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# Risk Communication and COVID-19: An Exploration of Best Practices

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**Abstract**

The purpose of this study is to determine if the risk communication strategies the State of
Minnesota applied in its response to the COVID-19 pandemic align with the best practices
described in the research.  The method used to conduct this research was a content analysis.
Upon conducting a content analysis, various best practice criteria were categorized based on
similar themes.  The analysis portion of this research consisted of analyzing various Minnesota
Department of Health case documents to determine if their risk communication strategies aligned
with the best practices described in the research.  The findings concluded that the risk
communication strategies the State of Minnesota applied aligned with two-thirds of the best
practices found in the research.  The main area where the State of Minnesota failed to apply
effective risk communication strategies was in its pre-planning tactics.  The findings of this
research are significant because they provide pertinent information regarding the State of
Minnesota's risk communication strategies and response to the COVID-19 pandemic.  More
specifically, the findings are significant because they can be used by government officials to
improve the State of Minnesota's response to future crises.

*Keywords:* COVID-19 pandemic, risk communication, best practices

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The COVID-19 pandemic is proving to be one of the most significant public health crises in history, having an immense effect on nearly every aspect of human life and society. The World Health Organization declared COVID-19 a global emergency on January 30, 2020 (Nicola et al., 2020). As of January 9, 2021, there were approximately 87.6 million global cases of COVID-19 and over 1.9 million deaths, and those numbers are increasing on a daily basis (World Health Organization, 2021). COVID-19 is affecting people in a multitude of ways, and its effect on the economy has been extremely detrimental, as it has ignited fears of a major recession. According to Nicola et al. (2020), "social distancing, self-isolation and travel restrictions forced a decrease in the workforce across all economic sectors and caused many jobs to be lost. Schools have closed down, and the need of commodities and manufactured products has decreased" (p. 1). Furthermore, the food sector has experienced an increased demand as a result of people panic-buying and stockpiling food products (Nicola et al., 2020). The current unemployment rate has also skyrocketed, reaching 14.7% in the U.S. and 8.1% in Minnesota (Bureau of Labor Statistics, 2020; Minnesota Department of Employment and Economic Development, 2020). Considering these factors, effective communication of risk is needed to control COVID-19.

While there are now many COVID-19 vaccines, the risk of spreading the virus is still high given that only a small number of people have currently been vaccinated, such as essential workers. Furthermore, the significant number of group gatherings that some people participate in is another major risk for spreading COVID-19. When the stay at home order was implemented in the spring of 2020, it proved to be fairly effective for slowing the spread of COVID-19; however, as a result of many businesses opening up and group gatherings increasing

in size, there has continued to be an increased spread of the virus (Centers for Disease Control, 2020). Other risks of spreading COVID-19 include being in close contact with people who live outside of your home, not wearing a mask, and failing to practice social-distancing (Centers for Disease Control, 2020).

The role of effective risk communication amidst the COVID-19 pandemic is particularly significant given the magnitude of the situation and the need for the public to be provided with pertinent information regarding COVID-19. Furthermore, effective risk communication involves communicating what needs to be done to mitigate the risk of spreading COVID-19. Risk communication, as defined by the Centers for Disease Control (2018), provides the public with awareness of the specific type and extent of an outcome from a behavior. Generally, risk communication is a discussion of a detrimental outcome and the likelihood that the outcome will transpire. Effective risk communication practices are imperative to ensuring that society is equipped with the best tools needed to manage the repercussions of COVID-19.

In the following sections, I will first explore the best practices for engaging in risk communication through a literature review. Next, I will present a case study on the State of Minnesota where I will analyze various case documents to determine if the risk communication strategies the state applied align with the best practices discussed in the research. The research questions that will guide my inquiry are the following: What are the best practices for engaging in risk communication? Furthermore, do the risk communication strategies of the State of Minnesota align with the best practices? Through this research, I hope to better understand the best practices for risk communication, and I also hope that this research will be able to be used by individuals who might possibly benefit from the best practices discussed, such as local organizations and government entities.

**Literature Review**

**Distinguishing Risk Communication from Crisis Communication**

It is significant to note that risk communication and crisis communication are terms that are often used interchangeably; while they intersect in a variety of ways, they also have quite a few differences. Reynolds and Seeger (2005) explain that risk messages are often based on scientific and technical understanding of a risk factor, as well as cultural or social beliefs in regard to the risk. On the other hand, messages regarding crisis usually concern what is known and not known about an event (Reynolds & Seeger, 2005). Many of these messages are phrased as "what we know at the present time" (Reynolds & Seeger, 2005, p. 48). The purpose of risk communication is to identify potential risks and take steps intended to avert crises (Sellnow & Sellnow, 2010). Sellnow and Sellnow also explain some of the distinguishing factors of risk communication and crisis communication. A primary distinguishing factor is that risk communication is risk centered, meaning it focuses on forecasting about a harm occurring in the future (Sellnow & Sellnow, 2010). On the other hand, crisis communication is event-centered, meaning it focuses on a particular event that has transpired and caused harm (Sellnow & Sellnow, 2010).

Another distinguishing factor is that risk communication involves messages about known probabilities of negative consequences and how they might be reduced (Sellnow & Sellnow, 2010). On the other hand, crisis communication involves messages concerning existing conditions, including the following: "magnitude, immediacy, duration, control/remediation, cause, blame, and consequences" (Sellnow & Sellnow, 2010, p. 118). A further difference between risk and crisis communication, according to Veil et al. (2008), is that risk communication focuses on persuading people to take action in order to limit risk, while crisis

communication centers its focus on responding to the public's needs for information.  Based on the review of the previously discussed research, risk communication primarily involves recognizing significant risks and taking steps to avoid crisis situations (Sellnow & Sellnow, 2010).  In the following section, exploring the best practices for risk communication is important because it will provide the public and government entities with tools needed to better manage the risks associated with COVID-19.

**Best Practices for Risk Communication**

Various researchers have outlined best practices for risk communication.  First, Sellnow et al. (2017) proposed the IDEA model as a best practice for effective instructional risk communication.  According to Sellnow et al. (2017), the IDEA model should be used by crisis spokespersons and media reporters when proposing risk and crisis messages to individuals being affected.  Sellnow et al. (2017) state that according to the IDEA model, the information in effective risk and crisis messages should address internalization, explanation, and action. Internalization helps answer the question: "How am I and those I care about affected and to what degree?" (Sellnow et al., 2017, p. 555). Next, explanation helps answer the question: "What is happening, why, and what are officials doing in response to it?" (Sellnow et al., 2017, p. 555). Lastly, action helps answer the question: "What specific actions should I and those I care about take (or not take) for self-protection?" (Sellnow et al., 2017, p. 556).  Therefore, the IDEA model advocates clear communication of the risk, the actions being taken by officials, and the actions that need to be taken by the public (Sellnow et al., 2017).

Using the IDEA model, Sellnow et al.'s (2017) study measured the message usefulness, cognitive understanding, and behavioral intents of people viewing a news story about a crisis situation applying the IDEA model in comparison to those watching a story imitating standard

crisis event news stories that were delivered to the public. The findings of Sellnow et al.'s (2017) study suggested that the message designed according to the IDEA model was notably more effective than the message that replicated typical crisis news stories that were delivered to the public. The nature of these typical crisis news stories was in regards to an E. coli outbreak in ground beef in various New England states (Sellnow et al., 2017). The IDEA model proved to be effective because the participants who viewed the messages designed as per the model were more likely to endorse actions for self-protection than those who viewed the typical crisis messages (Sellnow et al., 2017).

Similarly, Smillie and Blissett (2010) proposed a three phase model for effective risk communication. According to Smillie and Blissett (2010), differences across the communication of similar risks can lead to confusion and therefore consequent misreporting in the media. Therefore, Smillie and Blisset's study proposed a three phase model to prevent negative consequences such as misreporting in the media. This best practice suggests factual decision making, defining the main characteristics of the risk, identifying who the risk might affect, and the public perception of the risk (Smillie & Blisset, 2010).

Furthermore, Veil and Sellnow (2008) developed a three-part best practices model to aid multiple organizations in preparing for and learning from crisis incidents. This best practice involves strategically preparing for a crisis event before it occurs, being proactive in listening to public concerns, and responding to a crisis by effectively communicating with the media (Veil & Sellnow, 2008). The first part of this best practices model, strategic planning, is comprised of the following: plan pre-event logistics, coordinate networks, and accept uncertainty (Veil & Sellnow, 2008). The second part, proactive strategies, consists of the following: form partnerships, listen to public concern, and be open and honest (Veil & Sellnow, 2008). The final

part, strategic response, consists of the following: be accessible to media, communicate compassion, and provide self-efficacy (Veil & Sellnow, 2008). Veil and Sellnow's (2008) study applied this best practices model to a case study of an anthrax epidemic, which caused a widespread crisis response. Specifically, Veil and Sellnow's (2008) study examined the learning experience of the crisis cohort that responded to the anthrax outbreak. At the end of this case study, Veil and Sellnow (2008) concluded that assessing best practices permits an organization to learn from crises by creating alternate strategies and therefore preventing forthcoming crises.

Another significant approach that outlines the best practices for risk communication is the message-centered approach (Zhang et al., 2020). Zhang et al. (2020) developed a timeline of risk communication progress in Wuhan, China, and a message-centered approach was used to detect issues in the process. There are nine characteristics of best practices for risk communication based on the message-centered approach, however, Zhang et al. (2020) chose to examine three main characteristics that are relevant to COVID-19 risk communication. This best practice involves presenting the public with honest messages regarding risk, accounting for uncertainty involved in presenting risk messages, and recognizing that there are varying levels of risk tolerance among the public (Zhang et al., 2020). Zhang et al. (2020) concluded that the Wuhan government did not apply the previously discussed best practice, which led to worsened outcomes, such as widespread panic.

In a subsequent study by Herovic et al. (2020), the Crisis Emergency Risk Communication (CERC) model was suggested as a best practice for risk communication. The CERC model was developed by the Centers for Disease Control, and it provides best practices for people who communicate for an organization responding to crises (Centers for Disease Control, 2018). According to Herovic et al. (2020), the CERC model is different from other

crisis models because it combines crisis communication and risk communication. Furthermore, the CERC model can be implemented for both preparation during the pre-crisis stage and for responding after a crisis has occurred (Herovic et al., 2020).

There are five stages of the CERC model, including the following: pre-crisis, initial, maintenance, resolution, and evaluation (Herovic et al., 2020). The pre-crisis stage is the time frame when warning signs of a possible risk may occur (Herovic et al., 2020). During this stage, effective risk communication to the general public is imperative to ensuring that they are aware of the risk or crisis (Herovic et al., 2020). The initial stage is when the crisis emerges, and during this time frame, the CERC model suggests that spokespeople communicate with crisis victims in an empathetic manner (Herovic et al., 2020). The maintenance stage of the CERC model recommends that spokespeople continue communicating with various stakeholders and groups (Herovic et al., 2020). Next, the resolution stage involves finding new identifications of the risk, and communication throughout this stage should center around recovery (Herovic et al., 2020). Lastly, the evaluation stage happens when the public's response to the crisis situation is more relaxed and crisis response tactics are assessed (Herovic et al., 2020). Efficient communication during the evaluation stage is crucial because it ensures that the public is better equipped for future crisis situations (Herovic et al., 2020). Overall, this best practice involves clear communication to the general public before the crisis occurs, empathetic communication with crisis victims, communication with various stakeholders and groups regarding the crisis, recovery focused communication, and an assessment of crisis response tactics (Herovic et al., 2020).

Other significant research on best practices for risk communication was developed by the World Health Organization (WHO). The health emergencies preparedness and response team

developed a guide on outbreak communication with a specific focus on five best practices for communicating with the public during a pandemic outbreak (World Health Organization, 2004). These best practices involve building and preserving public trust, announcing an outbreak early, communicating with the public in a truthful manner, respecting the public's concerns, and planning for an outbreak in advance (World Health Organization, 2004). In regards to the first practice, build trust, it is crucial for officials managing an outbreak to build and preserve public trust (World Health Organization, 2004). The WHO (2004) states that trust is built from public opinions of the intentions and capability of authorities. According to the WHO (2004), if the public can trust authorities to provide them with accurate information regarding an outbreak, the public's general anxiety will be reduced. Furthermore, ensuring that authorities are competent will help divert reactions from the public that might heighten the outbreak's fiscal and social repercussions (World Health Organization, 2004).

The second best practice that the WHO (2004) discusses, announce early, is significant because it ensures that authorities are reporting the information they know at the time they know it, which fosters expectations that important information will not be hidden. Early announcements of an outbreak can also ensure trust is built between the public and authorities, which leads to a reduction in anxiety regarding the epidemic (World Health Organization, 2004). The third best practice, be transparent, is defined by the WHO (2004) as straightforward, thorough, and truthful communication. Specifically, transparency describes the relationship between the public and those managing the outbreak, such as a health officials and epidemiologists (World Health Organization, 2004). Overall, more transparency leads to higher levels of trust between the public and authorities, which is crucial in the initial stages of an outbreak (World Health Organization, 2004). In regards to the fourth best practice, respect

public concerns, the WHO (2004) states that public anxieties should be treated as valid and respected, and that they could possibly affect the impact of an outbreak. Successful risk communication is specifically seen as a conversation between experts and the public; therefore, public concerns should be respected. Lastly, the fifth best practice, plan in advance, signifies that outbreak communication planning needs to be an essential part of outbreak management planning from the beginning (World Health Organization, 2004). The WHO (2004) states that planning in advance is fundamental for successful outbreak communication, however, it needs to be implemented more frequently. Planning in advance involves having set outbreak communication plans in place before a crisis strikes, which ensures that the information being released to the public is not being rushed (World Health Organization, 2004).

Lastly, Seeger (2006) developed nine best practices for risk communication, including the following: pre-event planning, partnerships with the public, listen to the public's concerns, communicate with honesty, candor, and openness, collaborate and coordinate with credible sources, meet the needs of the media, communicate with compassion, concern, and empathy, accept uncertainty and ambiguity, and communicate with messages of self-efficacy.

The first best practice that Seeger (2006) suggests is pre-event planning, which has a multitude of benefits in crisis situations. A few of these benefits include recognizing risk areas, communicating risk reduction, and recognizing needed response resources (Seeger, 2006). Having a plan in place before a crisis occurs can be a reminder of potential problems that might occur and provides employees with a plan to follow with the intent of preventing a crisis (Seeger, 2006).

The second best practice suggested by Seeger (2006), partnerships with the public, signifies that the public has the right to be informed about the risk it is facing, and authorities

should make an effort to educate the public using risk assessments. Furthermore, while a crisis is unfolding, the public should be informed about exactly what is occurring, and officials managing the crisis are obligated to share this information with the public (Seeger, 2006). In regards to the third best practice, listen to the public's concerns, Seeger (2006) states that establishing a positive relationship with the public before a crisis occurs is an imperative part of effectively managing the crisis. Continuous communication with the public during a crisis is needed to achieve this sense of trustworthiness (Seeger, 2006).

The fourth best practice that Seeger (2006) discusses, communicate with honesty, candor, and openness, refers to communicating the entire truth, even when it might have a negative reflection on an organization. Furthermore, Seeger (2006) states that openness signifies a type of candidness that goes further than an honest response. The fifth best practice, collaborate and coordinate with credible sources, states that it is imperative for agencies to establish collaborative partnerships before a crisis strikes (Seeger, 2006). An effective way to collaborate and coordinate with credible sources is to establish a pre-crisis network with other agencies (Seeger, 2006). Furthermore, Seeger (2006) states that in order to maintain these networks, risk communicators need to select subject-area experts and maintain relationships with stakeholders at each level.

Seeger's (2006) sixth best practice, meet the needs of the media, is an important aspect of effective risk communication. According to Seeger (2006), the media are the main connection to the public, and when a crisis occurs, they are required to report information truthfully. Risk communicators should also intend to involve the media through the use of open and candid communication, and they should also use the media as a resource to help manage the crisis (Seeger, 2006). Seeger (2006) also suggests that risk communicators participate in media

training before a crisis situation occurs so that they are well-prepared for when the crisis actually strikes. The seventh best practice that Seeger (2006) suggests, communicate with compassion, concern, and empathy, states that when officials communicate with these three specific characteristics, the public has a much more positive response to officials who acknowledge their concerns. Furthermore, if the public observes that officials are expressing genuine concern and empathy, it has more confidence that the actions being suggested are reasonable (Seeger, 2006).

Next, the eighth best practice that Seeger (2006) suggests, accept uncertainty and ambiguity, involves recognizing the uncertainty in a crisis situation with statements including the following: "the situation is fluid" and "we do not yet have all the facts" (p. 241). This type of ambiguity permits the communicator to enhance the message when more information arrives and prevents statements that may be portrayed as inaccurate as additional information arrives (Seeger, 2006). Lastly, the ninth best practice that Seeger (2006) suggests, communicate with messages of self-efficacy, involves highlighting the significance of messages that provide people with information telling them what they can do to reduce their harm created by a risk factor. These are known as messages of self-efficacy, and they may help people reestablish a sense of control over an uncertain crisis situation (Seeger, 2006). Seeger (2006) suggests that self-efficacy messages are the most effective when they have certain characteristics, such as certain harm-reducing actions that those affected by the crisis can use. Furthermore, the messages may also focus on actions that can be done to help others in times of crisis, such as checking on loved ones or donating food (Seeger, 2006).

The best practices for risk communication presented in this research are similar in various ways. For example, a few of the reoccurring best practices included pre-event planning, early announcement of the risk, listen to the public's concerns, communicate with compassion, and

candid media communication.  The congruence of the best practices described in this research is significant because it indicates that the best practices can be applied to a real-life crisis.  Hence, a case study was conducted on the State of Minnesota's risk communication strategies in response to the COVID-19 pandemic.

**Method**

The method I used to conduct my case study on Minnesota's risk communication strategies was a content analysis.  Content analysis is a fitting methodological choice for my case study because it allowed me to analyze individual case documents to see if their content met the criteria outlined in the previously discussed best practices.  According to Krippendorff (2004), content analysis is defined as the following: "a research technique for making replicable and valid inferences from texts to the contexts of their use" (p. 18).  Krippendorff (2004) states that content analysis techniques are expected to be both reliable and replicable.  Replicability means that "researchers working at different points in time and perhaps under different circumstances should get the same results when applying the same technique to the same data" (p. 18).  While conducting my content analysis, I specifically categorized the best practices under various criteria based on similarities of their characteristics.

I analyzed fourteen case documents from the Minnesota Department of Health (MDH) website, and they included public service announcements, videos, and various documents in the following categories: materials and resources, daily life and coping, if you are sick, about COVID-19, protect yourself and others, and situation update.  It is important to analyze these case documents from the Minnesota Department of Health because they are representative of the risk communication strategies that the State of Minnesota implemented in response to COVID-19.  Within my analysis, I will be presenting each best practice criterion and explaining how

aspects of that criterion were evident in the MDH case documents.  Below is a table with the

criteria for each best practice.

| Best Practice Criteria | Definition of Criteria |
|---|---|
| Clear Communication About the Risk | 1. Defining the main characteristics of the risk: who is at risk?, when are we at risk?, and where do we find the most risk?<br><br>2. Actions taken by officials.<br><br>3. Actions that need to be taken by the public.<br><br>4. Accounting for uncertainty. |
| Planning | 1. Factual decision making.<br><br>2. Strategic preparation before the crisis occurs.<br><br>3. Early announcement of the risk.<br><br>4. Advance planning for an outbreak. |
| Engagement with the Public | 1. Proactive listening.<br><br>2. Presenting honest messages about the risk.<br><br>3. Communication with various stakeholders and groups regarding the crisis.<br><br>4. Candid media communication with the public.<br><br>5. Building trust.<br><br>6. Communicate to the public with compassion, concern, and empathy. |

**Analysis**

The following research questions will guide this analysis: What are the best practices for engaging in risk communication?  Furthermore, do the risk communication strategies of the State of Minnesota align with the best practices?  Within this analysis, I will be presenting each best practice criterion and explaining how aspects of that criterion were evident in various MDH case documents.  I will also be listing possible shortcomings if MDH failed to satisfy that specific criterion.  Finally, I will provide a general assessment of what MDH did well and what they didn't do well, in regards to their risk communication strategies.

**Clear Communication About the Risk**

The first main criterion in this section, defining the main characteristics of the risk, is evident in Governor Walz's *Dial Back Announcement* (MDH, 2020).  Governor Walz presented the *Dial Back Announcement* via a PowerPoint presentation to the general public on November 18, 2020 (MDH, 2020).  This criterion is evident in the announcement because Governor Walz defines various characteristics of the risk including the following: who is at risk?, when are we at risk?, and where do we find the most risk? (MDH, 2020).  In regards to who is at risk, Governor Walz state that those being greatly affected by COVID-19 include front-line workers, nursing home staff, fire and police departments, teachers, caregivers, and more (MDH, 2020).  While these people are being highly affected by COVID-19, Governor Walz also states that the risk ultimately affects *all* of us (MDH, 2020).  Furthermore, in regards to when we are at risk, Governor Walz states that not following these safety precautions puts us as risk for COVID-19: not gathering together for long periods of time, not being indoors, wearing a mask, and not being seated near others for long periods of time (MDH, 2020).  Lastly, we find the most risk for COVID-19 in places such as large group gatherings, indoor restaurants and bars, and crowded

public transportation (MDH, 2020).

The second criterion, actions taken by officials, can be seen in Governor Walz's announcement *Minnesota's Stay Safe Plan: Adjusting the Dials* (MDH, 2021). In this announcement, Governor Walz clearly communicates the actions he is taking to loosen social restrictions while still keeping in mind the severity of the risk of COVID-19 (MDH, 2021). Governor Walz states that Minnesota's updated plan to slow the spread of COVID-19 includes a mandatory mask requirement, social distancing, teleworking, getting tested for COVID-19, a reduction in social gatherings, and reduced capacity for gyms, restaurants, bars, and entertainment venues (MDH, 2021).

The third criterion in this section, actions that need to be taken by the public, can be seen in the public service announcement *Stay Safe Minnesota* (MDH, 2020). The *Stay Safe Minnesota* PSA advices the public to take six specific actions in order to prevent the spread of COVID-19 (MDH, 2020). The PSA specifically states, "right now, it is important to: wash your hands often, get tested if you have symptoms, stay six feet away from other people, wear a mask when you go out, stay home when you can, and work from home when able" (MDH, 2020). Another example of actions that need to be taken by the public can be seen in the public service announcement *COVID-19 Symptoms* (MDH, 2020). This PSA responds to the COVID-19 crisis by providing the public with information regarding symptoms of COVID-19. The PSA candidly recommends people to get tested if they have COVID-19 symptoms, and talk to their doctor, a local clinic, or use the online screening tool on the Minnesota COVID-19 Response website to help determine if they should get tested (MDH, 2020).

The fourth criterion, account for uncertainty, is evident in the document *Questions and Answers: COVID-19 Vaccines for School and Child Care Staff* (MDH, 2021). This criterion is

specifically evident in the response to the question: "Do I still need to wear a mask after I receive the vaccine?" (MDH, 2021). The response to this question states the following: "Yes. After the second vaccine dose, it takes about two weeks for your body to build up protection. It is not known yet how long COVID-19 vaccines may protect people who get them from the virus. It is not known yet if people who get the vaccine can transmit COVID-19 to others if they get infected with COVID" (MDH, 2021). This example aligns with Seeger's (2006) ninth best practice, specifically because the information regarding the COVID-19 vaccine is fluid and we do not yet have all of the facts about how the vaccine works.

Upon evaluating this best practice, it is clear that MDH met all aspects of the criteria. Clear communication of the risk was evident in all four criteria, and there were a sufficient number of examples to support the criteria on the MDH website. The criterion that MDH presented the most was *actions that need to be taken by the public*. MDH provided multiple public service announcements on its website that clearly communicated to the public the actions they need to take to protect themselves from COVID-19. The criterion that was the most underrepresented on the MDH website was *account for uncertainty*. The previously stated example regarding the COVID-19 vaccine was the only example that was evident upon searching the MDH website. Another element regarding uncertainty that MDH should have included is information regarding the new strain of COVID-19 that originated in Europe. Because the new strain of the virus has not yet spread throughout the entire United States, there is still a lot of uncertainty about it, and government officials may not yet have all of the facts about the strain.

**Planning**

The first criterion in the planning best practice, factual decision making, is evident in Governor Walz's *Dial Back Announcement* (MDH, 2020). Within this announcement, Governor Walz presents factual information regarding the surge in COVID-19 cases, and then he uses this information to make a decision to increase restrictions throughout the State of Minnesota. Factual information is presented through the use of graphs and charts; for example, the graphs and charts used in this presentation describe the trend of daily confirmed COVID-19 cases, 7-day COVID-19 case growth, and the percentage of critical care beds available in the State of Minnesota. This data specifically showed that the number of COVID-19 cases were trending upward, and the number of critical care beds were decreasing, therefore, Governor Walz made the decision to increase restrictions for social gatherings throughout the State of Minnesota.

The second criterion within this best practice, strategic preparation before the crisis occurs, is not evident on the MDH website because MDH did not provide any current information regarding its preparation strategies for the pandemic. It is hard to know if the State of Minnesota had effectively prepared for the pandemic because of this lack of information. The third and fourth criterion within this best practice, early announcement of the risk and advance planning for an outbreak, were also not evident on the MDH website. The fact that MDH did not provide any information regarding its pre-planning tactics for the pandemic is concerning because that means we do not know how well equipped the State of Minnesota truly was for COVID-19. However, it is possible that this information was most likely not available on the MDH website because the pandemic has already been occurring for a year, therefore, the information on the website is continually being updated for the current situation. A

recommendation for MDH would be to include a section on its website about pandemic preparedness and how the state plans for pandemic outbreaks before they occur.

Upon evaluating this best practice, it is evident that MDH did not meet the majority of the criteria. Out of the four criteria, the only one that MDH met was *factual decision making*. MDH did not meet any of the other three criteria: *strategic preparation before the crisis occurs, early announcement of the risk,* and *advance planning for an outbreak*. This is problematic because it reflects how unprepared the State of Minnesota was for COVID-19.

**Engagement with the Public**

The first criterion in this best practice, proactive listening, is evident in the video *Frequently Asked Questions About the COVID-19 Vaccine* (MDH, 2021). According to Veil and Sellnow (2008), proactive listening is defined as listening to public concern. Within this video, government officials listen to the public's concern regarding the COVID-19 vaccine and provide honest answers to the following questions: how are COVID-19 vaccines being made faster?, how are the vaccines being tested?, how will the vaccines get approved?, and who will get the vaccine first? (MDH, 2021). The content in this video is representative of this criterion because government officials are clearly listening to the public's concern about the vaccine, and they provide them with information in an open and honest manner.

The second criterion in this best practice, presenting honest messages about the risk, is evident in the document *Managing Stress and the Threat of COVID-19* (MDH, 2020). This document presents an honest message regarding the stress associated with COVID-19, and the main message in the document states the following: "living through the threat of a public health emergency such as COVID-19 can be extremely stressful. Dealing with the threat of COVID-19 is upsetting because it is outside the range of a normal day to day experience. You may feel

anxiety, or fear for yourself and your loved ones becoming exposed to the virus.  While it is critical during this time to take care of your physical health, you also need to pay attention to your emotional health" (MDH, 2020).

The third criterion in this best practice, communication with various stakeholders and groups regarding the crisis, is evident in the document *Safe Learning Plan for the 2020-21 School Year* (MDH, 2020).  This document provides communication between government officials, MDH, and the Minnesota Department of Education regarding safe learning during the pandemic.  Within Governor Walz's letter addressed to Minnesotans, he states: "School districts and public health officials have a lot of important work to do, but the ultimate success of this process isn't just up to them.  It's also in the hands of each and every Minnesotan.  Our schools reflect their surrounding communities.  For this to work, we need Minnesotans to come together to slow the spread of COVID-19.  We need everyone to do their part to help get our kids and our teachers back in the classroom safely" (MDH, 2020, p. 3).  This is a clear example of how government officials are communicating with the public regarding the pandemic.

The fourth criterion, candid media communication with the public, is evident in the media briefings (*Updates on Minnesota's Response to COVID-19*) that Governor Walz presents to the public (MDH, 2021).  The local news, as well as Minnesota Public Radio, airs each of the Governor's briefings (MDH, 2021).  Within each briefing, Governor Walz provides a candid update on the current COVID-19 situation, as well as any changes or updates in social restrictions (MDH, 2021).

The fifth criterion, building trust, is evident in the video *What to Expect: Getting a Nasal Swab at a Testing Event* (MDH, 2020).  This video discusses the process of getting a nasal swab to test for COVID-19, and it provides the public with specific information about what to expect

at a testing event (MDH, 2020).  Within the video, a few different people are shown as they are

getting their nasal swab tests, and then they are interviewed regarding their experiences with

getting tested (MDH, 2020).  The content in this video is building and preserving public trust

because it reassures people that the process of getting tested is safe and easy, and it also reassures

them that they can trust the medical professionals who are testing them.

       The sixth criterion, communicate to the public with compassion, concern, and empathy, is

evident in the document *How Supervisors and Managers Can Support Staff During COVID-19*

(MDH, 2020).  This document provides managers and supervisors with information regarding

common traumatic stress reactions that staff may be experiencing as a result of COVID-19, as

well actions they can take to support their staff (MDH, 2020).  For example, a few of the actions

the document suggests you can take to support your staff include the following: "provide a

supportive presence, create opportunities for peer support, normalize staff reactions, promote a

work life balance, be aware of struggling staff, and bring compassion and grace to your

interactions" (MDH, 2020, p. 1-2).  An example of a document that communicates to the public

with concern is *Find Your Happy Place: Tips to Reduce COVID-19 Stress* (MDH, 2020).  This

document provides the public with a plethora of tips to reduce stress and anxiety related to

COVID-19.  For example, some of the tips that the document suggests to reduce COVID-19

stress include the following: focus on what you can control—including your thoughts and

behaviors, do what you can to reduce your risk, take comfort that you are caring for yourself and

others, remember that you are resilient and so is humankind, be gentle with yourself, create a

regular routine, practice meditation, and reach out if you need to talk (MDH, 2020).

       Upon evaluating this best practice, it is clear that MDH met all aspects of the criteria.

MDH effectively engaged with the public through it various communication tactics.  Whether it

was through a document, press release, or video, MDH showed engagement with the public in its response to COVID-19.

**MDH: Successes and Room for Improvement**

Overall, MDH implemented a variety of successful risk communication tactics in regards to its COVID-19 response. Out of all of the criterion presented in the best practices, MDH met nearly all of the criteria of best practices except for a few aspects regarding its pre-planning tactics. Overall, MDH provided the public with a lot of significant information regarding COVID-19, and it was accessible to all people, including those who speak other languages. The videos that MDH produced also included transcripts, and a few videos included ASL interpreters.

While MDH had a lot of successes in its risk communication tactics, it still has some room for improvement. For example, the criteria *early announcement of the risk, advance planning for an outbreak,* and *strategic preparation before the crisis occurs* were not evident on the MDH website. MDH did not provide any information regarding its pre-planning tactics for the pandemic, which is concerning because that means we do not know how well prepared the State of Minnesota truly was for COVID-19. A recommendation for MDH would be to include a section on its website about pandemic preparedness.

<div align="center">

**Conclusion**

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The COVID-19 pandemic is certainly one of the most significant public health crises in history, having immense ripple effects on nearly every aspect of society. The number of COVID-19 cases and deaths is rising by the minute, and human life is being affected in numerous ways. Therefore, effective communication of risk is imperative to helping control the spread of COVID-19.

The best practices for risk communication outlined in the literature review are significant, and they include the following categories: clear communication about the risk, planning, and engagement with the public. Within the first best practice criterion, clear communication about the risk, the definition of the criteria includes the following: defining the main characteristics of the risk, actions taken by officials, actions that need to be taken by the public, and accounting for uncertainty. Within the second best practice criterion, planning, the definition of the criterion includes the following: factual decision making, strategic preparation before the crisis occurs, early announcement of the risk, and advance planning for an outbreak. Lastly, within the third best practice criterion, engagement with the public, the definition of the criterion includes the following: proactive listening, presenting honest messages about the risk, communication with various stakeholders and groups regarding the crisis, candid media communication with the public, building trust, and communicate to the public with compassion, concern, and empathy.

To answer the second part of my research question, *do the risk communication strategies of the State of Minnesota align with the best practices?*, this research concluded that the State of Minnesota's risk communication strategies aligned with two-thirds of the best practices found in the research. MDH applied effective risk communication strategies that aligned with the best practices found in the research, except for the following three criteria in the planning best practice: *strategic preparation before the crisis occurs, early announcement of the risk*, and *advance planning for an outbreak*. This lack of information regarding the State of Minnesota's pre-planning tactics is rather concerning because it questions the state's ability to prepare for significant crises. It is possible that the State of Minnesota had a pandemic preparedness plan in place before COVID-19 started, however, we cannot be entirely sure because the information is not evident on the MDH website.

A limitation of this research is that MDH continually updates its website, therefore, the information obtained for this research was continually evolving. Given that this research was conducted over a six-month long time frame, it was interesting to see how the State of Minnesota's risk communication strategies evolved as the pandemic continued. As previously stated, MDH does not have any information on its website regarding it pandemic preparedness strategies, and this is the other main limitation of this research. In regards to its risk communication strategies, the State of Minnesota certainly has room for improvement in order to better prepare for future crises.

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