Lessons Learned: COVID Management and Cultural Practices in the US Hmong Community

Maichou Lor, PhD, RN; Phia Xiong, MD

ABSTRACT

Introduction: Racially and ethnically minoritized communities are disproportionately affected by the COVID-19 pandemic. Yet, it is not well understood how these communities are coping with and managing COVID-19. Research has shown that patients' cultural identities and practices can affect their health behaviors.

Case Presentation: We report the cases of 2 Hmong patients, a middle-aged man and an elderly woman, who were diagnosed with COVID-19. Both patients used a combination of traditional remedies and Western medical treatments to combat COVID-19.

Discussion: It is important to recognize how culture can affect COVID-19 treatment decisions in the Hmong population. The power of social networks in disseminating inaccurate information during the pandemic is something to be aware of within the Hmong community.

Conclusion: Hmong patients are likely to use traditional remedies passed along through virtual social platforms and word of mouth, due to poor access, limited health literacy, and low English proficiency skills. Culturally acceptable interventions are needed to improve access to health literacy interventions, including better translations of COVID-19 information for the Hmong community.

INTRODUCTION

The COVID-19 pandemic has resulted in more than 36 million cases and half a million deaths in the United States.[1] Racially and ethnically minoritized communities are disproportionately affected by COVID-19,[1] yet it remains unclear how these communities are addressing this disease. The purpose of this paper is to share our observations to increase awareness on how culture can affect treatment decisions and to illuminate the Hmong community's response to COVID-19. As bicultural health care professionals from the Hmong community, we have witnessed how cultural orientations can influence the response to a novel disease crisis: COVID-19. Specifically, we share 2 case studies to highlight how the Hmong community copes with and manages COVID-19.

CASE STUDIES

We present 2 Hmong case studies that were shared with us from community members. Mrs H, a 76-year-old Hmong woman who lives in Wisconsin and has limited English proficiency, contracted COVID-19 from her family in July 2020 and was hospitalized. She has a medical history of high cholesterol, diabetes, hypertension, and osteoporosis and has Medicare for health insurance. She has a Hmong family doctor whom she sees regularly, which allows her to be independent. She does not need her family members to accompany her or require interpreter services. She has no education and cannot read or write in either Hmong or English. She described that prior to her hospitalization, her family gave her several remedies—including a urine treatment—as part of her regimen. At home, she took her own urine mixed with warm water and another herbal supplement—vacomb, a dried white flower. This treatment information was obtained through word of mouth among family members who had previously contracted and recovered from COVID-19. Despite the treatments, Mrs H's shortness of breath worsened, which resulted in hospitalization. During her hospitalization, her family continued to bring her the urine treatment in the form of a soup. She continuously drank this concoc-

• • •

Author Affiliations: University of Wisconsin-Madison, School of Nursing, Madison, Wisconsin (Lor); Department of Medicine, SUNY Downstate, Brooklyn, New York (Xiong).

Corresponding Author: Maichou Lor, PhD, RN, University of Wisconsin-Madison School of Nursing, 701 Highland Ave, Madison, WI 53705, phone 608.265.4248; email mlor2@wisc.edu; ORCID ID 0000-0001-8451-4364.

tion. She was in the hospital for 2 weeks before being discharged. She believed that the urine and oxygen treatments helped her recover from COVID-19.

Mr L, a 56-year-old man living in California, contracted COVID-19 in November 2020. He has private health insurance through his spouse and sees a Hmong family doctor. He has limited English proficiency; however, he can read and write proficiently in Hmong. Mr L's past medical history includes stage 3 chronic kidney disease, obstructive sleep apnea, asthma, gout, hypertension, transient ischemic stroke, hypothyroidism, and severe seasonal allergies. He described his COVID-19 symptoms as severe shortness of breath with a tight band-like sensation around the chest. He also noted some coughing, early satiety, lack of appetite, loss of smell, and diarrhea. He suspected he had contracted COVID-19 based on information from friends and family, who were previously affected by the disease. Based on his family's advice, he pursued testing and was confirmed positive. To treat his COVID-19, Mr L's wife and other middle-aged family members suggested that he take some over-the-counter antibiotics and herbal remedies, based on information they had heard through their own social networks. His wife, who listens to the local Hmong radio station, also made a urine concoction for him—as well as for herself—as a prevention, treatment, and cure for COVID-19. Adhering to both community and public health department recommendations, he drank the urine concoction about 3 times a day and self-quarantined for 14 days with his family.

THE HMONG IN THE UNITED STATES

The Hmong are upland people from Laos in Southeast Asia who came to the US as refugees of the Vietnam War in the 1970s.[2] According to the 2020 US Census, more than 330,000 Hmong live in the US.[3] The largest Hmong populations are concentrated in California, Minnesota, and Wisconsin. The Hmong are a tight-knit community from a primarily agrarian society, many of whom are unfamiliar with Western culture and medicine. Over 53% of Hmong have less than a high school education.[4] Hmong is traditionally and primarily an oral culture. A written Hmong language was only recently created in the 1950s,[5] and most Hmong have not been formally educated to read and write this language. As a result, the written Hmong language remains unfamiliar to a majority of the population, especially the elderly. Over 21% of Hmong speak English less than well or not at all.[6] These characteristics create multilayer barriers to health literacy, including understanding and accessing information about the evolving COVID-19 pandemic, which places the Hmong at higher risk for experiencing health disparities. Although materials are readily available in the Hmong language in states with large Hmong populations, they are effective only for those who have been educated to read the newly created language, which excludes many illiterate Hmong. Collectively, these factors seem to impact the ability of these vulnerable populations to process COVID-19-related information because the technique fails to account for the low health literacy. Compensatory behaviors may arise, such as greater reliance on social media and networks for information, since ideas are presented in a way that is easier for these populations to process, which can further exacerbate medical dissonance. This is evident in the 2 case studies, where it appears that a default back to traditional beliefs and practices occurs as a coping mechanism to reduce fear and uncertainty because information through their networks is more easily understood that provided by more official outlets.

The Hmong's coping mechanisms and processing of information also are tied to their historical roots. Their history of trauma—of being constantly uprooted and persecuted without a country to call home—has instilled a strong ability to adapt to any crisis but also highlights their difficulty in accessing sustainable education.[2] During the pandemic, low health literacy due to decreased comprehension surrounding the disease state of COVID-19 has been pivotal in driving community members to develop new recipes containing traditional herbs to manage and treat COVID-19 symptoms.

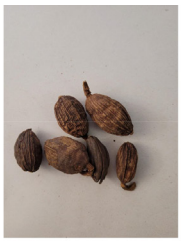
HERBAL TREATMENTS FOR COVID-19 IN THE HMONG COMMUNITY

We observed new recipe developments exchanged through social networks, wherein community members rely on the video or audio delivery of COVID-19 information through Hmong social media outlets on Facebook, radio stations, YouTube, and television shows, as well as through word of mouth. The information is being disseminated across state lines among Hmong communities, as seen in the 2 cases from California and Wisconsin. Since the Hmong culture is collectivist and highly values interdependence, the 2 individuals in the case studies illustrate the reliance on information and first-person experiences exchanged within their communities. As Mrs H's and Mr L's cases demonstrate, both have relied on and followed through with herbal treatments suggested by their relatives and members of the community who had experienced COVID-19. The reliance on their social networks for strategies is a result of their tight-knit communities and is consistent with tradition. This is not an uncommon phenomenon; research has shown that the spread of information in a social network is highly influential.[7] After reviewing the various social media platforms, we learned that many listeners or viewers are middle-aged to elderly non-English speakers. The recipes were shared by individuals, often those with relatives who had recovered from COVID-19.

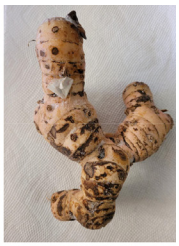
The most consistently used—but not comprehensive—list of remedies includes a mixture of ginger, lemongrass, ginseng, galanga, szechuan pepper, vacomb, tsaoko fruit, dried aniseed, and ntaw ntoo yuj (a sprig of bark), depicted in Figure 1. Among websites where this recipe is found, the directions for creating and using the concoction are consistent: mix herbs together in a boiling pot of water, filter the liquid, and serve it warm. Although the

Figure 1. Hmong COVID Remedies


Dried Aniseed


Tsaoko Fruit


Ginger


Galangal
(Qhauv Qaj, in Hmong)

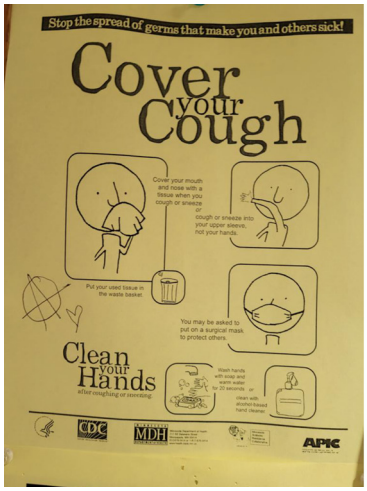

Lemon Grass


Szechuan Pepper

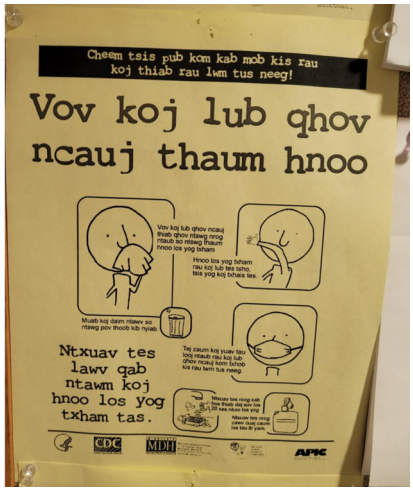

Bark
(Ntaw Ntoo Yuj, in Hmong)


Vacomb
(Vaj dawb, in Hmong)

Figure 2. Flyer Example of COVID-19 Prevention



English Document



Hmong Translated Document

Hmong lack a scientific understanding of these herbs, some of these herbs—such as ginseng—have proposed physiologic mechanisms for their effect that provide protective properties against influenza and other respiratory illnesses such as COVID-19.[8,9]

Another popular COVID-19 remedy involves mixing the urine of the person taking the treatment with the herbs. Traditionally, Hmong people have held a strong cultural belief that urine has medicinal and healing properties. This cultural belief and practice reemerged during the COVID-19 pandemic. Instructions are to mix roughly 2 ounces of urine with warm water and vacomb.

LESSONS LEARNED

It is clear that cultural factors play a significant role in the choice to pursue alternative medical treatments. The case studies highlight not only the use of herbal medicinal remedies but also the traditional healing belief around drinking urine as a treatment for COVID-19. Additionally, the 2 cases show that Mrs H and Mr L seemed to blend both forms of medicine in a reasonable way appropriate for them. For example, Mrs H sought hospitalization when needed, while Mr L appropriately followed public health guidelines and stayed in quarantine.

Additionally, we learned that Hmong patients are likely to use traditional remedies (herbal or cultural practices that have been used consistently over time in the Hmong community to treat illnesses as they arise) disseminated through virtual social platforms and word of mouth, due to the lack of access to current COVID-19 health information, low health literacy, and limited English proficiency. Even though COVID-19 information is mobilized to various communities to increase implementation, it does not translate well into practice, and current methods are not effective in reaching all communities, including the Hmong. For example, COVID-19 information is not translated in a manner that is culturally comprehensible to the Hmong community. Existing COVID-19 information is delivered through flyers, posters, or pamphlets and often posted at clinics or hospital settings. Figure 2 depicts a flyer providing information on the prevention of the spread of COVID-19 in the Hmong language at a clinic. While there are efforts to translate English materials into other languages such as Hmong, the quality of its translation is questionable. For example, on the flyer shown in Figure 2, the translation for "cover your mouth when you cough" is semantically incorrect in Hmong. Rather than vov (which, in Hmong, refers to covering a larger area, eg, the whole body), it should have been npog (which, in Hmong, refers to covering a smaller area, eg, the mouth). Such translation is considered culturally insensitive. It is possible that the translator may not have understood such cultural nuances due to a lack of fluency in the Hmong language. Although neither Mrs H nor Mr L are literate in Hmong, it is possible that similar types of transla-

tions or medical interpretations were given to both Mrs H and Mr L and that they may have not understood. This highlights the need for more culturally and acceptable health literacy interventions, including better translation of medical information for the Hmong community. Hence, it is critical for health care systems to use a rigorous process to select translators and interpreters and evaluate translated health information before dissemination. Such processes could include an interdisciplinary effort, such as translation/interpreting, education, linguistics, public health, medicine, and nursing to collaboratively create and evaluate translations of COVID-19 information.

The cases also posit that COVID-19 has affected Hmong patients' access to US health systems. Although Mrs H and Mr L have Hmong family doctors, surprisingly, they did not mention seeking advice from these doctors. A possible explanation for such behavior could be because the Hmong family doctors work in a private health care system that is limited by resources (eg, low number of staff members) and were unavailable to answer patients' questions or to see them. This is not an uncommon issue, since the COVID-19 pandemic has had a major impact on the capacity of health systems to continue the delivery of essential health services.[10] However, the impact of COVID-19 may have impinged on the Hmong community to a greater extent due to the limited number of Hmong health care providers.[11]

Furthermore, poor language (ie, English language proficiency) and literacy skills remain impediments to health care access for the Hmong, even during COVID-19. As the cases demonstrate, both Mrs H and Mr L sought traditional medicine first before seeking care from the US health care system, as well as relying on their social networks to gain verbal information about COVID-19.

CLINICAL AND RESEARCH IMPLICATIONS FOR AMBULATORY CARE

Several clinical and research implications can be learned from the 2 cases described above. Although the pandemic is a unique phenomenon, it does not mean that behavior and practices will deviate from what is familiar and comfortable for communities. For the Hmong, this means turning to well-established cultural knowledge of herbal medicinal remedies to cope with and manage COVID-19. The use by Mrs H and Mr L of both traditional herbal remedies and Western medicine treatments suggests that the Hmong likely use holistic methods more frequently in treating and managing COVID-19. The use of traditional Hmong herbal remedies is common, yet evolving.[12,13] Additionally, the use of over-the-counter antibiotics purchased from local markets is frequent among Hmong members. A recent news article has documented the misbranding of medications sold at the Hmong Village Market in St. Paul, Minnesota.[14] Hence, it is critical that clinicians acknowledge the use of traditional herbal remedies and over-the-counter antibiotics and discuss such medicines with their Hmong patients to identify any potential harm or contraindication.

Some communities are disproportionately affected by COVID-19, adding to an already disproportionate health-related burden. For example, in the case of Mr L, who has stage 3 chronic kidney disease, hypertension, asthma, and COVID-19, his use of the urine treatment can confound the cause of his kidney disease, where the possibility exists of exacerbating an acute kidney injury on top of the chronic kidney disease. Therefore, it is vital that clinicians spend time with Hmong patients to thoroughly investigate whether their Hmong patients are taking urine concoctions at home and to provide education to Hmong patients.

The power of social networks in disseminating inaccurate information during the pandemic is another factor of concern. As seen in the cases of Mrs H and Mr L, all of their information sources were family and friends who had had COVID-19. Mrs H and Mr L shared that after receiving their positive test results, they were not contacted by a health care provider or public health department to discuss their COVID-19 diagnosis, leading them to rely on their immediate family members—particularly English-speaking adult children—and reach out to their social networks for information about COVID-19 and how to manage it. This lack of connection, access, and outreach from the public health system or health care educators may reinforce the distrust held by the Hmong and similar communities toward health care professionals. Research has shown that Hmong patients have a lack of trust in doctors due to fears of being studied[15] or conflicts between Hmong cultural values and beliefs and Western medical practices, as documented in the well-known book *The Spirit Catches You and You Fall Down*.[16] Community capacity-building is crucial in building trust and compliance and in ensuring health equity.

Some limitations must be acknowledged regarding the case studies in this research. The cases are first-person accounts shared from community members of their experiences during COVID-19, which limits our ability to describe specific medical treatments received during hospitalization or information about the over-the-counter antibiotics used. Additionally, we only presented 2 case studies, so generalizability may be limited to Hmong individuals with limited English proficiency. More research is needed to better understand the impact of COVID-19 on the Hmong community at large.

To ensure health equity, social and racial justice requires that all communities, including smaller communities that have been minoritized such as the Hmong, be included in research, funding, and national initiatives to address COVID-19. Asian subgroups that have language and cultural barriers are most at risk of being underserved and underrepresented in research due to the lack of funding and focus. Research funding could be directed toward creating and providing culturally and linguistically appropriate COVID-19 education interventions. Given the lack of research on Hmong traditional remedies, future research could study the impact of herbs such as vacomb on COVID-19 outcomes.

Additional funding could assist Hmong community health workers in bridging the gap between the Hmong community and the health care system, as well as help clinicians better understand any traditional remedies being used. We acknowledge that in states where certain subgroups are the majority, resources may be more readily available to address some of these disparities. However, in states where the subgroups are minoritized, access continues to be a challenge. Hence, education and opportunities for all communities are important to prevent misinformation and reduce disparities in care.

Funding/Support: Maichou Lor was supported by the National Institute of Nursing Research of the National Institutes of Health under award number K23NR019289. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Financial Disclosures: None declared.

REFERENCES

1. COVID data tracker. Centers for Disease Control and Prevention. Published March 28, 2020. Accessed May 12, 2021. https://covid.cdc.gov/covid-data-tracker

2. Duffy JM, Harmon R, Thao B, Yang K. *The Hmong: An Introduction to Their History and Culture.* Center for Applied Linguistics, Cultural Orientation Resource Center; 2004.

3. Hmong American Census 2020 Network. Hmong American Census Network. Accessed May 10, 2021. https://www.hmongcensus.org/

4. Hmong in the U.S. fact sheet. Pew Research Center. Accessed April 21, 2021. https://www.pewresearch.org/social-trends/fact-sheet/asian-americans-hmong-in-the-u-s/

5. Duffy JM. *Writing from These Roots: Literacy in a Hmong-American Community.* University of Hawaii Press; 2007.

6. Ryan C. *Language Use in the United States: 2011.* United States Census Bureau; 2013. American Community Service Report Number ACS-22. Accessed June 16, 2014. https://www2.census.gov/library/publications/2013/acs/acs-22/acs-22.pdf

7. Luarn P, Yang JC, Chiu YP. The network effect on information dissemination on social network sites. *Comput Human Behav.* 2014;37:1-8. doi:10.1016/j.chb.2014.04.019

8. Lee WS, Rhee DK. Corona-Cov-2 (COVID-19) and ginseng: comparison of possible use in COVID-19 and influenza. *J Ginseng Res.* 2021;45(4):535-537. doi:10.1016/j.jgr.2020.12.005

9. Li X, Shi SM, Zhao YQ. Research progress of ginseng prescription, ginseng and ginsenoside in prevention and treatment of viral diseases. *Chin Tradit Herb Drugs.* 2020;9(51):2379-2389.

10. Maintaining essential health services during the COVID-19 outbreak. World Health Organization. Accessed August 31, 2021. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/related-health-issues

11. Hmong American Experience. 3: MD/DO. Hmong American Experience. Accessed August 31, 2021. https://hmongamerican.org/md-od-directory/

12. Dubost JM, Phakeovilay C, Her C, et al. Hmong herbal medicine and herbalists in Lao PDR: pharmacopeia and knowledge transmission. *J Ethnobiol Ethnomed.* 2019;15(1):27. doi:10.1186/s13002-019-0307-2

13. Lor KB, Moua S, Ip EJ. Frequency and perceptions of herbal medicine use among Hmong Americans: a cross sectional survey. *J Immigr Minor Health*. 2016;18(2):397-401. doi:10.1007/s10903-015-0190-4

14. Gottfried MH. Citations at St. Paul's Hmong Village Market for misbranded medications. *Twin Cities Pioneer Press.* October 10, 2018. Accessed September 1, 2021. https://www.twincities.com/2018/10/10/investigation-into-misbranded-medications-leads-to-search-warrant-citations-at-st-pauls-hmong-village-market/

15. Thorburn S, Kue J, Keon KL, Lo P. Medical mistrust and discrimination in health care: a qualitative study of Hmong women and men. *J Community Health*. 2012;37(4):822-829. doi:10.1007/s10900-011-9516-x

16. Fadiman A. T*he Spirit Catches You and You Fall Down: A Hmong Child, Her American Doctors, and the Collision of Two Cultures.* Farrar, Straus and Giroux; 2012.

advancing the art & science of medicine in the midwest

WMJ

WMJ (ISSN 1098-1861) is published through a collaboration between The Medical College of Wisconsin and The University of Wisconsin School of Medicine and Public Health. The mission of *WMJ* is to provide an opportunity to publish original research, case reports, review articles, and essays about current medical and public health issues.

Visit www.wmjonline.org to learn more.