



COVID-19 in Pictures: A Multi-State Community Assessment

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Foreword

In March 2020, the World Health Organization (WHO) declared the outbreak of SARS-CoV-2, the virus that causes COVID-19, a pandemic. COVID-19 is a severe acute respiratory disease that has the potential to progress to pneumonia and acute respiratory distress syndrome (ARDS). The pandemic started in Wuhan, China in 2019 and has persisted through most of 2020. The unprecedented nature of the outbreak led to multiple interventions by public health and government officials to try and contain its spread. These measures included stay-at-home or shelter-in-place requirements, closures of public and private spaces, as well as the cancellation of theatrical, musical and sporting events. Inadvertently, some of these interventions led to unanticipated consequences.

It has been said that a picture is worth a thousand words. This document walks the reader through the impact of COVID-19 on the community using photography. It uses methods similar to photovoice. Photovoice is a qualitative research method that utilizes photographs taken by community members to describe their lived experiences. For this project, the data collectors were final year MPH students completing a practicum as part of the requirements for their degree. They were tasked with taking pictures of the impact of COVID-19 on their communities, and identifying relevant public health themes related to those pictures. The pictures were taken in the states of Maine, New York, and Texas, between April and July 2020. For each photograph, ideas

were developed, public health themes were generated from those ideas, and several overarching themes were identified. A literature review was then conducted to further explore the overarching themes identified by the project. The use of photography brings the concepts to life, engages the reader, and gives them the opportunity to give their own interpretation to the images. This report is a presentation of some of the pictures, as well as a discussion of the themes that were identified.



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Access to Health Care

In the wake of the COVID-19 pandemic, most businesses and health care facilities had to suspend non-essential services. The Centers for Disease Control and Prevention (CDC) recommended that all healthcare systems prioritize urgent visits and delay elective care, and encouraged most clinic visits to be done remotely. These telehealth capabilities helped reduce the need for person-to-person contact, and subsequently, limit the spread of COVID-19 in healthcare settings.



At the time, emergency rooms had selective access in order to balance caring for those in greatest need with minimizing the risk of infecting patients and health care workers.¹ Although the fear of getting infected with the virus contributed to several people not going to a health care facility, for the most part, many services were greatly restricted to handle the surge of COVID-19 patients. Transportation cutbacks also affected access to care, as people who usually rely on public transportation faced additional challenges in getting to their health

care providers due to restricted bus services. ² Barriers to accessing health services are depicted by pictures showing empty patient waiting rooms, and signs asking patients to call instead of walking in. These changes in accessibility made it necessary to incorporate alternate ways of receiving care, hence the option of telehealth services.



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Mental Health

For many in the United States, the COVID-19 outbreak was the first time they had heard of the term 'pandemic'. At first, there was a feeling that this was a life threatening illness only affecting those in China. By mid-March however, shocking images coming



out of New York City made the extent of the pandemic in the United States very real. As of the time of writing this report, the United States has reported 5 million cases and over 160, 000 deaths from COVID-19 with the toll rising daily. ³ This never before experienced situation, coupled with travel restrictions, and quarantine of citizens in order to reduce the spread of the virus, caused fear of the unknown to many. ⁴ Public health interventions such as social distancing, not being in groups of more than ten people, avoiding close physical contact, and wearing a mask in public, were instituted to slow the spread of the virus.

Photographs from Maine and other states show empty beaches, closed schools, churches and playgrounds. Whereas these measures were necessary to keep people



and communities healthy, they had an unintended effect on the behavior and day-to-day functioning of community members, including children. ⁵

Mental health is critically important for individuals and for society as a whole. Social connections are essential for our sanity and fundamental for combating the negative health effects of loneliness

and social isolation. ^{6, 7}

Communities everywhere were faced with fear of contracting the virus, feelings of extreme loneliness due to isolation, as well as anxiety over being laid off of work and a loss of income.



Therefore, keeping people healthy should be a priority particularly in a public health emergency. This is especially true for the elderly and people with underlying mental health conditions.

Food Insecurity

In addition to the impact of the COVID-19 pandemic on health and healthcare, one unanticipated challenge that emerged was the issue of limited access to food. Food insecurity is a worldwide problem, and the United States is no exception.



In the earlier months of the outbreak, people began to purchase large quantities of food in the anticipation of the unknown. Over-buying of supplies led to imposed rations of food and paper products.

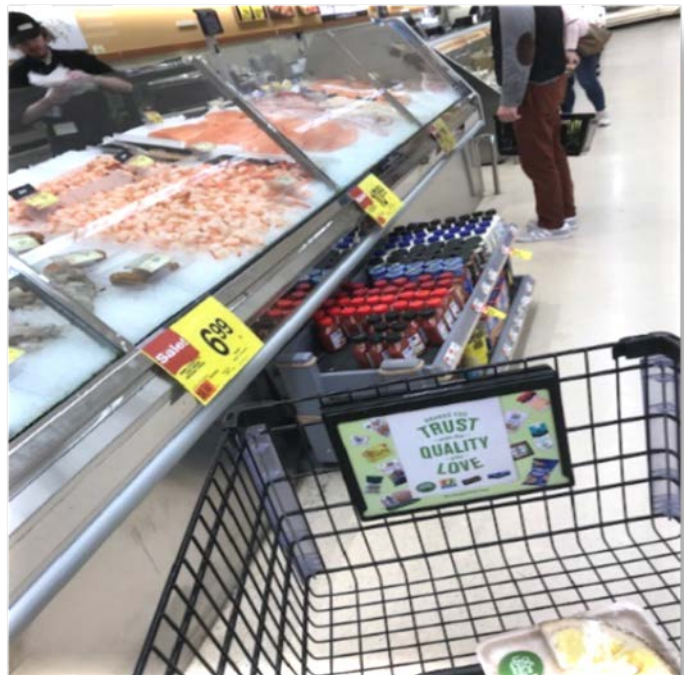


Photographs show grocery stores with limited hours, limited capacity of patrons, empty shelves, and rations on food, especially meat.



Interestingly, as we took photographs related to the availability of food, we found that the food rations in grocery stores were mostly in place for chicken, beef, and pork, while healthier foods such as seafood, fruits, and vegetables did not have as much shortage. We posit that this was likely a reflection of consumer demand, and reflects the dietary

preferences of consumers. Cost could also have been a determining factor as it has been determined that healthier food costs more. As all of this was going on, the Food and Drug Administration (FDA) reported that they were protecting food supply, and that there was no shortage from the supply





sources, yet shelves were empty and families struggled to buy food.^{8,9} Access to these foods were limited for obvious reasons but the impact was the same: food was

inaccessible at the time, and people cannot be healthy without food.

Between the months of March and May 2020 many farmers, including meat and dairy suppliers, had to dispose of their produce due to transportation issues and worker shortages.¹⁰ During this time, food insecurity rose to 38 percent from a previous 2018 level of 11 percent.¹¹ Not only did the empty grocery store shelves demonstrate the impact of transportation and worker issues on food availability, it also depicts the hoarding and over-buying that were going on at the time. This highlights food as both a valuable and vulnerable resource in a public health emergency.

At the community level, food insecurity hit schools and children under 18. New York City kept schools open as long as possible during the quarantine because for many children, school-lunch programs were the only nutritious foods available. ¹¹



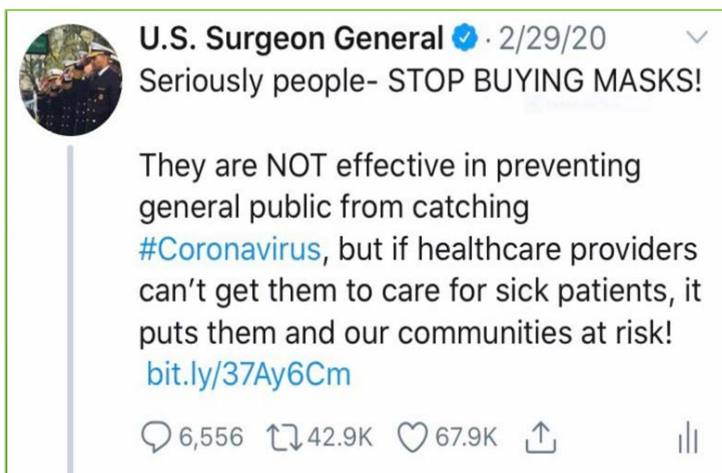
Some schools in New York City were closed, but allowed for pick-up of boxed lunches for

families in need. Coupled with the challenges posed by the pandemic, the number of those affected by food insecurity is expected to rise. ¹²

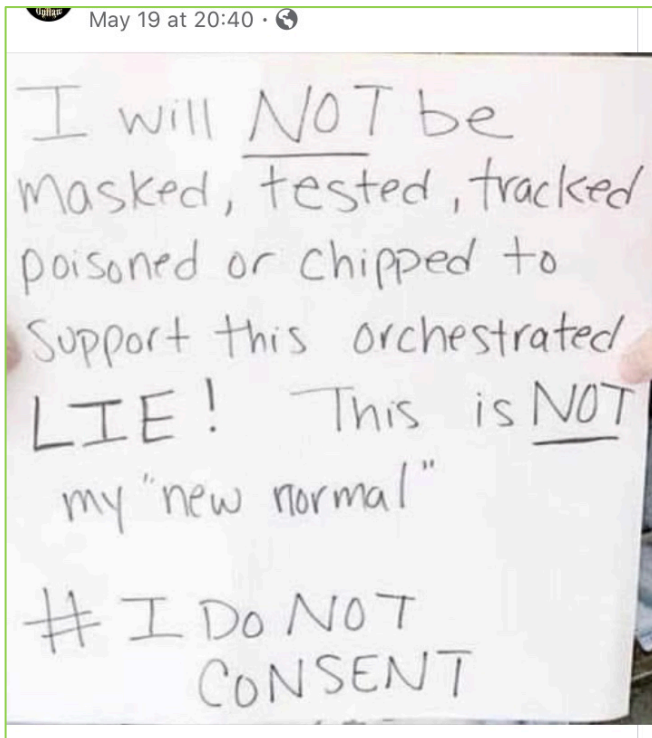
Risk communication and public trust

When the CDC and WHO declared COVID-19 a pandemic, a lot of uncertainties and questions arose regarding restrictions on social gatherings and the use of protective gear, as these disruptions to social and economic life had profound impacts on members of the community. Some of it was related to confusion over changing recommendations from the authorities. From whether or not facial masks were protective for members of the public, and the types of masks to use, to who needed to be quarantined, and for how long.

The WHO, US Surgeon General, the US Department of Health, and the CDC at first did not recommend wearing masks. Their reasoning was that recommending masks would create a false sense of security, create more fear, and lead to over-purchasing and hoarding of masks.



The over-purchasing of masks by members of the public would in turn leave vulnerable populations and health care workers without needed protection. ¹³ Their position was eventually reversed, and wearing of masks became recommended where social

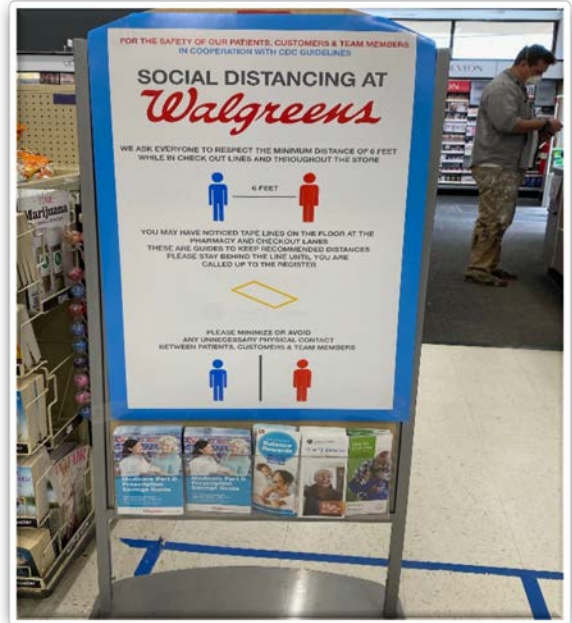


distancing was not feasible. The reversal sparked outrage, demonstrating a mistrust of public health and governmental authorities, and subsequently led to resistance to the updated guidelines. Screenshots from Facebook and Twitter show the response of the public to the evolution of CDC mask recommendations by public health

authorities. Social distancing and cordon sanitaire are necessary to contain outbreaks of infectious diseases, however, clear and consistent communication from public health authorities is indispensable in keeping everyone safe while maintaining public trust. The balance between both prove to be a challenge, leading to accusations of violation of civil liberties by some in the community. These photographs demonstrate some negative reactions to public health recommendations, and reiterates the fact

that how risks and health policies are communicated to the public has the potential to impact compliance.

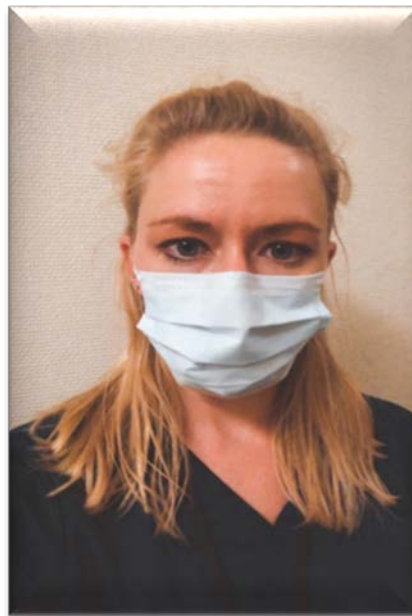
In emergency situations, the perceived susceptibility to succumbing to a disease or condition will determine the extent to which members of the public adhere to mitigation strategies.¹⁴ The degree to which the public perceives and responds to messages by authorities is often determined by how public health data such as morbidity and mortality rates are presented. This response includes healthy behavior such as wearing a mask, washing hands, or maintaining social distancing. Therefore, it is important that messages from public health authorities including pertinent data, are presented in a way that a layman can understand. There should also be clear messaging on the justification for any health interventions. The combination of these two factors increases the likelihood of adherence to health interventions,¹⁴ and is key to mitigating the effects of an infectious disease outbreak.



There were signs everywhere encouraging social distancing



An empty pharmacy waiting room



Masks were required in most stores and offices



WHAT CAN YOU DO TO FLY SMART?

- Wear a face covering over your nose and mouth.
- Wash your hands often for at least 20 seconds.
- Cover your face when coughing or sneezing.
- Use your smartphone to check in.
- Avoid touching your face.
- Stay home if you are sick.

FLY HEALTHY. FLY SMART.

The safety and wellbeing of passengers and employees is the top priority of U.S. airlines, and we are committed to instituting multiple layers of protection throughout the travel experience – from check-in to touchdown.

AIRLINES ARE HELPING YOU FLY HEALTHY.

- Requiring face coverings.
- Using HEPA filtration systems.
- Sterilizing with electrostatic sprayers and foggers.
- Sanitizing counters, kiosks and gate areas.
- Disinfecting surfaces like arm rests and seat buckles.



The airline industry: cancelled flights and health promotion messages

Improvising in a time of shortage

As mentioned earlier, in the early months of the outbreak, citizens were challenged to make adjustments to their personal and professional lives while preparing to self-isolate. This led to a shortage of food supply. In addition to food shortages, the overwhelming demand to care for patients critically ill from COVID-19 across hospitals in the US led to shortages of key equipment needed for both patients and medical staff including ventilators, personal protective equipment (PPE), protective suits, goggles, and N95 respirator masks. ¹⁵



Healthcare workers across the US at some point had to battle the pandemic with inadequate access to these items. While no one could have predicted how long the pandemic would last, the sudden unanticipated rise in COVID-19 cases shed light to existing gaps in the global supply chain of health care equipment. First, most face masks were produced outside the US, and the N95 respirators produced in the U.S did not meet FDA

standards.¹⁵ Eventually the government approved NIOSH N95 respirators for healthcare workers but state and health departments had trouble receiving them.

While efforts were underway by the government to secure more masks, as can be seen in this screenshot, some health care providers had to improvise PPE's at their facilities.

At some point, the CDC offered guidance for health care workers to disinfect their N95 respirators intended for one-time use, and to make use of bandannas and/or scarves as face coverings when supplies were depleted.¹⁵

In the community, fear of the virus caused Americans across the nation to begin panic buying to build their



personal health care stockpile. Shelves in local grocery and retail stores were wiped clean of disinfecting supplies, hand sanitizers, gloves, dust masks, and toilet paper to survive the health crisis.



This was obviously triggered by concerns about being isolated for fourteen days. An interesting occurrence was that in the earlier weeks of the pandemic, toilet paper became the essential commodity to purchase. American consumers began to share pictures across different social media platforms of their large stockpiles of toilet paper. One

study investigated the relation between personality traits, perceived threat of COVID-19, and the stockpiling of toilet paper. It showed that a greater perceived threat of COVID-19 contributed to increased stockpiling of toilet paper. ¹⁶

As a result, one person's panic buying due to fear of not having personal essentials readily available for purchase in turn created an immense amount of anxiety in others because the supplies were depleted. This again led retailers and grocers to set restrictions on the number of essential items people could purchase. Furthermore, they

modified their business hours to provide access for those considered high risk, first responders, and essential workers.

In addition to toilet paper, hand sanitizer, disinfecting wipes and sprays were also hard to find in stores or online. Consumers had to improvise, and began creating their own disinfecting products, using Clorox, rubbing alcohol, and aloe Vera gel, even though non-toxic and environmentally friendly cleaning products were in stock at that time.



Social Capital

As documented earlier, probably one of the most challenging health measures during the COVID-19 pandemic was that of social distancing. This was an important public health intervention since the virus is presumably spread by person-to-person contact. A consequence of this however, was the absence of a feeling of connectedness with the community, particularly for those who were unable to be with family or friends during that time. This feeling of connectedness is referred to as social capital. Social capital is a measure of community cohesiveness, and has been shown to be a determinant of health, particularly in public health emergencies. ¹⁷



The WHO defines health as the complete physical, mental, and social well-being, and not merely the absence of disease or infirmity. ¹⁸ Therefore, social capital can be described as an integral determinant of the health of individuals in any community. Not only does it demonstrate the ability to cope in emergencies, it can lead to improved rates of community recovery from emergency

situations. ¹⁷ In general, communities with high social capital tend to have better

mental health and a lower prevalence

of chronic diseases. ¹⁹

The COVID-19 outbreak impacted

social capital in two ways. On one

hand, it negatively impacted social

interactions by limiting connections

to online platforms, however, on the

other hand, it led to a demonstration

of social capital in communities

across the US, where complete

strangers were encouraged to look

out for each other. Although it is

challenging to measure social capital, certain characteristics could provide an insight

into the degree of cohesiveness of any community. For this project, our measure for

social capital in an era of social distancing was the degree of neighborliness exhibited

by individual and corporate members of the community towards one another.

Photographs demonstrated community cohesiveness, and showed appreciation for

essential workers.





Signs in front of homes provided supportive messages to everyone. Store signs, church signs, street signs; all presented some form of 'We are in this together' messages, and encouraged members of the community to look out for each other.





On television, Facebook, Twitter, and other social media platforms, statements like 'Let's look out for each other' were prevalent, with the intent to foster a feeling of community among residents.

Therefore, even for people who live alone, there was a feeling that they were not going through alone, and that there were friendly neighbors willing to help if needed.



Health Education and Promotion in all places

Health education is a professional practice in public health that is vital to the overall well-being of individuals and communities. Its primary purpose is to effect changes in attitudes, perceptions and beliefs and behaviors to prevent disease.²⁰ Health education empowers individuals to understand the importance of taking charge of their health, and making responsible and informed decisions.

In order for businesses, retailers and corporations to open to the public, they needed to comply with the regulations set in place by local, state and federal governments. At some point during the pandemic, when infection rates were steadily rising throughout the country, they began to institute health education messages in an effort to reduce the transmission of COVID-19. It became commonplace to approach a business and read about more than just a promotional sale or an 'enter here' sign. Informational



placards, current health policies and procedures, and instructions on self-screening for COVID-19 symptoms were all displayed for the benefit of patrons prior to entry.



For example, wearing a mask was encouraged, and in some places, required prior to entry. Upon entry, hand sanitizer was often readily available for use, in addition to wayfinding signs throughout to remind patrons to maintain a distance of 6 feet between them and other shoppers.

Images captured in Maine, New York and Texas, show directional markers strategically



placed on the floor to let customers know where to stand while waiting in line to checkout. The displays were clear, concise, and easy to read. One advantage of having these health education and promotion procedures beyond the boundaries of health care facilities was the reinforcement of the messaging coming from public health authorities. Thus it became



imperative that if an individual chose to visit a business, they needed to comply with the health promotion procedures set in place. This approach to health education and promotion in non-health care settings such as retail stores, restaurants, and wholesale clubs became the new normal. It demonstrates an innovative opportunity to keep promoting public health in the community even after the COVID-19 pandemic is over.

Summary and Conclusion

In summary, the COVID-19 outbreak affected communities across the US in two major ways. The first are people who got infected with the virus, and the second group are those who were affected by the impact of the health policies instituted to combat the spread of the disease. It turns out that although there were over 5 million people infected with the virus as at the time of this report, many more people were indirectly affected by health policies than by the disease itself. On a positive note, telehealth services were shown to be feasible models of care that offered flexibility and increased access, and could potentially with time, lead to lower healthcare costs. Community resilience as well as opportunities for health promotion outside of traditional healthcare or public health settings were also demonstrated.

There have been many lessons learned from the COVID-19 pandemic. One of which is the demonstration of the need for more systems thinking by policymakers such that health impact assessments are conducted, and the implications of health policies are weighed before instituting them, even in emergency situations. In the meantime, public health professionals will continue what we do best – work hard to keep our communities safe.

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