duration (AVD), average percentage viewed (APV). AVD is the average time of the viewer watching a video. APV is the average of the percentage of time the viewer watches a video relative to the duration of that video [17]. YT

encourages the content creator to upload a video that is not only aimed to attract people to click on but also to enjoy the whole video, or be seen as a more engaged video. However, the truth algorithm to promote a video is still a "black-box" [14].

The video with the highest views count also reflects the highest impression. Videos with the highest impression CTR are videos on My Meal playlist (Table 1) with more than the modest impression CTR according to YouTube management [18]. The high impression CTR possibly relate to the thumbnail or the title that interested the viewers.

The APV was relatively low for all videos (<55%), and this can be interpreted as the engagement is still



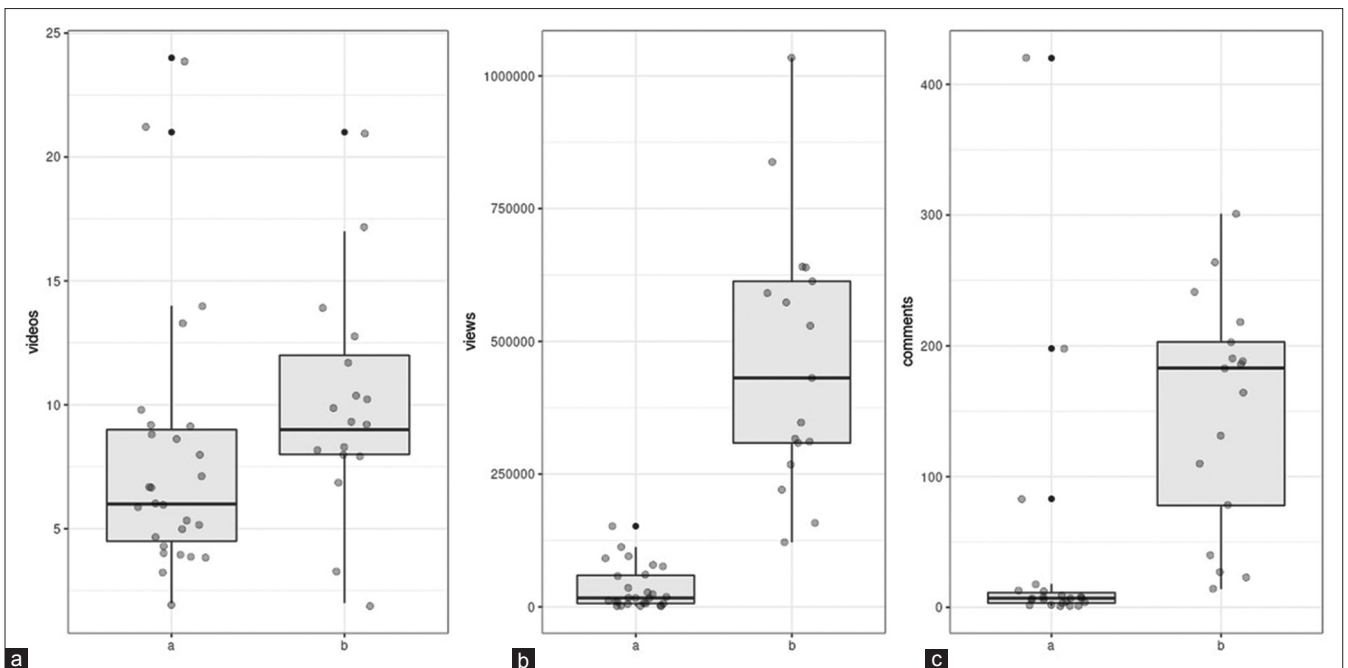*Figure 4: The box plot (mean and quartiles) of number of published videos (a), views counts (b), and comments counts (c) before 2020 and after 2020. Data source: YouTube analytics collected on June 30, 2021*

low [17]. We traced back on certain videos, identified when the viewer's leave watching, and identified a dissatisfied content and technical matters (e.g., too loud back sound) as a possible explanation.



*Figure 5: Work cloud of viewers' comments on INAHEALTH YouTube Channel. Data source: YouTube analytics collected on June 30, 2021*

### *Tracing back the traffic source*

Traffic source shows how viewers find a video is important to assess the reach of a video or a channel [19]. There are several traffic sources: Suggested video, YouTube search, browse feature, and others. Suggested video means that viewers come from suggestions appearing along or after another video. The YouTube algorithm suggested a video that might be of viewer's interest is based on viewer's prior activity on YouTube. YouTube search means that viewer finds our video from search terms on YouTube, and browse feature means the viewer comes from the homepage/home screen, subscription feed and other browsing feature but not from a link from other social media [17]. The traffic sources of INAHEALTH channel (Figure 6) were dominated by YouTube related or suggested video (46.7%), followed by YouTube search (18.8%) and browse features (10.2%). The top 3 videos with the highest views count show a higher proportion of traffic source coming from suggested video (69%, 83%, and 58%).



*Figure 6: The traffic source type of the top 3 highest views count videos and the INAHEALTH channel. Data source: YouTube analytics collected on June 30, 2021*

YouTube analytics provides content creator to identify the videos from which viewers suggested to a video. In the INAHEALTH channel, the three highest viewed videos had the source of suggesting videos with topics surrounding food and sickness, for example, a video titled "Prevent kidney failure!! 10 healthy foods that are good for the kidneys."

## Discussion

YouTube provides an excellent opportunity for health promoters to influence people's behavior, although to attract viewers among over 4 billion of videos is a challenge [20]. The INAHEALTH channel playlists were developed using the community empowerment and edutainment theories. From these experiences, we summarize some key recommendations to develop a health promotion channel on YouTube: (1) Understanding the audience, (2) delivering video content suitable to the audience, (3) encouraging enjoyable interactions, and (4) managing the online experience.

### *Understanding the audience*

Audience segmentation has long been applied in health communication and is still relevant for the YouTube platform. To reach a broader audience, it is important for segmenting them to be homogenous in determinants of targeted behavior such as demographic, economic, and value conditions [21]. Those determinants should be explored using quantitative surveys, qualitative data collection [22] or an analytic dashboard on the YouTube platform. Using YouTube analytics, we could characterize the sex, age group, and the country of access location of viewers. In the INAHEALTH channel, we found that the audience was people 18–35 years old, which is in line with findings of a study that showed the use of social media is closely related to young age [23], who were accessing video more through the Internet than through terrestrial TV (77% vs. 57%) [24]. By understanding who is the audience, we can better decide what issues they are looking for and searching on YouTube.

### *Delivering video suitable to audience*

Providing the right content is one key to increase the reach to viewers. A video should deliver a "trending topic" what the targeted audience is looking for digitally. To define a trending topic, we can use search engines such as Google Trends as a reliable source of data [25] or predict a trending topic using machine learning that has been used on Twitter [26].

**Table 1: Performance of the top ten videos with the highest views count**

| No | Video title - playlist | Publish time | Views (thou-sand) | Impressions (thou-sand) | Impressions CTR (%) | Watch time (thou-sand hours) | AVD/video duration | Aver-age percentage view |
|---|---|---|---|---|---|---|---|---|
| 1 | The following are the characteristics of people with kidney disease-Hi Doc | February 13, 2020 | 2057 | 34.683 | 4.59 | 974 | 2:50/5:20 | 52.6 |
| 2 | Want to have a healthy heart? Here's how-Hi Doc | October 5, 2018 | 788 | 13.461 | 4.21 | 46 | 3:30/6.54 | 50.9 |
| 3 | Eps. 01)-My Meal (What is a good menu for high cholesterol??? (eps. 01)-My Meal | February 22, 2018 | 645 | 5.491 | 8.61 | 32 | 2:58/5:31 | 51.8 |
| 4 | First aid for chest pain-First Aid | February 15, 2018 | 611 | 7.208 | 6.61 | 38 | 3:42/9:19 | 39.8 |
| 5 | Is it true, drinking cold water while pregnant makes the fetus big? Myth vs. Fact | November 16, 2018 | 522 | 9.162 | 4.42 | 19 | 2:11/3:58 | 51.8 |
| 6 | Easy ways to overcome the stomach acid reflux | September 26, 2019 | 482 | 4.653 | 8.18 | 25 | 3:09/6:02 | 52.5 |
| 7 | 5 foods that are not good for hypertension, Number 3 is the most frequently find Part 1-My Meal | May 8, 2018 | 220 | 3.040 | 6.39 | 16 | 3:36/7:09 | 50.6 |
| 8 | What menu is good for high cholesterol??? (Eps. 02) - My Meal | February 22, 2018 | 193 | 881 | 11.98 | 11 | 3:24/10:35 | 29.8 |
| 9 | Food for diabetic person | January 5, 2018 | 181 | 1.430 | 9.71 | 8 | 2:41/9:30 | 28.2 |
| 10 | Eating peanuts can cause (suffer from) hyperuricemia. Is that right? (Part. 01) - My Meal | May 3, 2018 | 168 | 1.953 | 6.67 | 11 | 3:48/6:42 | 54.5 |

*The title of videos and playlist originally are in Bahasa, here we translated into English. Data source: YouTube analytics collected on 30th of June, 2020. CTR: Click-through rate, AVD: Average view duration.

Publishing videos regularly can also increase the video's reach. The algorithm on how the YouTube algorithm promotes a video depends on many variables and not opens to public. One variable is the consistency of publishing content regularly [27].

After a video reaches the audience, how the video could engage the audience is important to accomplish the message delivery [28]. One strategy is to pack the message into a video that meets the viewer's preferences. For example, in the INAHEALTH channel, using the doctor figure is what the audience prefers. The abundant noncredible health information on YouTube is a threat to public health [7] because the audience mistakenly trusts health practices that go against the standard medical. In social media, a credible reference should be provided so audience can quickly criticize it. A study found that in YouTube, a health promoting videos on Vape were less engaged and less popular for the audience [29], becoming a challenge for health promotion profession [28].

### *Encouraging enjoyable interaction*

After viewers watch the video, then viewers-creator interaction is enabled using social media so that users can create, share, exchange information [30]. This interaction should be encouraged [28] and well maintained to keep viewers' loyalty and to provide feedback to creator. Some parameters in the YouTube analytics dashboard support the monitoring of these interactions: APV, like, dislike, comments count, and the content of comments. Dominating likes and the results of the comment content analysis in INAHEALTH channel generally reflected a positive sentiment. Some ways to encourage interaction are using colloquial language, quickly responding and building a complementary website where viewers can trace the more detailed aspects of the health information. In addition, the website can increase the credibility [7] and outreach the audience from other social media [18], [19].

### *Managing the experience*

Classic health promotion management cycle of community analysis includes: Targeted assessment, program plan development, implementation, and evaluation adjustment [31], should be adapted to the technology advancement. Developing a business plan to design the system involves: Pre-production, production, post-production activities, all involving multidisciplinary collaboration is important, as also found from a similar experiences from FaceSpace, a web-based sexual health promotion program [9].

Routine monitoring and evaluation are important to assess the program's performance and to gain insights into what can be increased and improved. From the INAHEALTH analytics, there was an increasing number of published videos triggering more views count after 2020 than before 2020, demanding further exploration for some explanation. Working with data scientists is promising to do better routine monitoring using technological advancements such as big data analysis. Innovation is another key to improve the channel performance. The innovation might not always succeed, yet with continuous monitoring; we can always learn from any mistakes and make an appropriate adjustment. In the INAHEALTH lessons, we are innovating to increase the views count while organizing a community of interest by conducting some championships, however, these "artificial viewers" were not loyal viewers. Then, accordingly, we are making some adjustments to develop the community of interest by involving health services in broadcasting activities.

YouTube channels are increasingly accessed; thus, the Internet will continue to play an important role in shaping people's opinion. The INAHEALTH channel is not a perfect example; however, the channel has a wide reach, and could outline how to develop a health promotion in YouTube. Since the INAHEALTH channel has not used machine learning to identify trending topics, this is a limitation calling for further study to perform the innovation combining classic health promotion management with new technological advancements.

Despite providing the opportunity, many critics complain that YouTube is not transparent concerning

its algorithm, and that may account for 70% of all watch time on the platform. The algorithm is responsible for the spread of misleading information that has hit hardest in the non-English speaking countries, including Indonesia [32]. To address this issue, people should become more objective and aware that YouTube analytics tools are developed to benefit the YouTube.

## Conclusions

YouTube is a promising platform to conduct health promotion. To develop a health promotion channel in YouTube, a well-planned program, combining steps of classic health promotion management with technological advancements should be done. Regular monitoring, evaluation and innovation should aim to send a suitable content to the targeted audience and emphasize engagement with the audience.

## Acknowledgments

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