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# Perceived Risks and Ramifications of the COVID-19 Pandemic by Community and Healthcare Providers in Nepal

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#### Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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#### **ABSTRACT**

**Background:** The COVID-19 pandemic has inflicted real suffering in many parts of the world and is expected to impact different sectors. Lockdown is considered to be an effective measure in slowing the spread of coronavirus. The study expects to understand community and healthcare providers' perspectives on COVID-19 and pandemic responses during and after the lockdown in Nepal.

**Methods and Materials:** Data were collected through telephone interviews with six representatives of community-based organizations and nine healthcare providers, and the collation of information

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about COVID-19 from social media, news outlets and government announcements. Data were thematically coded and analyzed according to the themes.

**Results:** Although rapid dissemination of educational information through various social media was found, people reported an information overload on COVID-19 while questioning the authenticity of their sources. Several misbeliefs on the COVID-19 virus are rooted in the Nepalese community. Lockdown for a longer period was deemed an unsustainable preventive measure that directly impacted the income source of daily-wage workers. The fear of contracting coronavirus among healthcare providers at their workplaces was further triggered by the poor working conditions and non-availability of personal protective equipment (PPE). In fighting the pandemic, screening and management of other health issues were ignored.

**Conclusion:** The prevention measures against COVID-19 are important for the local context, however, the communities need access of basic commodities and access to reliable information to enable them to follow these measures. Availability of appropriate PPE for the healthcare providers is required to reduce the fear of contracting the virus from the patients and workplace. Essential health-care services must also be continued to help reduce excess mortality and morbidity.

Keywords: COVID-19; perception; healthcare providers; Nepal.

### 1. INTRODUCTION

After the outbreak originated in Wuhan, China, the COVID-19 (also known as the Coronavirus) pandemic has been engulfing the entire world and threatened to profoundly affect South Asia [1]. Many developed countries imposed severe restrictions to facilitate physical distancing and health system preparedness [2]. Similar policies were swiftly implemented in least developed countries. However, these control measures presented acute challenges for many Asian countries where a weakened infrastructure, overstretched health systems and limited public health surveillance compromised their potential efficacy [3,4]. The capacity to respond was further limited by the lack of motivation of underresourced healthcare providers with inadequate personal protective equipment (PPE) and poor incentives especially risk allowances [5].

In many parts of the world, the pandemic has inflicted real suffering, with a disproportionate impact on the most vulnerable, and it has highlighted prevailing inequalities, concerns over governance, and the unsustainability of the current development pathway [6]. The virus has not spread as rapidly as expected across Asian countries despite factors like overcrowding and large household sizes, high prevalence of pre-existing comorbidities and insufficient intensive care capacity that can increase transmissibility, progression to severe diseases and case fatality rates [7,8].

The ongoing COVID-19 pandemic has resulted in reduction in human mobility due to social distancing measures, whereas the effects of

other illnesses are unknown [9]. Nevertheless, specific capacities are required to build resilient health systems in the face of infectious disease emergencies since, most countries of Asia region are epidemic prone to vector-borne [10], and other diseases.

The Government of Nepal announced a phase wise nationwide lockdown from March 24, 2020, following confirmation of the country's two coronavirus cases [11]. Initially, all non-essential services and manufacture sectors were closed and all individuals had been instructed to stay at home while the citizens seeking medical attention or other defined essential activities were allowed to leave their homes [12]. However, like other many developing countries, Nepal has an under-resourced healthcare system [13], densely populated urban areas and shortages of basic commodities [14], which made the lockdown difficult to adhere to and enforce.

While lockdown is considered to be an effective measure in slowing the spread of coronavirus across the globe [15,16], it has further led specific population into financial pressure [17] and psychiatric issues in general [18,19]. People who live off of their daily wages have been threatened with starvation and poverty due to the loss of their source of income. Moreover, while the COVID-19 pandemic has affected every facet of people's lives, it is essentially a health problem. The financial pressures of losing a job or paying exorbitant fees for healthcare will ultimately affect people's ability to afford and access good nutrition and healthcare.

The future course of the COVID-19 pandemic largely depends on the behaviour of people [20].

With increasing number of researches conducted on COVID-19, only little research has been carried out on how to adapt COVID-19 pandemic responses to local settings in Asian countries like Nepal. However, there is still a dearth of relevant population level research in the context of Nepal, that addresses people's real experiences of living in the pandemic situation [20-22]. We studied health-care community and providers' perspectives on COVID-19 and on pandemic responses during and after the Nepalese lockdown. These findings may help to inform decisions on pandemic prevention strategies in the country.

### 2. METHODS

The data was collected through two approaches i.e. (i) the phone interviews which were conducted with representatives of community-based organizations and health care providers (Table 1), and (ii) the collation of news and information about COVID-19 from social media, news outlets and government announcements. The components of interview schedules were adapted from the guidelines of the World Health Organization (WHO) [23] and the International Federation of Red Cross and Red Crescent Societies (IFRC) [24] and other studies [5,25].

## 2.1 Community-Based Organizations

Six community-based organizations (CBOs) were selected through convenience sampling to participate in the study. Selected CBOs were approached first to refer a focal point for the organization. One representative from each of six organizations was interviewed by phone on how they and their organizations were affected by, were responding to the COVID-19 pandemic. Among them two representatives were women (age range: 27 to 47 years) and four were men (age range: 31 to 58 years). included: Interview topics (i) personal

perceptions on COVID-19 in Nepal; (ii) perception of community people and their behavior; (iii) organization's response on COVID 19; and (iv) perceptions of quarantine and isolation policies. Verbal consent to recording the interviews was obtained before every interview.

### 2.2 Healthcare Providers

Healthcare providers in this study have been defined as an individual health professionals or a health facility organization licensed provide healthcare diagnosis and treatment servi ces [26]. These include the medical doctors, nurses and allied health professionals (called them as "health worker"). We conducted phone interviews with three of each group. Interviews were conducted in the duration between the government-mandated lockdown and the first three weeks after the end of lockdown. Five of the nine healthcare providers were women (age range: 22 to 46 years) and four were men (age range: 28 to 58 years). Interview topics included: (i) changes in health service delivery; (ii) healthcare providers' concerns; (iii) the impact of COVID-19 on the provision of other health services: and (iv) the impact of COVID-19 on their personal lives. Phone interviews were recorded and transcribed.

### 2.3 Information from Social Media

The information about COVID-19 (including rumors and myths) was collated via social media platforms (Facebook, Viber and YouTube), local and international news outlets, and government and non-governmental organization announcements. The content of the collated information was analysed manually in a thorough manner to identify common themes. The common themes were further coded as categories to conduct thematic analysis. A table to guide information gathering, summarizing and synthesis was developed.

Table 1. Characteristics of study participants

Organization/Group of Participants	Female		Male		Total
	Number	Years(Age)	Number	Years(Age)	participants
*CBOs	2	27, 47	4	31, 33, 45, 58	6
Healthcare					
Providers					
Medical Doctor	1	42	2	35, 58	3
Nurses	3	22, 34, 38	0	•	3
Health Workers	1	46	2	28, 57	3
Total	7		8	,	15

\*CBOs: Community-based Organizations

# 2.4 Data Analysis

The data collector for each data source presented a summary of the key analytical findings to the research team and four themes commonly observed across all the three data sources were identified in discussions. Data were manually and thematically coded according to four themes. Data relating to each theme were extracted and compared across different data sources to identify sub-themes. In this process, subthemes were identified inductively.

### 3. RESULTS

The study identified four thematic areas: (i) reliability of available information on COVID-19; (ii) compliance with the preventive measures of COVID-19; (iii) perceived personal risk; and (iv) neglect of other health problems.

# 3.1 Reliability of Available Information on COVID-19

The participants reported an overwhelming sharing of the information regarding COVID-19, released through several means of (i) social media (mostly Facebook, Viber and YouTube); (ii) television; (iii) government announcements; and (iv) conversations with relatives and neighbors. Nonetheless, many unanswered questions were reported to be remained:

One of the participants expressed that people are still unclear and require clarification in simple language on the true nature of the virus, how the virus is spread or how to stop it (female health worker aged 46 years).

Although information was perceived as important for understanding and practicing preventative measures, participants talked about "hearing many different myths" (man aged 45 years, community-based organization). Many were unsure about reliable sources, "people are realizing perilous information which might not be true sometimes" (female nurse aged 38 years). Even some government information was considered unreliable as there was a widespread view that information was likely to have been censored and aimed at maintaining government interests.

Some rumors fueled fear among communities and healthcare providers. For example, there was a perception that COVID-19 was "more deadly than any other disease, such as Spanish

flu, AIDS" (female aged 27 years, community-based organization). Conversely, other rumors encouraged a perception of immunity: "the virus cannot affect Nepali people" (male aged 58 years, community-based organization). There was also the view that certain precautions, such as taking antibiotics, gargling with mouthwash, and eating garlic, could prevent infection. Perceptions of immunity or reduced risk may have encouraged non-compliance with preventive measures in communities.

Some of the prominent rumors include "people in Nepal are less likely to contract COVID-19 as a large number of the population has undergone BCG vaccination" (male aged 58 years, community-based organization), "COVID-19 can cure by drinking water with turmeric and washing hands with warm water" (female aged 47 years, community-based organization). Due to the lack of prompt response from the government and compromises in safety of healthcare workers and other vulnerable groups like pregnant women, communities have been disenchanted.

# 3.2 Compliance with the Preventive Measures

To combat against the deadly COVID-19, Nepal's government announced a phase wise nationwide lockdown effective from March 24, 2020 until 21 July 2020. All individuals had been instructed to stay at home while all non-essential services and manufacturing will be closed. However, the instructions were only followed for a few months as most individuals in communities continued with their lives and social interactions as normal prior to the pandemic.

Rampant violation of the rules pertaining to COVID-19 appropriate behavior was noticed. Lack of assent of people sought dismissal of the safety norms in place and birthed superstitious beliefs and their healthy lifestyle as excuses for not wearing masks. One of the participants said that "people have feeling the virus would not affect them as they have healthy lifestyle" (female medical doctor aged 42 years). Lack of penal provisions was reported as another reason for dismissal of mask use for safety that "no one is there neither to tell nor force for wearing a mask as well as use the safety measures" (male aged 45 years, community-based organization). Mental fatigue after dealing with a pandemic for several months with no end in sight was also pertained to the temptation of returning to lifestyles before the pandemic.

It has heavily affected the lives of poor who were daily-wage workers that lost their source of income and employment, with ramifications till present day. Their income tended to be generated daily that was used to purchase basic necessities on a daily basis. Staying at home was impossible because it threatened peoples' ability to meet their basic needs. Thus, dailywage workers left home and started to work available jobs. Because, "neither the government has any plan to provide relief to the affected nor daily-wage workers have any option of earnings to survive" (male aged 33 years, communitybased organization). In addition, staying at home may also increase other liabilities, such as gender-based violence when individuals were stuck in houses with their abusers, who are abusing them" (female aged 27 years, community-based organization).

Similarly, businesses were gradually opened, as the businessman expressed that they were running out their savings and needed income for paying bills and salaries. One of the participants justified the reopening of businesses after the push to pay taxes and non-existing plans from government to support them. "How long they can wait to over the lockdown, they have not seen any scheme for compensation rather pushing to pay the taxes from the government" (male aged 31 years, community-based organization).

After non relenting pressure from the public, cabinet decided to open government offices and public enterprises with allowing to resume the service with a bare minimum number of staff working in shifts. However, the government has been reinforcing compliance of safety measures, particularly wearing mask, using sanitizer and ensuring social distancing during business conduction. In the initial days, both the clients and staff of respective institution were concerned maintaining preventive health measures, based on the protocol designed by the government. However, limited availability of sanitization facilities and access of instructions to the clients at the respective institutions challenged the conformity to follow the preventive measures. A female nurse aged 22 years expressed that compliance with the public health measures like mask use was deemed as a hindrance after the few initial days as it was difficult to breathe and painful to wear them at all times.

The nation-wide lockdown was lifted due to the growing pressure and dissatisfaction from people

regarding the government response against COVID-19. The exhausted capacity of individuals to stay indoors and practice social distancing has been deemed as another reason of failing compliance to preventive measures. "In the local grocery shops and some enterprises such as bank, there's so much pressure and people are on queue. And now the social distancing that you are talking about doesn't become possible because people are already crowded in the queues" (female aged 47 years, community-based organization).

### 3.3 Perceived Personal Risk

Healthcare providers were fearful about the risk of contracting the virus and infecting their family members and others. The perceived risk when exposed to the patients existed due to the limited understanding and uncertainty of the virus and the risk it bears. However, this reasoning was heightened risk undermined by the occupational exposure as workers were expected to work with limited or no PPE. A male health worker expressed the constant instillation of fear in health workers and the inevitable requirement to work without PPE. "This is something that instils fear in us because at the end of the day you have to work, you have no option, but we don't have the essential protective equipment required of us to use" (male health worker aged 28 years).

On 20 March 2020, Nepal Medical Association appealed to the Government of Nepal to create a protective working environment for each healthcare workers with availability of advanced PPEs. The frontline doctors and nurses working in the fight against COVID-19, were ill-equipped to treat coronavirus patients, as the government failed to arrange adequate PPE. A female nurse aged 34 years mentioned that she was summoned to work in the hospital by the manager without any gown, face shield or mask as it had not been supplied by the government.

The government had arranged limited PPEs with support from the different development partners and the government funds. However, they were only supplied to the public health facilities while private facilities were left to fend for themselves. Healthcare providers felt undervalued and exposed, which culminated in a lack of trust that the healthcare system could protect them from COVID-19. The situation was even worse in private hospitals, where the staffs were forced to work without PPEs or quit their job, despite the

directives of Ministry of Health to arrange PPEs for their staff. A female nurse aged 38 years recalled how the available PPEs were substandard and yet staff were required to work for 12 hours a day so that only limited number of PPEs were used.

### 3.4 Neglect of Other Health Problems

Participants were concerned that single focus on preventing and treating COVID-19 would lead to the needs of people with other essential needs being overlooked. Several participants noted this was already happening as "neither any hospital was opened, nor any doctor was ready to check" (female aged 47 years, community-based organization), which led to "massive queues in pharmacies for medicine" (male aged 31 years, community-based organization).

Lack of public transport also created difficulties for people with chronic diseases and those with COVID-19 symptoms who needed urgent care. A male health worker aged 57 years mentioned that people undergoing treatments like dialysis are deprived of their means of transportation and cannot access proper treatment.

In response to the COVID-19 pandemic, essential medicines were compromised, medical procedures reframed, were and many procedures were deprioritized. As a result people who were already battling with other diseases and comordid conditions were left more vulnerable to COVID-19. "We already have many other problems - maternal and neonatal deaths, TB and HIV, however, coronavirus is an additional burden when we have to deal with other problems. We are forgetting all other existing problems to focus on Covid-19, which is a mistake" (male medical doctor aged 35 years).

Detection of new tuberculosis cases has declined significantly across the country, which could be the ramification of the nationwide lockdown that deprioritized the other diseases. Undiagnosed tuberculosis could lead to rapid increase in new infections and deaths . "As, the infection is highly contagious, people who have been infected knowingly or unknowingly might transfer it to other unsuspecting individuals ultimately leading to a public health disaster" (male doctor aged 58 years).

The hindrance in service delivery exceeded the diagnosis aspect and was largely felt even in the regular supply of the medicines for TB and HIV

patients. Initiatives have been put in place to ensure that the effect of limited medicines is as mild as possible. For example, participants described efforts to provide few months' supply of antiretroviral treatment in advance to people living with an HIV infection. Thus, the healthcare system exhibited some agility in responding preemptively to challenges. Nevertheless, despite these efforts, people with HIV infections were prevented from accessing treatment at clinics by a lack of transport, which led to "forced non-adherence" (female health worker aged 46 years).

### 4. DISCUSSION

This study reported social, financial resource-related barriers encountered for implementing public health and social measures preventing COVID-19 transmission in Nepal when the country went into national lockdown in March to July 2020, which led to limited mobility, inaccessibility of basic essentials in certain working groups of people, dampening of resources and service delivery for various essential healthcare problems and exhaustion of health resources in tackling the COVID-19 case surge that ultimately had a devastating effect on health care [27] and livelihoods [28]. The collateral damage of COVID-19 in the country is extensive as the weakened health system struggles to manage the intertwined threats of limited resources and COVID-19 [27].

The findings confirm that the people were overwhelmed by the information on COVID-19. The social media have the great advantage of rapid dissemination of educational content in the COVID-19 era [29], however the major news sources are basing their content more on opinion than on science. There are still many aspects of the virus that haven't been studied yet, which is one of the reasons why this pandemic is so frustrating and confusing. Nevertheless, the information transmitted through social media would not be trustworthy and likely to be incorrect, not been subjected to peer review, not applicable to our context, or even false [30]. Erroneous or exaggerated information can cause fear, stress, depression, and anxiety in people with or without underlying psychiatric illnesses [31].

The study reports that the people have misbeliefs on the COVID-19 virus such as Nepalese are immune to this strain and using turmeric power can't affect them by the virus. Some individuals particularly elderly and people with underlying health conditions, have elevated risk of severely contracting the COVID-19 disease [32], however much of the facts are yet to be revealed. The study also confirms that people's misconceptions excused themselves from practicing appropriate safety measures. The accurate information shared through media plays a critical role in shaping people's perceptions towards risk of diseases contracting [33]. misconceptions rooted in the community became a barrier to understanding the science [34]. Obviously, these misconceptions might have both serious medical and social consequences for the people [35], and sustaining or continuing with these types of conceptions will go a long way for COVID-19 in creating more harms than benefits [35,36].

The strict social distancing (e.g., nationwide lockdown) and sanitizing measures in response to the COVID-19 pandemic are unsustainable in the long-term due to knock-on socioeconomic and psychological effects especially in low and middle-income countries [37] like Nepal. The study confirms that the lives of daily-wage workers were badly affected by the pandemic. They were deprived of their only source of income and financial security, meaning that they have few to no savings [38]. If found any jobs, wage laborers must go to work wherever available without ensuring any preventive measures are accessible them at the workplace. They might be aware on the preventive measures, however it could be reflective of the fact that they live in small single-room homes and social distancing for them may not be possible [39].

Healthcare providers are the first line of defense to combat this pandemic, and likely to be affected by the pandemic process and the adverse conditions they face in patients, both as an individual and as a professional [40]. Recognizing protective factors that would help healthcare provider's performance and would improve their adaptation, given that there is a high physical and mental demand for their services in times of crisis [41]. Our study confirms that the healthcare providers perceived themselves to be at risk of being infected by the virus while at work, and their fear was further reinforced by poor working conditions and inadequate or unavailable PPE at the workplace. Working in healthcare is unequivocally risky and there is always a high chance of contracting infections. Therefore, effective infection prevention practices are paramount to both ensuring safety and combatting fear [42], and recognition of their efforts at institutional and government levels, can generate a feeling of security and motivation to continue working [43].

This study revealed the need of PPEs availability in the health care facilities in Nepal to protect healthcare providers from the elevated risk of infection. As well, with protection, healthcare providers feel more valued and have greater trust in the national response, as demonstrated in recent Ebola virus outbreaks [44]. International donors could help resources to the government of low- and middle-income countries. The provision of additional resources early in the pandemic not only help to provide effective response to the pandemic but also protect essential health-care services and reduce excess mortality and morbidity from other diseases [7].

The pandemic has created more inequalities not only to particular country but also worldwide, healthcare delayed and health needs unattended [45]. The study confirms that other than COVID-19, healthcare problems have neglected during the pandemic. Although, routine care is important to managing long-term health conditions, focus shifted from other areas in controlling the pandemic due to limited health care resources. The other reasons might be the limited preparation from the country in responding to the pandemic [46] and fear of being exposed to COVID-19 which has kept many people away from visiting the doctors for routine healthcare.

Numerous studies have been carried out across Nepal and in the worldwide context regarding COVID-19, however the finding of this research can help to map out the pandemic prevention strategies in the country from the perspectives of a healthcare provider. This study showcases the initial scenario of the COVID-19 situation to fill in the gaps and bring the concerns of healthcare providers to focus. It takes note of all the experiences and apprehensions faced by the frontline healthcare providers during a pandemic to advocate for supportive work environment and proper working conditions in a challenging context of healthcare service delivery amidst a pandemic. In addition, the findings help to understand the shortcomings of existing health care system and prepare for future crisis or any pandemic through developing a strategic and preparedness plan.

However, the study has several limitations. The study was conducted in the period of lockdown with limited sample size and the views and perceptions may not coincide with the current scenario of the COVID-19 pandemic but nevertheless it remains relevant to the rapidly evolving situation. As the study enlisted a majority of healthcare providers, who were contacted through phone, the responses provided is dependent on the honesty and recall ability and may result in recall bias [47]. Generalization of the findings must be carried out precariously the study may as lack representation of healthcare providers and community based organizations from different backgrounds in different geographical scenarios and healthcare settings of Nepal [48]. Although, the findings may be applicable to the adult population of similar social and cultural context, an analysis comparing the different sectors of the surveyed population can be carried out to determine COVID-19 preventive measures.

### 4.1 Policy Implication

Risk communication aims to provide people with the needed, accurate, timely and lifesaving information to protect themselves and others [49]. The activities related to risk communication carried out as part of the COVID-19 response reached most of the areas however many inconsistencies from the rumors and misconceptions about the virus itself were spread [50]. The need for better media screening, monitoring and consistent reporting would be beneficial based on the findings. Further, engaging with affected communities allows beneficiaries of assistance to actively participate in shaping the interventions they receive.

Based on the perceptions of the participants, the failure of the lockdown was also owed to the poor planning and non-existent relief programs by the government that aimed to provide the basic essential items for sustenance as the people who lived off of daily wages and businesses who had lost all their incomes of support and were struggling to survive. The added strain of paying taxes exponentially made it more difficult to comply with lockdown measures and was highly criticized. Recommendations to provide food, daily living and relief packages and risk allowances to vulnerable groups and healthcare providers respectively was mentioned. Similarly, a careful strategized transition of lockdown measures focusing on both socio-economic benefit and infection risk would help to ease the burden of daily wage workers and businesses. It would greatly improve morale of the healthcare providers and provide required support to the needy population.

The fear of contracting the virus while treating the patients without proper PPE or any PPE whatsoever in most of the private hospitals was also brought to notice by the participants. The management of occupational safety will be important to ensure protection of healthcare providers especially during a pandemic where the frontline workers act as a first line of defense and as one of the vital workforces required to treat and manage patients of the COVID-19 [51]. Provision of adequate and appropriate PPE at all times is also vital to prevent health care workers being infected from a large influx of COVID-19 patients.

The diversion of resources, services and funds from major essential programs has led to the danger of reversing the achievements in preventing and treating issues in the sectors of tuberculosis, HIV/AIDS, maternal and child health, reproductive health etc. It has negatively impacted the already vulnerable population to be under added risk of COVID-19 and mortality due to their health conditions and pre-existing comorbidities. It would be helpful to keep the essential services ongoing even amidst a pandemic through incorporation of strong qualified health workforce and support from government and partners. Proactive involvement from all the concerned ministries like education, social protection, agriculture, travel and tourism would take the burden off of the health sector in sole management of COVID-19 response.

The mental strain exhibited by individuals with the unending extension of lockdown highlighted the need for a shift in the strategies for the prevention of COVID-19. Emphasis on increased testing and contact tracing was recommended. The victims of gender-based and domestic violence being stuck with their abusers also supported the need for change in strategies. Establishment of helplines, volunteer groups, counselors catering to these specific concerns would greatly help the people in need to seek necessary help and protection.

### 5. CONCLUSION

The resulting impact of COVID-19 pandemic has made the disproportionate gaps in the health system glaringly apparent. The findings from participants of the community-based organizations and healthcare providers have generalized the risks and consequences of the

COVID-19 pandemic and lockdown on the lives population. Evidences Nepalese suggested that risk preparation, rumor monitoring and continuation of the essential health services is required as the national health system was not ready to handle the pandemic. The study concluded that access of reliable information to the communities and availabilty of PPEs and better working conditions for healthcare workers is imperative to enable them to follow the preventive measures and reduce fear and risk of infection from the patients. It was also concluded that proper relief measures must be kept in place to tackle socio-economic issues that arise with a lockdown and essential health services must be continued to reduce the risk of already vulnerable populations.

### **DISCLAIMER**

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

### **CONSENT**

All respondents were informed of the nature of the study and verbal consent was sought to interviews being conducted.

### **ETHICAL APPROVAL**

The study was approved by the Institutional Ethical Committee of Gandaki Medical College (GMC-IRC), Tribhuwan University, Nepal (20/77-78).

### **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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