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Community Mitigation of Disease Outbreaks:

Health Communication Perspectives

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The Aburto paper¹ in this issue of the *American Journal of Preventive Medicine* gives us the opportunity to address the challenges inherent in health communication in community settings in Mexico. With any disease communication effort—whether about chronic or infectious diseases—message designers must choose between loss-framed and gain-framed messages.² Loss-framed messages are often resorted to if the health issue at hand presents an immediate risk to an individual and must be dealt with immediately. Gain-framed messages are perhaps something of a luxury for chronic disease and other illnesses with long onset periods and clear risk reduction–related actions.

The present effort evaluated a mix of loss- and gain-framed messages, with a special emphasis on a need to take quick action. With the outbreak of such pandemics, planners must quickly decide the extent to which they use fear communication and what risk they run with that type of communication, as an individual may seek to take action to reduce his or her level of fear or may simply avoid the topic altogether in order to mitigate the fear without actually taking any action. Unfortunately, with rapidly moving epidemics (or national security threats), public health officials have little time to test their messages and must come up with the best possible balance between these two. The data from the current evaluation indicate that important measures were taken that were at least partly effective in lowering overall community risk during a period of nearly worldwide panic.

We were working in Baja California, Mexico at the beginning of and for a period of time after this outbreak, and our observations at that time largely parallel those of the authors of the article.¹ We also observed that most individuals were indeed aware of the outbreak and at least of some of the messages associated with the mitigation efforts. For example, public officials were seen wearing masks (although probably of an inadequate mesh density) and disposable latex gloves. However, as our work was primarily in impoverished communities comprising agricultural workers and their families in San Quintin, we saw few mitigation efforts and witnessed little awareness of the epidemic among these individuals. This is due

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partly to the poverty and isolation of this population, as they have limited access to broadcast media and limited literacy even if they were to have access to print communication. Moreover, the constant exposure these agricultural workers have to environmental risks such as dust in the air and handling of pesticides without protection perhaps puts them in a more fatalistic mindset with respect to the outbreak of a disease that they felt was unlikely to affect them directly. In short, lower-SES individuals may misunderstand or not know about a pandemic or may simply see it as one of the myriad challenges to their health and well-being that they face on a daily basis. This response would be much different contrasted to that of middle-income individuals who generally are healthy and can be expected to worry about an infection if they have a lot more to lose from being ill from it.

Another observation was that many of these agricultural workers were migrants from southern states of Mexico with high proportions of indigenous populations (e.g., Oaxaca). From our experience working in this community, we've adapted our communication strategies to accommodate language barriers. Many of these agricultural migrants are monolingual indigenous language-speaking adults. Hence, we believe another barrier to reaching these communities was Spanish-only campaign messages. We appropriately acknowledged the issue of audience segmentation and its role in developing messages to target audience. Future community mitigation efforts should also consider indigenous populations who may have varying linguistic, cultural, and religious characteristics from that of the general Mexican population, which would require additional adaptations for successful implementation.

The challenge to those of us working in health communication continues to be the matter of being prepared ourselves for the advent of public health threats. Launching messages and communication approaches in general that are either too conservative or too much "on the edge" may either fail to alert a population or cause a population to panic and take inappropriate measures or ignore the messages altogether.³ This is further complicated by the fact that lower-SES individuals may have substantially more difficulty accessing or processing a given message. This disadvantage applies not only to the poor and middle-income countries such as Mexico, but to wealthier countries such as the U.S. Thus, given that infections cross borders fairly easily, these countries must work together to make sure that their most vulnerable populations within each of them is protected from infectious diseases that ultimately very quickly become international pandemics.

Finally, in the days and weeks following the initial outbreak, we subsequently observed a noticeable level of adoption of mitigating efforts such as wearing of facemasks in the U.S.–Mexico border city of Tijuana Mexico. This confirms the authors' interpretation that campaign messages were being received and adopted. However, we also noticed a reduction in facemask use about 2 months after the initial outbreak, which would suggest that either mask use was not a sustainable mitigating behavior or that the initial level of anxiety and alert was reduced as time passed. Thus, in addition to evaluating adoption of mitigating behaviors, sustainability and length of adoption are important factors to consider during development and assessing effectiveness. We applaud the authors for taking on the difficult task of evaluating community mitigating campaign efforts of the Mexican government

during the H1N1 outbreak. The data generated by this timely effort will frame future research and facilitate preparation for future pandemic outbreaks.

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