



## Utilizing Instagram as Informational and Motivational Media for Diabetics with Diabetes Ulcer: A Qualitative Study

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### Abstract

The present study analyzes the use of an instagram account, @epitel.indonesia managed by Epitel Indonesia, a clinic specializing in diabetic foot and pressure ulcer treatment. The present study applied a qualitative descriptive approach. Primary data was collected through observation and in-depth interviews. The results showed that @epitel.indonesia account is used to disseminate information on diabetes and diabetes ulcer and to motivate patients with diabetic ulcer. In order to deliver information effectively, Epitel Indonesia uses dynamic colors as layout templates for each post, acquires information from credible and trusted sources, and maximizes the use of hashtags to make the posts easier to be found. Real photos of the patients' treatment progress are used to show the public that diabetic ulcers can be treated and healed through a proper and regular treatment. Those efforts were conducted by Epitel Indonesia to improve their patients' confidence and motivation as well as reduce their patients' anxiety of having their feet being amputated. The present study aims to contribute to the analysis toward the use of social networking sites for health and healthcare studies by revealing how a healthcare provider manages its instagram account to disseminate diabetes-related information and motivate diabetes patients in Indonesian context.

Keywords : diabetes, diabetes ulcer, health information, instagram, social media.

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### Introduction

The use of social media as health and healthcare promotion, education and intervention has been widely considered by healthcare providers in this Covid-19 pandemic. One of the health protocols applied in this pandemic time is social distancing that limits people from meeting face-to-face. This limitation reduces interaction between health providers and patients. Januraga (2017) argued that internet and social media can be used as intensive health support for people in the situation that they are not able to meet with health providers. Schillinger et al. (2020) added that the popularity and technical sophistication of social media platforms have translated into health discourse to an unprecedented degree in which its content becoming more creative, innovative

and engaging. A study conducted by Lyson et al. (2019) concluded that people's participation in online social media platform and receipt of brief, tailored messages is effective at increasing knowledge, awareness and prevention behaviors related to human papillomavirus (HPV) and cervical cancer. It can be concluded, social media networking site use can be optimized as health and healthcare support.

Since its initial release back in 2010, Instagram has been considered as a popular social media for spreading various healthcare information. In January 2021, Instagram was the second most downloadable application (Barnhart, 2021). Recently, Instagram has been used for various purposes. One of them is to disseminate ideas of health and healthcare, especially information related to diabetes. It has been argued that the application has a great potential to serve as a social networking platform in visually rich disciplines such as clinical dermatology, clinical infectious diseases and radiology, owing to its strong, albeit not unique, photo and video-sharing affordances (Boulos, 2016). In this sense, Frazier et al. (2015) conducted an experimental study on how photo-sharing feature in Instagram is used as peer-to-peer support and disease-related discussion among adolescents with Type 1 Diabetes. In relation to diabetes photo-sharing through posts in Instagram, Litchman et al. (2019) concluded that posts about Continuous Glucose Monitoring (CGM) provide a sense of well being, encouragement, support and overcome CGM-related frustrations among the diabetics. In addition, photos shared on Instagram are found to be interesting and knowledgeable, especially those showing how to make healthy snacks, think about the impact of different types of food on glycemic control, and how patients with Type 1 Diabetes experience the struggle of diabetes management (Malik et al., 2021). It can be said that Instagram has been used for spreading the information related to diabetes.

Related to the above paragraph, Instagram has also been used by health institutions to disseminate information related to diabetes. One of them is Epitel Indonesia. It is a clinic specializing in diabetic foot and pressure ulcer treatment. Epitel Indonesia notices that there are not many clinics specialize in diabetic foot ulcers care in Indonesia. In addition, information about diabetes, specifically diabetic foot ulcer and pressure ulcer in Indonesia can be considered limited although 8,5% of Indonesian population is at risk of having diabetes (Riskesdas, 2018). In regards to this, Epitel Indonesia created an Instagram account, @epitel.indonesia per 1 January 2022 has 1,055 followers with 312 posts. @epitel.indonesia does not only post about diabetes-related information but also personal stories from diabetics who had recovered from the diabetes ulcers. Gabarron et al. (2020) stated that disease-specific social media groups are trusted sources of information for the patients. In addition, it can benefit the users at many levels, including health outcomes. Besides that, Chen and Wang (2021) found out that health institutions mainly used social media for infoveillance, combating misinformation, health intervention and social mobilization. It can be concluded that health institutions play a significant role in disseminating health-related information, especially for specific diseases such as diabetes.

Despite considerable research on the use of Instagram as a media to disseminate information on health as well as healthcare, few studies have investigated the topic in the healthcare institution in Indonesia context. For example, a study on the Instagram page of @alodokter\_id was conducted by Arviani and Febrianita (2020) to investigate the types of messages delivered, the followers' engagement and the content strategy. Their study suggested that the Instagram account managed by Alodokter provoked the followers to be more aware of the health issues they might

be facing. Another study on utilizing Instagram to deliver health messages suggested that postings related to sex education on Center for Indonesia's Strategic Development Initiatives (CISDI) Instagram's account seem to make their followers to be more active in the discussion (Mukti and Putri, 2021). In addition, a recent study conducted by Suaib and Dunan (2021) showed that health institutions are not the only sources of health information. The Ministry of Health of The Republic of Indonesia utilizes Instagram to highlight information related to the safety, sharia' perspective, quality, and effectiveness of Covid-19 vaccines. Nevertheless, there has been a lack of research on how health providers use Instagram to disseminate information on non communicable diseases such as diabetes, specifically diabetic ulcer in Indonesian context. Therefore, focusing on @epitel.indonesia instagram account, the present study aims to fill the gap by investigating the use of Instagram for informational and motivational messages for the diabetics.

## **Method**

The present research used a descriptive qualitative method. Primary data was collected from observation and in-depth-interviews with an admin of the Instagram account (E1), the owner of Epitel Indonesia (E2), a patient of Epitel Indonesia (P), a member of patient family who saw postings on @epitel.indonesia (F) and a follower of @epitel.indonesia instagram account (I). The interviews were conducted in Epitel Indonesia Bekasi, West Java - Indonesia. The interviews lasted around forty to sixty minutes. Data collection was conducted from May to August 2021. The interviews' results were transcribed and checked by the informants to see their reliability. Collected data were coded using an open coding system into several categories such as the purpose of creating Instagram account, the design and layout of the account, the idea and inspiration behind every post, the source of information and pictures for the posts, the target readers or followers of the account and the optimization of the account.

## **Result and Discussions**

The present section aims to discuss the results of present study. The results of the present study show that there are two major themes of Instagram posts of @epitel.indonesia. The two major themes are @epitel.indonesia as a media to inform and educate about diabetes and diabetic ulcer and @epitel.indonesia as media to motivate. Following are several factors which make @epitel.indonesia as media to inform and educate about diabetes and diabetic ulcer.

### **Purpose of creating @epitel.indonesia**

Health providers need social media to inform patients about their existence. It may be intended for promotional aspect or to raise patients awareness. E2 commented that the initial reason of creating instagram account @epitel.indonesia was based on promotional aspect. However, as a clinic specializing in diabetes and pressure ulcers treatment, Epitel Indonesia' management realized that the Instagram account cannot only be used to promote their business. As healthcare providers, they are obliged to deliver healthcare awareness. Following are comments from E1 and E2 as @epitel.indonesia management team.

“Promotion is the initial reason why we made an Instagram account, but we also realize that we need to share something valuable to our followers, so we decided to give education about diabetes, especially in diabetes ulcers.” (E1)

“Well...first, we need to tell public that there is a clinic specializing in diabetes and pressure ulcers treatment. However, we also need to share information related to diabetes and diabetes ulcers to public, especially to patients because some patients do not know how to manage diabetes and treat diabetes ulcer.” (E2)

Based on observation towards postings on @epitel.indonesia, we found that the posts were classified into three categories, namely information and education, treatment progress and special occasion greetings. The information posts were about the location of Epitel clinics in some cities in Indonesia and their operational hours. Informational posts also tell public about how to contact and make appointment. We notice that the informational posts may serve as the promotional side of the account however they do not occur as often as the educational posts. The diabetes health-related educational posts are dominating most of the posts. In terms of frequency, the informational post which promote the clinic usually being posted once a month repetitively without changing the template or the image of the post. Meanwhile, the posts about diabetes health-related are uploaded twice or three times a week. From this, it can be concluded that @epitel.indonesia instagram account is not focusing to promote but as source of knowledge for diabetes patients especially patients with diabetes ulcers.

An interview with informant P revealed that as diabetes patient with diabetes foot ulcer, she tends to forget about diabetes self-management, especially about dietary. However, she can not consult paramedics directly (face-to-face) because of her ulcer. She can not walk often and her movement is limited. There is concern about excessive foot loading may cause delay in diabetes foot ulcer healing because of repetitive moderate stress on the ulcer (Najafi et al., 2016). Because of her limitation, she relays information on social media to help her managing her diabetes. Whenever she needs to refresh her knowledge about diabetes she opens @epitel.indonesia instagram account and sees the posts on information she needs there. Wong et al. (2019) study on role of Instagram in medicine concluded that active and technology savvy patients will consult online resources including social media platforms to obtain information about their symptoms, diagnosis or treatment. It can be said that @epitel.indonesia instagram account may help patients in managing diabetes.

Diabetic patients, especially those with diabetic ulcers, need to have proper knowledge, preventive care and treatment of their disease. A cross-sectional quantitative study of diabetic patients conducted by Amaral et al. (2019) concluded that diabetic patients had relatively low knowledge about the disease and the various types of strategies for glycemic control. In order to increase patients' knowledge, Mohamed nor et al. (2019) review type 2 diabetes patients' lifestyle changes and propose an early education for diabetic patients. If patients have sufficient knowledge on diabetes, it may lessen the burden of health care providers in dealing with other diabetes-related complications. It can be said that giving adequate knowledge about diabetes and diabetic ulcers is necessary to improve diabetes self-care. A patient might attain his or her specific goals with the idea that they will retain the improvements if they act with intention and receive suitable knowledge (Saftarina, 2021). It can be said that diabetic patients need to be exposed to a vast source of diabetes-related information on Instagram.

#### **Information shared on @epitel.indonesia and its target audiences**

An interview with informant P revealed that the first wound she had on right foot was because it touched a hot wok that she placed on the floor after cooking. It was just small wound, so she

treated it like how she treated normal wound. She cleaned it using disinfectant and applied anti-septic topical ointment on the wound. She never expected it turned out to be diabetes ulcer because she has never been diagnosed of having diabetes. Similar comment also came from informant F who treated his mother's wound on feet without knowing that it was diabetes foot ulcer. Both informants began to suspect the wound as it not showing any signs of recovery instead it got worse and widened. Only then they began to search for information online using available social media. Instagram is one of the social media they prefer to use in searching for information related to diabetes foot ulcer treatment. It can be concluded that neither patient and family of patient have adequate information about diabetes foot ulcer, thus they seek information related to it online by accessing social media such as Instagram.

Based on interviews with E1 and E2 the information shared on @epitel.indonesia is not restricted to describing the symptoms and causes of diabetes but also giving information on how to prevent the disease and do first aid treatment on the diabetic ulcers.

“The information we shared such as what is diabetes and diabetes ulcer, how to prevent from having diabetes ulcer, how to do first aid treatment for infectious diabetes ulcer before patients visiting nearby hospital or clinic. We hope that people can be more aware of diabetes and especially diabetes ulcers.” (E1)

E2 added that information shared on @epitel.indonesia is also targetted to the family of patients.

“Actually, our Instagram posts are not only about common diabetes information. We are focusing on diabetes ulcers. So the first thing we have to convey is education about diabetes, then we go to the ulcer section. Now, we should be the one who shares more about the ulcers and the causes. Now, technically, our main target audience is the patient, [giving information] on for example, what diabetes is like, why he/she has an ulcer, how to clean it, what he/ she can or cannot consume and such things. But we should not forget to educate their families [as well], now family education is the most important because diabetic patients are generally stubborn, so that's how it is. What we have to reach is the family as well. Third is how we motivate them to take care of the wound. We also share information about daily food and medicine in take. That's our focus right now. We are focusing our posts for diabetics with diabetes ulcers.” (E2)

The idea of educating families about diabetic ulcer treatment is considered important because all patients communicated and informed their diabetes problems to the family (Karota et al., 2020). Educating families can also minimize or prevent the effects of burden on family's caregivers responsible for patients (Isworo, Suharsono, and Sitepu, 2019). Family's knowledge on diabetes makes the family able to support the patients effectively and increase the patients' condition. In addition, the better the family support, the more obedient the patient undergoes treatment and improves their quality of life (Masruroh et al., 2021; R Amelia et al., 2018). In contrast, diabetic patients with less support from their families show more stress and poor glycemic control (Singla, Jain and Chaudhry, 2018). The weight of evidence suggests that both patients and their family need to have proper knowledge and education about diabetes.

### **Templates design and layout**

Being aware of the usefulness of Instagram to disseminate information, Epitel Indonesia carefully designed the templates of each post. As the admin of @epitel.indonesia, E1, commented,

“Every year we always look for a better template by reviewing previous year’s template. We realized that most Instagram’s users are young adults and that’s why we need to make our posts more eye-catching for them. Maybe one of these young adults who saw our posts have parents, relatives or even neighbors with diabetic ulcers. For example in 2020 we used bold colors such as maroon. We chose maroon because it contrasts with Epitel’s main colors which are blue and white. Maroon color also symbolizes that Epitel exists and is ready to help diabetics treating their diabetic ulcer. And this year we decided to use white because it’s a softer color that symbolizes positivity and we wanted to show positivity to diabetics that shows diabetic ulcers can be treated and healed with proper treatment. We also added a watermark of Indonesia’s map to reflect our dreams of becoming a nation-wide clinic specialized in diabetes and pressure ulcer treatment.” (E1)

Based on the above comment, it can be inferred that @epitel.indonesia carefully designed the templates that they use in every post. Every year, they evaluate the template in order to represent their ideas and attract more Instagram’s users, especially young adults. Informant E2 added:

“Why every year we have a design change (but we never change the logo, just its layout) because we want to give a new spirit, we want to encourage nurses and also to those who see our posts...patients, patients’ families, and the general public. So, why do we form a color combination of shapes like that? To be more up to date with the situation. There is a picture that looks like it’s in a tab, as if it’s on a phone. That’s because our main target audience is young adults. We also realized that now older people are able to access Instagram or Youtube. That’s why we chose dynamic and vibrant design, so it’s more attractive and people are interested to read the information given.” (E2)

Both previous comments show that the selection of template design of @epitel.indonesia is adjusted to the target audience (young adults), the latest trend on Instagram posts and is intended to motivate nurses, patients and the public. Below is the example of post on @epitel.indonesia:



fig. 1 Posts on @epitel.indonesia about risk of diabetes ulcer  
Source : Epitel Indonesia document

Fig. 1 shows posts about risk of diabetes ulcer. From these posts we can see Epitel Indonesia uses bright color as background and animated pictures to make the information more attractive and engaging. Visual formatting is one thing that needs to be carefully designed and considered. O'Donnell and Willoughby's (2017) study on pre-testing and experimental conditions of the messages found that background images are needed to increase message salience for photo-sharing social networking sites such as Instagram. Thus, informational posts with proper visual image may impact perceived message's effectiveness. It can be said that the use of well-designed templates or layouts may increase the efficacy of messages on @epitel.indonesia's posts.

### Optimizing the use of hastags

Another aspect that can be used to increase message effectiveness shared in @epitel.indonesia's Instagram account is by optimizing the use of hashtags. E1 said,

“We really need hashtags, so we just change the caption but the hashtags will stay the same, so people will find it easier. For example, treating ulcer at home, treating ulcer in Jakarta or Bekasi, or diabetes ulcer, there are so many hashtags. We use about 20 hashtags or the maximum number.” (E1)

The above comments suggest that @epitel.indonesia uses hashtags in order to make the posts easier to be found by the public. Most people who browse information in Instagram use keywords related to the information they need. These keywords are also known as hashtags in social media networking which act as pointers and filters of information people need to find. Hashtags are also described as a meaningful form of engagement that comes from the user when posting a picture to Instagram (Holtz & Kanthawala, 2020). Using hashtags frequently also will facilitate the access of the people to the information directly (Turanci, 2019).

Based on observation on @epitel.indonesia, we found that there are several hastags that always occur on the posts. These hastags are #diabetes, #perawatanlukadiabetes (diabetic ulcer treatment), #lukadiabetes (diabetic ulcer), #dietsehat (healthy diet), #perawathomecare (homecare

treatment), and #epitelindonesia. Informant I said that he found @epitel.indonesia instagram account by using #diabetes hastag when searching for diabetes-related information. He also added that by inserting hastag he can see other posts from others that share about diabetes on Instagram. Several studies concluded that hashtags in social media can be used to motivate healthy lifestyle, to campaign health-related awareness, to disseminate health-related education effectively, as a symbol of activism among the public in social media and even to infer a county's health statistics (Santarossa et al., 2016; George & Britto, 2018; Britto et al., 2018; Lacs, 2021; Garimella, Alfayad, Weber, 2016 ). The weight of evidence suggests the significant role of hashtags in health-related posts.

### **Credible source of Information**

Besides paying attention to design and optimizing the hashtags in posts, Epitel Indonesia also makes sure that the information given in each post is valid and trustworthy. Hence, E2 commented,

“We have a special team who make sure that the sources are valid or reliable so that later they will not become the subject of scourge for us. So we look up the information from reputable sources...not from blogs or wordpress. In addition we are only looking from a trusted website. For example, from WHO data, the Ministry of Health because they are more valid. Besides that, we are also quoting from research articles from medical or nursing journals . ”

Based on E2's comment, it can be said that information shared at @epitel.indonesia' Instagram account can be considered credible because they collected the information from several reliable sources such as books, journals and official websites. Besides that, E1 said,

“So we get information from journals, books, seminars and also from specialists. oh, we once used a doctor as a reference from one of the seminars on nutrigenomics. We posted the information about nutrition and nutritional dietary for diabetics last year.”

Besides books, journals, and official websites as main sources of information, @epitel.indonesia also uses information from specialists such as nutritionists who gave presentations in seminars.

Sharing health information on a specific disease treatment which in this case is related to diabetes and diabetic ulcer may be considered as a herculean effort because it has impacts on the patients, their families and the general public. A study by Gabarron *et al.* (2018) concluded that the users of diabetes related social media groups are interested in knowing more about research and innovations in diabetes. Therefore, healthcare providers on social media should be careful in giving health information on their social media posts because misinformation posts may have significant negative effects on patients' health. In addition, health information on social media can also be used to refute false or misleading health information clearly, simply by providing appropriate sources (L. Bode & Vraga EK, 2017). It can be concluded that healthcare providers on Instagram should be careful in selecting the source of information in order to post credible, valid and trusted information that can inform various parties.



### **Diabetes-ulcers treatment progress photos to motivate patients**

One of the complications of diabetes is diabetic foot ulcer. Diabetic foot ulcer can be defined as a full-thickness wound which is present at a level distal to the ankle in patients with diabetes (Amin & Doupis, 2016). Diabetic ulcers are a serious health problem because patients with chronic diabetic ulcers have to deal with pain, infection, hospital stays, and amputation (Naves, 2016). This condition leads to anxiety and demotivation of the patients. Some patients may think that having diabetic foot ulcers means amputation. The fact is diabetic foot ulcers can be treated with proper medical procedures and eventually be healed. Unfortunately, most patients do not know about this and they tend to abandon the ulcers or just treat it in the same procedure as a normal wound. Improper way of treating the ulcers may result in severe infection and the patients' risk for amputation increases. Therefore, patients must understand and adhere to optimal wound care for good outcomes in diabetic foot ulcers (Aumiller & Dollahite, 2015). It can be said that diabetic foot ulcers should be treated accordingly to prevent further infection and amputation.

As a clinic specializing in diabetic foot ulcers' treatment, Epitel Indonesia is fully aware that some of their patients have little motivation to cure because of the condition of their ulcers. Informant E1 said,

“So the patients who come to us are usually in serious conditions or when the wounds are severe to the point that the patients are already weak and their minds are in despair... They keep asking these questions; Can they survive or not? Will it be amputated or not? If you come with this condition, you usually come with bad injuries, physically weak and low motivation.”

E1 also added that patients do not believe that the ulcers can be healed because some of them have been told or witnessed by neighbors or relatives who have their foot amputated.

Based on observation, Epitel nurse who treats patient's diabetes ulcer takes pictures of the ulcer after the treatment. Then, the nurse will show the photos to the patient and family and discuss the progress. The photos are sent to family and patients for their records. An interview with F revealed that the treatment progress photos are important for him because they serve as reminder for him to be more careful in taking care of his mother. Informant F also added that sometimes he showed the photos to relatives and neighbors who visited and asked to see the ulcer. In contrast, Informant P said that she does not want to see the photos of her diabetes foot ulcer because it scares her. However, she allowed Epitel Indonesia to post her ulcer photos on Instagram because she wants to motivate others. She felt sad losing two of her foot fingers and she does not want others to have similar experience.

One of the ways to motivate the patients is by showing them photos of healed diabetic foot ulcers. E2 commented,

“Well, one of the forms of motivation that we give is through Instagram. Usually patients still hesitate to do treatment if they do not see evidence of healed diabetic foot ulcers. If we just talk about it, they do not believe it, but if they are given direct evidence, they will believe it. So there are examples of ulcers ranging from severe to fully healed on Insta-

gram and patients can share those evidence at home. Besides sharing, they can see, oh the process is like this, slowly but surely, that's what we always do to treat the ulcers. By seeing the truth, they are willing to treat the ulcers because there's real evidence of healing. And social media makes it easy for them to access, and share the healed ulcers photos anytime and anywhere.”

From E2 comment, it can be inferred that Epitel Indonesia uses its Instagram account @epitel.indonesia to post photos of patients' treatment progress. By doing so, they can motivate patients to do the treatment and also to increase their confidence of healing. In addition, patients can show their family or relatives that diabetic foot ulcers can be cured if treated properly.

Related to the above paragraph, health-related photo sharing in social media may have positive aspects for the patients. A computational analysis research on Centers for Disease Control and Prevention Instagram photos conducted by Kim & Kim (2020) found out that photos shared on Instagram can be a source of complementary information that may be used as a call for actions for better health. Similarly, Rozenblum, Greaves & Bates (2017) concluded that social media creates a new opportunity for patients and their families to participate actively in their care and self manage their medical problems by learning from those with similar conditions. In addition, Ahmed et al. (2016) study concluded that the purpose of images shared on instagram is to dispense education. Despite its positive impact on patients' wellbeing, healthcare providers should be aware that clinical photos posted on Instagram' timelines should respect and protect patients' privacy and confidentiality (Boulos et al., 2016). It is because some patients may want to protect their identities or be less comfortable with sharing personal information. The weight of evidence suggests that photos shared on instagram bring positive energy to the patients who have similar conditions but other aspects such as patients' privacy and confidentiality should not be neglected.

Besides giving motivation to patients, we observed that the photos that show diabetic foot ulcer treatment progress in @epitel.indonesia also trigger comments and discussions from doctors, nurses and patients who viewed the posts. One of followers who often commented posts on @epitel.indonesia is informant I. Based on interview with informant I, we found out that he is a fresh graduate from nurse academy. He followed @epitel.indonesia because he wanted to have more knowledge about diabetes and diabetes foot ulcer treatment. Some of his comments are asking about the ulcer treatment procedure. Regarding to this, E1 commented,

“There are several doctors who comment on @epitel\_indonesia posts if they agree with the posts and some add further information. Nurses from Epitel Indonesia and other clinics also sometimes commented and joined the discussion. Nurses usually share their experience in treating diabetes foot ulcer.”

E1 also added that there was one particular thoracic surgeon who frequently comments on the photos of diabetic foot ulcers treatment' progress posted on @epitel\_indonesia. This surgeon gives suggestions on how to conduct the treatment and also explains to patients the purpose of the treatment's procedures. It can be concluded that diabetic foot ulcer treatment progress photo shared on @epitel.indonesia accommodates communications among doctors, nurses and patients.

The interaction between patients, doctor, nurse and public in general in a social media may create a health-based or disease-related online community. This community can provide many avenues not only for peer support through emotional and technical support but also serve as a tool of empowerment (Gavrilla et al., 2018). A study by Alzahrani and Alanzi (2019) also concluded that one of the principal benefits involved in the utilization of social media was to facilitate communication between patients and doctors. Individuals highly engaged with diabetes online community are more likely to have better glycemic levels, high health-related quality of life and diabetes self-care levels (Litchman et al., 2017). It can be said that social media such as Instagram provides support and facilitates communication with peers and paramedics.

## **Conclusion**

As one of the most popular social networking sites, Instagram is considered as an effective media in disseminating health and healthcare messages. The results of the present study show that Epitel Indonesia, a clinic specializing in diabetic foot ulcers' treatment, utilizes its Instagram account, @epitel\_indonesia to reach patients with diabetic foot ulcers. Epitel Indonesia is aware that diabetic patients may not have enough knowledge regarding the diabetes and diabetic foot ulcer. Therefore, Epitel Indonesia uses @epitel\_indonesia' Instagram account to disseminate information related to diabetes and diabetic foot ulcers. Types of information shared are the cause of diabetes, diabetes and diabetic foot ulcers prevention as well as management. In addition, they give information related to first aid for diabetic foot ulcers and healthy diets for the diabetics. The posts were exemplified by using vibrant design layout and attractive visual images, citing from a credible source of information and maximizing hashtags' use so that the patients can find the posts easily. Posts on @epitel\_indonesia also contain photos of diabetic ulcer treatment' progress which are used to motivate patients and are able to bridge communication between fellow doctors, nurses and also with patients.

The present study contributes to the utilization of social networking sites for studies related to health and healthcare. The present study reveals how a healthcare provider manages its social media sites, specifically Instagram as a reliable and easy-to-access source of information for the patients of diabetes and diabetic foot ulcers. Nevertheless, there are still some limitations of the present study. For example, it does not analyze the impacts of Instagram on patients' perceived knowledge and behavior change to improve their well-being and the effectiveness of Instagram as a dynamic communication platform between healthcare providers and the patients. Therefore, further study should include a quantitative approach and qualitative content analysis to find out the impacts of health messages on Instagram to diabetics and how the messages are able to provide effective communication for doctors, nurses and patients in Indonesian context.

## **DECLARATIONS**

### **Conflicting interests**

The Author(s) declare(s) that there is no conflict of interest

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