



WPI

COVID-19 In The Home Care Community

Evaluating the methods that a Right at Home home care agency used to operate during the COVID-19 pandemic

By Students:

Dennis Chavez Romero

Natalie Mathews

Brian Phillips

Dawson Scheid

Advisors:

Professor John-Michael Davis

Professor Joel J. Brattin

An Interactive Qualifying Project Report submitted to the faculty of Worcester Polytechnic Institute in partial fulfillment of the requirements of the Degree of Bachelor of Science

This report represents the work of WPI undergraduate students submitted to the faculty as evidence of completion of the degree requirement. WPI routinely publishes these reports on its website without editorial or peer review. For more information about the project's program at WPI, please see <http://wpi.edu/academics/ugradstudies/project-learning.html>

Abstract

The COVID-19 pandemic created operational and financial challenges for home healthcare businesses. The Right at Home agency, in Northern Westchester, New York, took proactive steps to maintain their services. We evaluated this business' adaptations to their policies and procedures in response to the virus. In the event of an outbreak, we recommend that home care facilities conduct telehealth assessments of clients, provide online training and financial assistance to caregivers, and perform wellness checks on both clients and caregivers.

Acknowledgments

We would like to recognize the following people and organizations for their support and role in the completion of this project.

- The Right at Home agency, in Northern Westchester, New York, for providing us with the company's daily office functions, policies and procedures, as well as the opportunity to allow us to perform this analysis.
- Professors John-Michael Davis, PhD and Joel J. Brattin, PhD for their constant guidance and feedback throughout the duration of our project.
- Professor Melissa Butler for her guidance in the early stages of our project.
- The Right at Home agency's administrative staff and caregivers for their time, providing information and helping us with our project.

Authorship Page

All team members contributed to the writing and editing of the report. The distribution of the team members involvement is shown in the table below.

Section	Primary Author(s)	Primary Editor(s)	Secondary Editor(s)
Abstract	Dawson	Natalie	Brian, Dennis
Executive Summary	Dennis, Natalie	Brian	Dawson
1.0 Introduction	Natalie	Dennis	Brian, Dawson
2.0 Background	Dawson	Dennis	Brian, Natalie
2.1 The Beginning of the Global Health Crisis	Dennis	Brian	Dawson, Natalie
2.2 Challenges the Pandemic Brought on Businesses	Natalie	Dawson	Brian, Dennis
2.3 Strain on Resources for Home Care Agencies	Brian, Dennis	Dawson	Natalie
2.4 Policies, Procedures, and Guidelines Within Home Care	Dawson	Natalie	Brian, Dennis
2.5 The Right at Home Agency	Natalie	Dennis	Brian, Dawson
2.6 COVID-19 Within New York State	Brian	Dawson	Dennis, Natalie
3.0 Methods	Brian, Dennis	Dawson	Natalie
3.1 Identify the Baseline for Pandemic Procedures and Policies	Natalie	Brian	Dawson, Dennis
3.2 Identify the Challenges that Right at Home Faced	Brian	Dennis	Dawson, Natalie

3.3 Assess the Efficacy of the Operational Changes	Dennis, Natalie	Dawson	Brian
4.0 Results and Analysis	All	Dennis	Brian, Dawson, Natalie
5.0 Conclusions	Dawson	Natalie	Brian, Dennis

Table of Contents

Abstract	i
Acknowledgments	ii
Authorship Page	iii
List of Figures	vii
List of Tables	viii
Executive Summary	ix
1.0 Introduction	1
2.0 Background	3
2.1 The Beginning of the Global Health Crisis	3
2.2 Challenges the Pandemic Brought on Businesses	4
2.3 Strain on Resources for Home Care Agencies	5
2.4 Policies, Procedures, and Guidelines Within Home Care	6
2.4.1 Liability Concerns for Home Healthcare Agencies	7
2.4.2 Financial Support for Home Care Agencies	7
2.5 The Right at Home Agency	8
2.6 COVID-19 within New York State	10
3.0 Methods	13
3.1 Identify the Baseline for Pandemic Procedures and Policies	14

3.2 Identify the Challenges that Right at Home Faced	14
3.3 Assess the Efficacy of the Operational Changes	16
4.0 Results and Analysis	17
5.0 Conclusions and Recommendations	24
References	26
Appendix A: Survey Consent Form and Survey Questions	31
Appendix B: Interview Consent Forms for RAH Employers & Employees and Interview Questions	39

List of Figures

Figure 1: Pie chart of survey responses: Specific Types of Care Provided by RAH Caregivers.	18
Figure 2: Line Graph: Combined Total Caregiver Hours Spent with Clients January 10, 2020 to February 7, 2020.	19
Figure 3: Pie chart of survey responses: Form of Support Caregivers Received from RAH.	20

List of Tables

Table 1: Counties in New York with the Most COVID-19 Cases.

11

Executive Summary

COVID-19 took the United States by surprise as the number of cases increased at an unprecedented rate. Multiple state governments implemented the shutdown of businesses and social distancing protocols to mitigate the spread of the virus (Partlow & Miroff, 2020). However, the New York State Department of Health (NYSDOH) permitted home care agencies to continue providing services according to their regulations and the guidelines proposed by the Centers for Disease Control (CDC). In Northern Westchester, NY, the Right at Home (RAH) home care agency faces challenges imposed by the current COVID-19 pandemic. These challenges include preventing the spread of the coronavirus, dealing with medical supply shortages, and mitigating legal action exposure.

New York home care agencies must operate in accordance with NYSDOH regulations. According to these regulations, each home care agency must have a governing authority or body, operations managers, nursing supervisors, staffing coordinators, and care providers. These guidelines provide an operating manual for agencies like RAH to adhere to while ensuring delivery of safe and effective care services.

National guidelines established by the CDC fall short in providing enough protection and guidance for home care businesses. Due to the United States' lack of preparedness, the rapid spread of the virus caused the number of COVID-19 cases to increase, forcing essential businesses to take proactive steps to improve their operations and adapt to the growing challenges imposed by the virus. As an essential business, the RAH agency continued to provide services and adhere to NYSDOH's policies despite RAH's uncertain conditions.

Without updated laws or regulations relevant to the COVID-19 pandemic to protect home care agencies from lawsuits, the RAH agency may face legal implications or lose their license if they fail to comply with NYSDOH regulations. Additionally, due to increasing challenges that the pandemic imposes on home care agencies, companies must implement modifications to their operations and adopt new methods to overcome these obstacles and continue to provide their services safely. These challenges include a shortage of medical supplies, a decrease in clientele, difficulties containing the virus, and a scarcity of home care workers.

We designed this project to explore the challenges the RAH home care agency faced due to the pandemic. Our goal was to evaluate the performance of the administrative policies and procedures implemented as a result of COVID-19 by the RAH home care agency and to report how home care agencies can successfully operate during a health crisis. We achieved this goal through the completion of three objectives. Specifically, we:

1. Identified the administrative procedures and policies established for RAH's frontline workers to operate during a health crisis.
2. Determined the challenges that the home care agency faced due to the COVID-19 pandemic.
3. Assessed the efficacy of RAH's operational changes in response to the pandemic.

To achieve our objectives, we first researched CDC guidelines and NYSDOH regulations that home care agencies follow to sustain basic operations during health crises and protect their frontline workers. We then obtained RAH's codified version of its policies and procedures. Subsequently, we verified that RAH strictly followed NYSDOH regulations and identified operational changes that the agency applied throughout the progression of the outbreak. Thereafter, we examined how different caregivers within home care adjusted to the changes presented by the COVID-19 pandemic. We administered an online survey to approximately 75 caregivers via ClearCare (the agency's communication platform) and received 29 responses. We also created a series of interview questions (see Appendix B) for the owners, the administrative staff, and the caregivers. We conducted eight interviews with RAH staff via phone call or video conference. Finally, we tabulated, graphed, and analyzed the data from the survey results, and gained insight into how the emergence of COVID-19 affected RAH's caregivers. Finally, we compared and analyzed the responses from both the administration and the caregivers we interviewed. With this information we evaluated the business' new, or adjusted, administrative policies and procedures.

Results and Recommendations

After evaluating the practices RAH followed during the pandemic, we established recommendations for other home care agencies to follow. These recommendations are to:

1. Prepare registered nurses or other medical personnel to use telehealth to oversee client care and abide by social distancing measures.
2. Offer remote training and education about the current pandemic for caregivers to provide care for their clients.
3. Perform wellness checks by calling or video conferencing with caregivers to monitor any illness-related symptoms before sent to a client's home.
4. Utilize available subsidized revenue sources to maintain business continuity, and offer bonuses and hazard pay to retain experienced staff.

This research project emphasized the importance for home care communities to identify common challenges and share successful operational methods to use during a health crisis. Through their collaboration, home care agencies will be able to overcome the limited government involvement to be better prepared for a future health crisis.

1.0 Introduction

Humanity is not new to global pandemics, but the world came to a standstill after a new strain of coronavirus, SARS-CoV-2, emerged at the end of 2019 (Ma, 2020). The World Health Organization (WHO) declared a global emergency on January 31, 2020, due to the airborne virus (Sohrabi, 2020). Every country is racing to find a cure, prophylactic, and process to live and work through this new reality. As a result of the unforeseen nature of the disease and its unpredictable course, the virus caused the global shutdown of many businesses in an attempt to slow down the spread of COVID-19 from workers to clients and vice versa. There are many studies on how to open the economy and return to some form of normalcy in the way we live and work. Unfortunately, there is little academic literature on how to continue working through a pandemic. Low-margin businesses faced great financial difficulty after losing several months of revenue. Most small businesses decided to shut down and laid off a significant fraction of their workforce (Hubbard & Strain, 2020). However, due to their necessity, other businesses remained open to serve the general public; hence, the need for essential workers. As a result of the growing challenges and the extensive safety regulations that the pandemic imposed, open businesses — such as home care agencies—underwent financial difficulties.

Home care agencies provide services that play “an important role in enabling older adults with chronic illness or functional impairment to continue living in their homes and communities” (Hsieh & Kenagy, 2020). Many of these facilities have taken strong preventative care measures to ensure that the virus does not spread within the community of clients and home health aides. However, as medical supplies and testing for COVID-19 dwindled, restricting the transmission of the virus became more difficult. Home healthcare businesses looked for newer and more efficient methods to sustain and manage proper care despite shortages of medical supplies, testing, and staff. Without a national and state mandate on how to provide services in the COVID-19 environment, the home care agencies were left to their own volition to produce operational roadmaps to navigate potential litigation, medical concerns, and administrative policies.

In order to contain the virus and examine the effectiveness of local, community, and national regulations it is crucial to evaluate the policies and standard practices that home care agencies employ. By analyzing how one home care agency, Right at Home (RAH) in Northern Westchester, faced challenges imposed by COVID-19, we evaluated the effectiveness of their modified policies and procedures implemented during the pandemic. Our focus was to collect data and information about the obstacles that the agency faced to bring together a cohesive operational solution to address the concerns from a patient-client perspective and the caregiver-aide viewpoint. We conducted this study with a series of surveys and interviews with the RAH community to examine how clients, patients, caregivers, and owners within the agency dealt with these common challenges.

In this project, we aimed to evaluate the performance of the administrative policies and procedures implemented as a result of COVID-19 by this RAH agency and to report how home care agencies can successfully operate during a health crisis. We achieved this goal through three objectives. Specifically, we:

1. Identified the administrative procedures and policies established for RAH's frontline workers to operate during a health crisis.
2. Determined the challenges that the home care agency faced due to the COVID-19 pandemic.
3. Assessed the efficacy of RAH's operational changes in response to the pandemic.

All in all, we reported the main issues that home care agencies faced during the COVID-19 pandemic and provided essential information about RAH's policies and procedures. Subsequently, we conducted the study by carrying out a series of surveys and interviews with the RAH staff and examined how clients, caregivers, directors, and owners within the Northern Westchester RAH office underwent and overcame their common challenges. Ultimately, we evaluated the modifications of policies and procedures within the RAH agency due to the pandemic and produced recommendations for other home care facilities.

2.0 Background

To understand how COVID-19 interrupted life as we know it, it is important to examine the origin, contagion, and lethality of the virus. Countries around the world responded to the global emergency by altering, reducing, or eliminating business operations. In this section, we first examine the history and spread of COVID-19. We describe how the disease taxed the healthcare industry and strained medical resources including supplies, testing, and healthcare workers. We then explain how home care agencies may face litigation risk as they attempt to navigate this uncharted territory. Finally, we introduce the Right at Home (RAH) agency, who agreed to participate in our research about COVID-19 in the home healthcare community.

2.1 The Beginning of the Global Health Crisis

COVID-19, the disease caused by the novel coronavirus SARS-CoV-2, is a highly contagious viral infection that stems from the order of viruses known as *nidovirales*, which originate from the family of *coronaviridae* (Shereen et al., 2020). The *Alpha-* and *Beta-* genera of coronaviruses (Alpha- and Beta- CoVs) stemmed from bats and then infected humans via different pathways (Woo et al., 2012). Both *Alpha-* and *Beta-* CoVs originated when the initial CoV moved between different species of bats (Woo et al., 2012). Finally, experts categorized CoV-19 or COVID-19 under the genus of *betacoronavirus* and hypothesized that a bat transmitted the pathogen to a pangolin, and ultimately to a human (Zhou et al., 2020). This virus, discovered in late 2019 in Wuhan, China, stems from the same lineage of Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) (Zhou et al., 2020).

Due to its primary form of airborne transmission, COVID-19 exhibits an especially contagious behavior (Lewis, 2020). Specifically, experts hypothesize that the virus' rapid spread was mainly caused by healthy individuals encountering asymptomatic carriers of the pathogen (Lewis, 2020). Initially, scientists believed that one could only contract the virus by inhaling the drops from a sneeze or cough directly to the face or by interacting with the surfaces that an infected person had previously touched (Lewis, 2020). However, American scientists stressed the

possibility of COVID-19 spreading via airborne transmission—a form of transmission where “dust particles containing microorganisms can remain suspended in air for long periods of time” (Mount Sinai Hospital, n.d.). As this pathogen has spread around the world, the number of infected people continued to increase. In January 2020, a team of Hong Kong and China-based researchers from the Michigan Institute for Data Science (MIDAS) estimated that every infected individual is likely to infect two to three other people during the early stages of the outbreak (McCool, 2020).

The combination of the previously discussed factors played a significant role in the timeframe during which the virus spread on a global scale. Due to this elevated infection rate, COVID-19 infected over half a million people before the end of March 2020. The number of confirmed cases then increased to over 10 million before the end of June 2020. As a result of the virus’ rapid spread, home care agencies faced various challenges as the pathogen became increasingly difficult to contain.

2.2 Challenges the Pandemic Brought on Businesses

As the COVID-19 pandemic emerged within the United States, the state of New York faced the worst of the coronavirus. New York established a 10-Point Plan on March 22, 2020. The 10-Point Plan included the closure of all non-essential businesses and non-essential social gatherings (New York State, n.d.). Essential businesses remained open as they were necessary for everyday life. According to New York State guidelines, 6 of the 14 categories of essential businesses are healthcare operations. Essential healthcare operations included hospitals, doctors’ offices, nursing homes & residential healthcare facilities, licensed mental health facilities, home care facilities, and emergency dental operations (Moskowitz, 2020). Even with the ability to operate during the pandemic, the state required businesses to provide essential services to implement social distancing regulations (New York State, n.d.). Home care agencies are businesses that provide care to elderly or disabled people in their homes (Paying for Senior Care, 2019). During the pandemic, the U.S. government required home care businesses to continue providing their services while also implementing social distancing mandates in the workplace. However, due to the nature of the care that many caregivers provide, they cannot abide by these

social distancing regulations, as many of their services require physical contact. In this case, home care agencies need access to proper medical equipment to protect their caregivers and clients. Therefore, home care agencies faced challenges in sustaining care and managing country-wide medical supply shortages.

2.3 Strain on Resources for Home Care Agencies

The COVID-19 health crisis has put a large population of the elderly and individuals with weakened immune systems at an increased risk for severe illness. In fear of contracting the virus, some patients of care facilities discontinued their services to look for safer alternatives such as home care (Famakinwa, 2020). According to a survey conducted by the health care research and consulting firm Transcend Strategy Group, “over 50% of family members are now more likely to choose in-home care for their loved ones than they were prior to the coronavirus” (Holly, 2020). As a result of this sudden increase in the demand for a reliable form of in-home care, home care agencies have been facing some major obstacles that include managing medical supply shortages and a decreasing number of healthcare workers.

Medical supply shortages stem from an increase in global demand. As a result of exporting countries saving medical supplies for their population, non-supplying countries experience a deficit in crucial medical supplies (Associated Press, 2020). These shortages include personal protective equipment (PPE) such as N95 masks, regular masks, goggles, gloves, and gowns (Hillhouse, 2020). Due to the scarcity of medical supplies, employees of some essential businesses may not have access to this equipment, thus increasing their risk of infection. Lack of proper PPE prevents most home care agencies from taking care of their clients and caregivers without risking exposure to both parties (WHO, 2020).

Home care agencies have experienced recent difficulties when providing proper support for their employees, which may have caused issues retaining staff. Caregivers often face challenges to their health. Many home care workers use public transport to go to a client’s home, have no PPE, and are ineligible for paid sick leave or vacation pay (Lazarus, 2020). When caregivers are able to go to work, they are paid minimum wage to put themselves at risk or even

their clients (Jaffe, 2017). This combination of factors tends to take a toll on healthcare workers, and in turn cause them to stop pursuing this line of work. Therefore, the decreased number of home care workers is another constraint that has put pressure on home care agencies across the United States.

2.4 Policies, Procedures, and Guidelines Within Home Care

The Centers for Disease Control and Prevention (CDC) is the premier national public health institute of the U.S. and is a federal government agency in the Department of Health and Human Services (HHS). The CDC provides resources and guidelines to prevent or control infection spread in public and private facilities (Centers for Disease Control and Prevention [CDC], 2020a). Guidelines are recommended practices that allow leeway in their interpretation or implementation of practice (Business Dictionary, n.d. a). To support how state and local governments respond to pandemics, the CDC provides information and checklists with specific activities they can take in accordance with local laws and authorities. The CDC has established community mitigation guidelines, such as nonpharmacological and social interventions like social distancing, frequent hand washing, and the use of face masks. These interventions help slow the transmission of a virus to delay the rate of infection until a vaccine is readily available (Qualls et al., 2017).

As businesses in the healthcare system home care agencies have a strict set of regulations that they must follow to maintain their operational licenses and keep their communities safe—these regulations consist of health policies and procedures provided by the state’s Department of Health. Furthermore, home care policies are sets of rules that an organization adopts to achieve goals and protect its business’ operations. Additionally, procedures are the specific methods by which policies are upheld and followed (Business Dictionary, n.d. b).

The WHO defines health policy as “decisions, plans, and actions that are undertaken to achieve specific health care goals within a society” (WHO, 2013). Together, policies and procedures create a framework to ensure a home care agency’s success in achieving results that are compatible with their business’ intended purpose. Operating under the HHS guidance, all

U.S. states and territories have their own health departments governed by state laws and operated by state employees. All three levels of the U.S. government (federal, state, and local) interact to shape their policies, deliver health care, and run programs (Altman & Morgan, 1983).

2.4.1 Liability Concerns for Home Healthcare Agencies

As long as the COVID-19 pandemic continues, the New York State Department of Health's (NYSDOH) policies ensure that home care agencies in the state strictly adhere to these mandates while providing their services. However, providing services and ensuring the home care community's safety during the pandemic has been difficult. The state of New York requires home care agencies to have an Emergency Preparedness Plan to "ensure the continued delivery of services to patients with minimum interruption during an emergency" (NYSDOH, 2016). The Infection Control Policy imposed possible litigation for home care agencies, requiring home care agencies to prioritize both clients' and employees' safety from the risk of infection. Agencies must develop an Exposure Control Plan in accordance with the Occupational Safety and Health Administration's (OSHA) standards and Clinical Policies and Procedures for Infection Control (NYSDOH, 2018).

Home care business owners face the difficult choice between accepting new clients and risking major financial downside in the event of a lawsuit. They must choose between reducing liability or retaining loyal staff who might be more vulnerable to infection. Some states have issued emergency orders that grant healthcare agencies with limited immunity from most lawsuits during the coronavirus pandemic, without protection from egregious accusations such as willful misconduct, gross negligence, and criminal activity (Wellford & Yohey, 2020). These immunity orders make individual cases more difficult to win in court, but the threat of litigation deters some home care agencies from accepting clients and employing staff who might have the virus.

2.4.2 Financial Support for Home Care Agencies

Home care agencies must follow precautions mandated by the government and make tough decisions about how to operate during a pandemic. In the first few months of the COVID-

19 outbreak, most businesses closed completely or reduced operations significantly. Congress enacted the Paycheck Protection Program (PPP) in April 2020 as part of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act). The PPP is a financial relief program that allows small businesses struggling in the COVID-19 economy to apply for forgivable PPP loans in order to keep workers on the payroll during the economic recession. The PPP already had more than \$660 billion in funds allocated to support small businesses in May 2020 (Wasson & House, 2020).

Once the government reduces mandates and businesses resume normal operations, a different financial risk will emerge in the threat of coronavirus-related litigation. When employees return to work and customers begin receiving goods and services, the chances that one will infect another with COVID-19 will inevitably increase. Viral latency makes it impossible to determine which one of the two people infected the other if both test positive. Many lawsuits filed accusing employers of exposing their employees and customers to the coronavirus are due to poor enforcement of policies (Kane & Cadmus, 2020). Therefore, there is currently no federal legislation to protect businesses from COVID-19 lawsuits brought by employees or customers who claim that a business exposed them to the disease because of an action or inaction.

2.5 The Right at Home Agency

Right at Home is a home care and assistance franchise that has provided home care services for the elderly and disabled since 1995, serving over 500 locations worldwide (Right at Home , n.d). One RAH agency in Northern Westchester, NY agreed to participate in our study on COVID-19 within the home healthcare community.

Regi Mathews is the CEO and owner of the Northern Westchester RAH agency. Regi Mathews' responsibilities include managing the financial, legal, and marketing aspects of the company and its overall policies and procedures. Geetha Mathews and Nathan Mathews are owners, President and Vice President respectively, and Operational Managers of RAH. Furthermore, operational managers are responsible for the overall management and growth of the

RAH's Northern Westchester office. They evaluate and manage the office staff employed by the company. Their duties also depend on ensuring that the agency abides by NYSDOH regulations. The Director of Client Relations and Nursing is Jennifer Henion, who also is a registered nurse and the nursing supervisor within the office. Her responsibilities include case management of assigned clients according to the agency's policies and procedures as well as other applicable procedures, manuals, laws, and relevant professional standards. RAH's governing body consists of the owners, the supervising nurse, and a medical health physician. The governing body is the overarching authority responsible for the agency's management and operations. Additionally, they may modify the written RAH policies regarding the home care operations to prioritize the safety and efficacy of patient-related services (R. Mathews, personal communication, June 23, 2020).

The staffing coordinators of the agency are responsible for recruiting, scheduling, and managing caregivers. They also assist with client inquiries, timesheets, payroll, billing, and general office and clerical functions. Furthermore, RAH's caregivers provide the following types of care: companion care, personal care, and skilled nursing. Home health aides and personal care aides are responsible for providing various types of care and relating paraprofessional services following an established care plan. Additionally, they also provide care and comfort for patients within their homes under the agency's policies and procedures. Companion caregivers are responsible for maintaining a safe and clean environment, performing various housekeeping tasks, meal preparation, and companionship activities for patients in their residences (R.Mathews, personal communication, June 23, 2020).

These predetermined roles within the RAH agency are a part of the home care community. As a result of the COVID-19 outbreak in the early months of 2020, the RAH home care agency has had to adjust its operations to follow CDC guidelines and NYSDOH regulations in order to mitigate the staff-to-client transmission of the virus and vice versa.

RAH's fundamental operations for delivering its services to their clients consist of marketing the agency's services, hiring caregivers, providing in-services, and providing on-call services. Marketing within healthcare facilities increases flow of clients. To establish

relationships and increase marketing efforts, the RAH agency conducts informal visits with case managers and presents their services in hospitals, adult care facilities and nursing homes. RAH's in-services are the professional training of the agency's employees, which the registered nurse conducts to keep caregivers' skills relevant and current to meet the needs of their client base. In-services include mandatory education on the proper use of PPE, infection control standards, the agency's emergency procedures, and programs directly related to the specific care provided. The nurse supervisor and staffing coordinators provide on-call services to facilitate 24/7 coverage of services to their clients. The staff member on-call is responsible for responding to concerns of clients and caregivers. As an essential business, RAH's hiring is a daily necessity to ensure that the agency has an available caregiver for an assignment regardless of the type of care requested (R. Mathews, personal communication, June 23, 2020).

2.6 COVID-19 within New York State

In July, 2020 the state of New York was responsible for 25% of all deaths in the United States (Johns Hopkins University & Medicine, 2020). The gravity of the situation has caused political leaders to enforce drastic measures to protect their communities' public health safety. On March 7, 2020, the New York State Governor, Andrew Cuomo declared a state of emergency and advised people to follow quarantine orders (Mckinley, 2020). On July 6, 2020, Westchester county exhibited the sixth most reported COVID-19 cases in New York, as shown in Table 1. Though cases are still climbing, and citizens continue to practice social distancing, the state faces a phased reopening of the economy.

COVID-19 Cases by New York Counties (01/01/2020 - 07/09/2020)

County	Counted Cases
Queens	66,024
Kings	60,281
Bronx	48,038
Nassau	42,088
Suffolk	41,730
Westchester	35,106

Table 1: The table above shows the six counties in New York with the most COVID-19 cases (CDC, 2020b).

Despite the reopening of businesses in New York, there is uncertainty about the duration of the outbreak. This uncertainty and rapid spread of the virus puts the elderly and those of weakened immune systems at higher risk of death. A majority of RAH’s client base consist of the elderly, forcing the agency to ensure that its current operations abide with the state regulations and provide safe services to this vulnerable community. With the elderly comprising the majority of RAH’s client base, the agency must modify its current operations to abide by the regulations placed by NYSDOH in order to maintain its services and protect its community.

In response to the pandemic, the U.S. government provided guidance to its businesses, while individual states established regulations to reduce infection and mortality rates. Businesses that provide essential services in the healthcare industry face challenges such as the strain on resources, including PPE and limited labor; these businesses also run the risk of facing possible litigation. By making changes to their policies and procedures, home care agencies have tailored protocols to alleviate operational difficulties in the COVID-19 environment.

3.0 Methods

The goal of our project was to evaluate the performance of the administrative policies and procedures implemented as a result of COVID-19 by the Right at Home (RAH) home care agency, and to report how home care agencies can successfully operate during a health crisis.

The main objectives that achieved this goal required us to:

1. Identified the administrative procedures and policies established for the RAH frontline workers to operate during a health crisis
2. Determined the challenges that the home care agency faced due to the COVID-19 pandemic.
3. Assessed the efficacy of RAH's operational changes in response to the pandemic while cross-referencing the agency's baseline policies.

Our research began on June 10, 2020, and continued until July 9, 2020. We completed the objectives via surveys and interviews with the RAH staff: owners, operational managers, director of client relations, and caregivers. We surveyed caregivers, and interviewed owners and staff members to collect information about the effects of COVID-19 within the agency. We used the information gained from the surveys and interviews to assess how RAH adapted the challenges imposed by COVID-19 and examined how these adaptations affected operations and logistics within the agency. When conducting research and looking for interviewees, we tried to accommodate the interviewees' availability when scheduling meetings. We also considered the stress and anxiety that is especially prevalent in care staff during this pandemic, and avoided overly-demanding questions that might be beyond interviewee's comfort level. The following sections reflect the methods that we used to complete the aforementioned objectives.

3.1 Identify the Baseline for Pandemic Procedures and Policies

We contacted the Northern Westchester RAH's owners regarding the business' codified policies and procedures document, established before the COVID-19 pandemic from the agency's office in Mount Kisco, NY.. The agency strictly followed NYSDOH regulations for home care agencies and adjusted their operations accordingly. However, after examining the agency's policies and procedure manual, we found that there was no written set of procedures in the agency's manual to prepare them for a worldwide pandemic. We researched the guidelines that the Centers for Disease Control and Prevention (CDC) published. We then obtained the set of regulations that the New York State Department of Health (NYSDOH) enforced on home care agencies during the pandemic from their website. We then reviewed the *Right at Home Policies and Procedures* manual written in 2016, along with CDC guidelines, and NYSDOH regulations. From the conducted interviews with RAH owners and operational managers, we identified the modifications that RAH employed after March 1, 2020 to respond to the COVID-19 pandemic.

3.2 Identify the Challenges that Right at Home Faced

To build on the understanding gathered from RAH's policies and procedures placed to operate in an outbreak, we examined the challenges that different caregivers within the home care agency faced. We administered an online survey via ClearCare (the agency's communication platform) to the business' caregivers. The survey identified the specific care they provided (companion care, personal care, skilled nursing, and other specialized forms of care). During the interview with Geetha Mathews, owner and President of Right at Home, she stated that the survey was sent to approximately 75 caregivers via ClearCare (personal communication, June 16, 2020). We obtained 29 total responses, as indicated in Qualtrics' analytics.

The owners took a significant role in the research process of our project. With one of the team members being the daughter of the Northern Westchester RAH's owners, it guaranteed us the participation of caregivers in both interviews and surveys. Additionally, the connection with the agency may have resulted in the integrity of the data collected to be subject to a positive bias. Therefore, our relationship with the agency may have caused the caregivers to give us more

reserved responses to questions asking about RAH's operations. Nonetheless, as clarification, when the team sent consent forms and emails to caregivers we mentioned our relationship with the agency.

With help from the Northern Westchester RAH's CEO, we distributed surveys to the agency's caregivers (across all types of care provided by the agency) through a Qualtrics (the online survey platform) link via ClearCare. As seen in Appendix A, the survey included categorical, ordinal, interval, and both open and closed-ended questions. The categorical data collected labels that addressed the type of care and common diseases that the caregiver provides care for. The ordinal questions briefly conveyed how the pandemic affected the caregivers' mental health and work hours. Along with asking about RAH's possible shortage of personal protective equipment (PPE), the survey also contained short, open-ended questions regarding the home care's policies and procedures established for pandemics that affected caregivers the most. Since the survey was voluntary, and not all of the caregivers responded, we used the results to conclude information about the general RAH caregiver population. From the completed survey responses, we were able to create pie charts that visually showcased the caregivers' responses to each of the multiple-choice survey questions.

We created semi-structured interview questions for each role within RAH before conducting the interviews. We interviewed RAH's owners, the director of relations and nursing, and caregivers who were willing to participate in the interviews, as indicated by their survey responses. The interviews took place via Zoom or phone call between June 10, 2020 and, July 9, 2020, and ranged from 10 to 35 minutes. By conducting these interviews we aimed to report on the staff's viewpoint about the administrative policies and procedures that the agency introduced or adjusted since the appearance of COVID-19. The overarching topics that interviews focused on were about individuals' latest experiences in the workplace and their opinions on the effectiveness of the agency's policies. The information gathered from these interviews yielded the team a baseline to begin identifying the administrative policies and procedures that the RAH home care agency introduced—or adjusted—as a result of COVID-19. By having interviewees

complete consent forms (see Appendix B) before the interviews, we gained their permission to take notes on their responses and keep an audio record of each interview.

3.3 Assess the Efficacy of the Operational Changes

Based on the data collected from the caregivers' survey responses and the staff's interviews, we assessed the effectiveness of RAH operations in response to challenges posed by the pandemic. We accomplished this by drawing initial conclusions from the survey responses about the challenges that the agency's caregivers faced from March 2020 through May 2020. After transcribing and taking notes on the previously mentioned interviews, we reviewed these responses to understand how RAH carried out its basic operations and how the changes to these operations affected the interviewees. This analysis allowed us to lay a robust framework about how the agency carried out its operations to follow local mandates while protecting their home care community.

Using a resource from the CDC's website, the team procured a way to evaluate the policies RAH implemented. The three types of evaluations of a policy include evaluating its content, implementation, and influence within a community (CDC, n.d.). The team was able to decipher how new, implemented policies affected the different home care community members who participated in our interviews. We discussed the findings to utilize multiple perspectives and reach a consensus about the data's final interpretation. Together, we hypothesized which RAH policies and procedures were robust enough to sustain adequate operations and identified those needing adaptations or modifications in response to the COVID-19 pandemic.

4.0 Results and Analysis

In this chapter, we discuss the common findings of the data and experiences collected from the survey and interview responses with the Right at Home (RAH) staff. Completing objectives 1 and 2 of the project revealed the challenges that the RAH home care agency encountered and the steps they took to overcome them while also following New York State Department of Health (NYSDOH) regulations.

RAH encountered a variety of challenges throughout the progression of the COVID-19 outbreak. Among these, those that affected the business' operations in a significant way include lack of marketing, restrictions on visiting nursing home facilities, and the inability to host back-office functions. To address these main issues, the Owner and Vice-President of RAH, Nathan Mathews, stated that the home office ensures that RAH is up-to-date with "the regulations from the Department of Health, as well as federal and state legislature." Additionally, during his interview, Nathan Mathews specified that the NYSDOH provided large quantities of personal protective equipment (PPE) to all Right at Home franchises—including the ones managed by the Mathews' main office (personal communication, June 11, 2020).

RAH's lack of marketing and newly implemented remote hiring logistics led to a decline in employment rates. Another problem mentioned by Nathan Mathews was the decrease in clientele that small businesses have experienced due to fear of infection (personal communication, June 11, 2020). As a result, Right at Home had a decay in its employment rates, meaning that caregivers could not work without enough clients to assign them to. As previously stated, RAH is currently facing difficulties in its marketing department, which has led the business' hiring rates to decline. Specifically, RAH could not market for new clients in nursing homes and hospitals, as these facilities restricted visitors from entering their premises. In addition, due to social distancing regulations, the agency had to conduct interviews online and utilize a hiring site called careerplug.com. The change to operating online has been yet another change that affected RAH's basic operations due to a lack of the business' technology dependency before the pandemic. During her interview Jennifer Henion clarified that the

business encountered difficulties hiring and retaining staff, partly because the agency is doing all of its paperwork remotely (personal communication, June 18, 2020).

The risks of exposure and possible transmission of the virus made caregivers reluctant to provide their care services. The fear of contracting COVID-19 engulfed RAH's caregivers. Jennifer Henion stated that the staff was reluctant to go to work. In conducted interviews with caregivers, they expressed their fear of working with their clients due to the elevated risk of infection. During their interviews, caregivers reported that they did not want to risk contracting the virus because it could be detrimental to their health, and could even put their clients' health in jeopardy (personal communication, June 19-27, 2020). A driving factor for this shared concern among RAH's caregivers is that most of the forms of care that RAH provides uses physical contact with clients (which inevitably increases a client's risk of infection), as seen in Figure 1. As a result, RAH's caregivers underwent a decrease of 626.31 client hours from March 6, 2020 to May 22, 2020, as observed by the declining trend in total client hours in Figure 2.

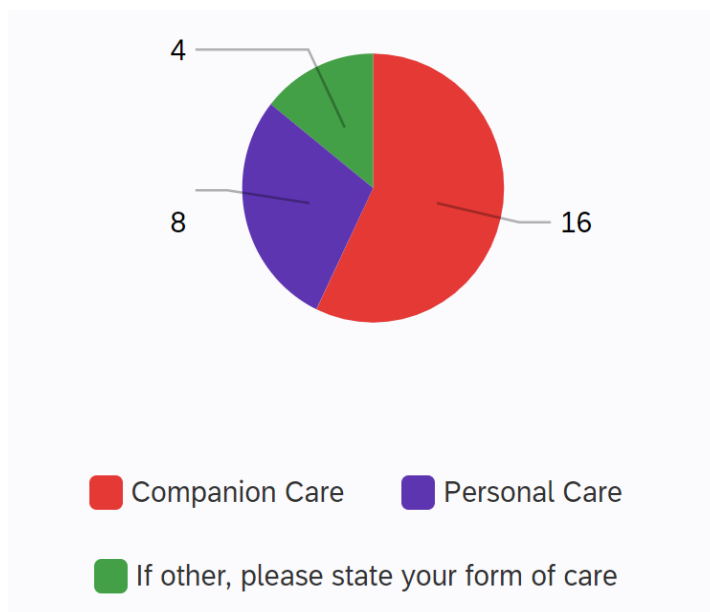


Figure 1. Pie chart of survey responses on specific types of care provided by RAH's caregivers, generated with Qualtrics.

Total Client Hours vs. Date

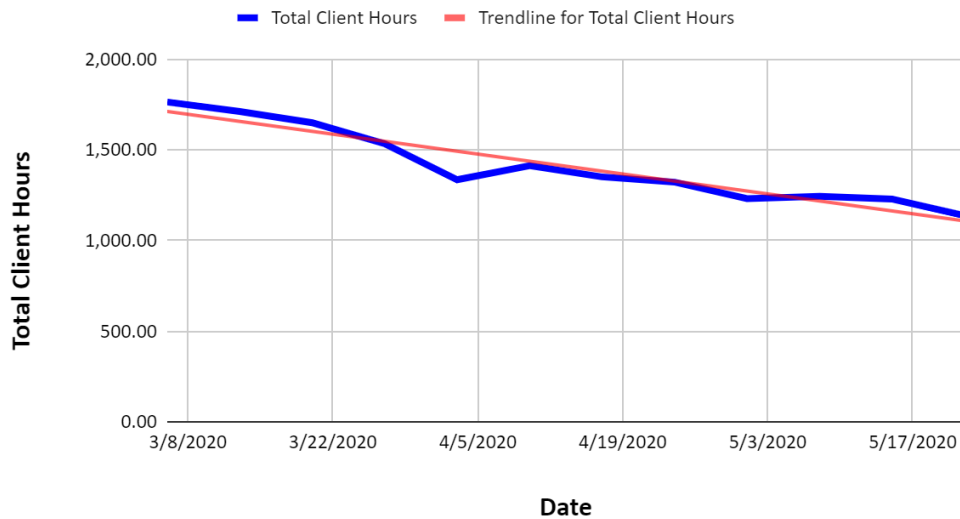


Figure 2. Graph of combined total caregiver hours spent with clients from March 6, 2020, to May 22, 2020. Provided by Regi Mathews.

The state mandates established in the midst of the pandemic were for home care providers to follow and to ensure their home care community's safety. As an agency under New York State, the RAH home care agency must follow NYSDOH regulations. Therefore, RAH implemented wellness checks as a method to screen their clients and caregivers prior to providing care services. Similarly, some of NYSDOH regulations included the screening of prospective clients and staff. Screening questions include:

- Whether the individual presents symptoms of a respiratory infection such as fever, cough, shortness of breath or sore throat.
- Whether the individual has contacted someone confirmed of or suspected of having COVID-19, or ill with respiratory illnesses in the past 14 days (NYSDOH, 2020).

In addition to the mandated screening, home care agencies must create policies to ensure that employees monitor themselves for respiratory infections symptoms before beginning home care visits. If employees are experiencing COVID-19-related symptoms, they must notify the agency’s office and be fully aware that proceeding to provide services while symptomatic will put people around them at risk of infection. Additionally, these policies include a plan that instructs symptomatic staff to return to their homes and contact their primary care physician (NYSDOH, 2020). RAH administrative staff stated that staffing coordinators conducted wellness checks over the phone or through video calls, such as facetime, to check for respiratory symptoms in caregivers or clients (J. Henion, personal communications, June 18, 2020). In the pie chart from Figure 3, most working RAH caregivers reported receiving wellness checks.

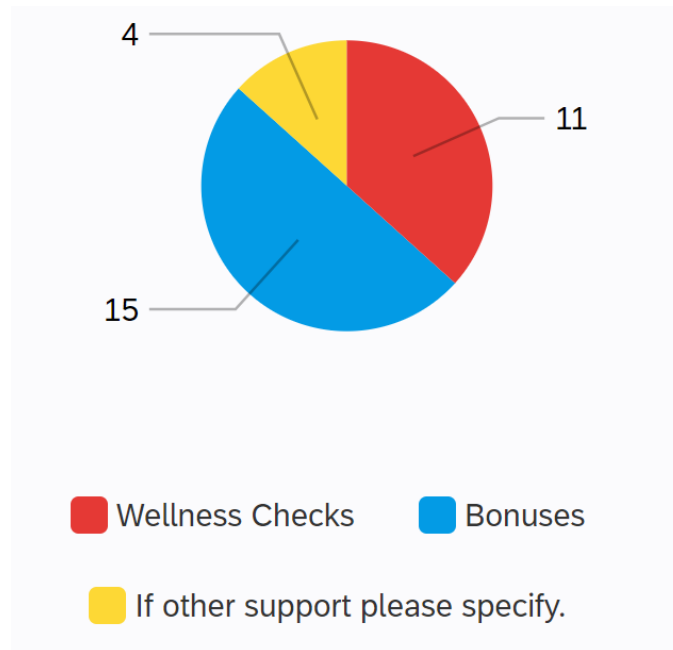


Figure 3. Pie chart of survey responses on which form of support caregivers received from RAH. Generated with Qualtrics.

RAH did not experience shortages of personal protective equipment (PPE). Among the New York Governor Executive Orders, Governor Andrew Cuomo addressed in an executive order the need for agencies to devise a plan to handle scarce medical supplies to ensure that staff

has protective equipment when dealing with clients (NYSDOH, 2020). According to the interviews with RAH staff, the agency has not yet faced shortages of PPE. In his interview, Regi Mathews claimed that “the agency has enough gloves and other forms of PPE for their home care workers, and if needed, the state government would supply for the company” (personal communication, June 10, 2020).

RAH developed policies and procedures to permit telehealth assessments within homes. Due to the loose nature of the limited, preventative COVID-19 guidelines provided by the CDC and the regulations for home care agencies published by the NYSDOH, the RAH agency had to devise a new set of policies and procedures to deliver their care services to clients safely. Some of these policies and procedures feature using telehealth to conduct safety assessments, and forming a plan of care for clients. During her interview, Jennifer Henion explained how the pandemic had not only imposed risks for the agency’s clients and caregivers, but also for herself (personal communication, June 18, 2020). To combat this risk, she used telehealth methods via phone or video calls to meet the responsibilities of her role within RAH. However, this is a temporary solution to the current problem. Jennifer Henion claimed that telehealth is not her ideal form of care—she believes that telehealth is inadequate for tasks that require physical contact, like taking a client’s blood pressure (personal communication, June 18, 2020).

RAH employed online training to teach caregivers how to prevent themselves and their clients from contracting COVID-19. The agency recognized the importance of keeping everyone healthy and preventing the pandemic from spreading. So it is imperative that RAH ensures everyone’s general well-being in their community, otherwise they would face potential litigation or removal of their operating license—such as in the event of a client or caregiver contracting COVID-19 from a sick counterpart. Regi Mathews and Jennifer Henion both stated that, in order to prevent transmission of the virus, the agency set up prevention techniques such as training their caregivers to use PPE efficiently, and refusing to provide services to prospective clients that tested positive for COVID-19.

Some caregivers mentioned that the training required them to learn how to identify the disease symptoms so that they would notice if their client contracted the virus (personal

communication, June 19-27, 2020). The agency began by enforcing online training, which according to our survey results, 21 of the 29 caregivers agreed was useful. This training taught caregivers how to use PPE efficiently and ensured that they did not unnecessarily waste the equipment. We considered these training points to be successful when we observed that, in the survey responses, 25 of the 29 caregivers reported that they had adequate access to PPE, which implied that RAH was successful in ensuring that the caregivers had enough medical supplies. Caregivers also stated in both surveys and interviews that they regularly received new and up-to-date information from the agency. Moreover, calling clients before in-person visits ensured that the caregiver did not enter a residence with a person that exhibited any COVID-19 symptoms.

Due to NYSDOH regulations, RAH has not accepted COVID-19 patients. Prior to conducting interviews, we were under the impression that RAH extended its care to COVID-19 patients as long as the caregiver in charge used PPE. However, due to the high risk of infection and NYSDOH Infection Control Policy, RAH's governing body in Northern Westchester mandated that the agencies not provide their services to clients who tested positive for COVID-19, or to those that presented COVID-19-like symptoms. Regi Mathews explained that there is not enough protection for home care agencies to risk providing care for COVID-19 clients in the state of New York, as they could face litigation if a caregiver contracted the virus, or if a client died under their services due to the virus (personal communication, June 10, 2020).

RAH used bonuses and government-given financial support to recruit caregivers. Nathan Mathews stated that due to the government's creation of the Federal Payroll Protection plan (PPP), RAH mitigated many of the problems that would have arisen from caregivers losing their jobs (personal communication, June 11, 2020). Geetha Mathews described the three-tier bonus program which RAH implemented in May 2020. The first tier was a ten percent (10%) bonus for all caregivers who worked during March 2020. The second tier was a flat rate loyalty bonus of \$100 for any caregiver who has been on the payroll since 2017. The third tier is also a flat rate bonus of \$150 for any caregiver who worked with clients infected with COVID-19 (G. Mathews, personal communication, June 16, 2020). Three out of four interviewed caregivers stated that the financial assistance provided by bonus or hazard pay was beneficial. The fourth caregiver was

unaware of receiving financial assistance (personal communication, June 19-27, 2020). Our survey results reflected that 13 out of the 29 participants obtained hazard pay. Since RAH did not extend its services to COVID-19 infectees, the agency compensated these 13 caregivers after they unintentionally interacted with clients who later confirmed positive with COVID-19. This allowed these caregivers to quarantine or test themselves for COVID-19 before coming back to work (G. Mathews, personal communication, June 16, 2020).

5.0 Conclusions and Recommendations

The COVID-19 pandemic created a ripple effect in the social systems. The Centers for Disease Control and Prevention (CDC) provide basic guidelines for all healthcare agencies, whereas the NYSDOH develops regulations for home care agencies to follow. Agencies that provide healthcare services in the home environment had to create their policies and procedures to protect their caregivers and vulnerable clients.

Using the surveys and interview responses provided by the agency's owners and staff, we evaluated the changes that Northern Westchester Right at Home made and implemented. We compiled a list of policies and procedures that RAH utilized and adopted during the outbreak's progression, and outlined the recommendations that proved to benefit this RAH agency as it continued to operate during the pandemic. We recommend that home care agencies implement telehealth assessments during a health crisis. Skilled medical personnel can consult and perform routine health and safety checks via web communication with the client alone or with a physically present caregiver in the client's home. By utilizing telepresence, the agency is reducing the number of people in direct contact with a vulnerable client and improving the efficiency of medical personnel.

Home care agencies should provide remote in-service training modules sessions for their caregivers to follow the CDC's social distancing guidelines. During a health crisis, we recommend that home care agencies provide their caregivers with online in-services in informative training videos for each type of care the agency offers. Training videos should also include effective use of PPE and education on handling patients in an outbreak. Furthermore, with future knowledge and experience in training to deal with COVID-19 patients, home care agencies may extend their services to clients with infectious diseases without fear of possible litigation.

We recommend that home care agencies' administrative staff perform daily wellness checks on their caregivers and clients to reduce infection risk in their community. Wellness checks consist of a series of questions about physical indications of the onset of disease-related

symptoms. Home care agencies should conduct screenings immediately before any caregiver visits a client's home that includes any other people physically present in the home.

Home care agencies should use the Federal Payroll Protection plan and other financial bonus programs to maintain business continuity during business reduction required by social distancing and the pandemic-driven economic recession. Home care agencies may realize reduced demand for services as marketing initiatives for prospective clients decreased and client services discontinued due to fear of contracting the virus. We recommend that home care agencies utilize available subsidized revenue sources to maintain business continuity and offer bonuses and hazard pay to retain experienced staff.

In the midst of the largest health crisis in recent history, we recommend that home care facilities share operational solutions to protect their home care community. RAH and other home care agencies should share their successful practices implemented during the COVID-19 health crisis especially with the possible future resurgence of COVID-19.

In conclusion, the COVID-19 pandemic challenged agencies in the home care industry to find creative solutions to overcome viral contagion and disruption to business operations. Home care agencies should consider using our recommendations during future health crises to protect vulnerable clients and caregivers, and to safeguard operations with enhanced policies and procedures.

References

- Altman, D. E., & Morgan, D. H. (1983). The role of state and local government in health. *Health Affairs*, 2(4), 7-31. <https://doi.org/10.1377/hlthaff.2.4.7>
- Associated Press. (2020). *Imports of medical supplies plummet as demand in U.S. soars*. Modern Healthcare. <https://www.modernhealthcare.com/supply-chain/imports-medical-supplies-plummet-demand-us-soars>
- Business Dictionary. (n.d. a). *Guideline: Definition*. <http://www.businessdictionary.com/definition/guideline.html>
- Business Dictionary. (n.d. b). *Policies and procedures: Definition*. <http://www.businessdictionary.com/definition/policies-and-procedures.html>
- Centers for Disease Control and Prevention. (2020a). *About CDC 24-7*. https://www.cdc.gov/about/organization/cio.htm?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fabout%2Forganization%2Findex.html
- Centers for Disease Control and Prevention. (2020b). *Cases & Deaths by County*. (2020, June 26). Retrieved July 09, 2020, from <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/county-map.html?state=NY>
- Centers for Disease Control and Prevention. (n.d). *Overview of policy evaluation*. <https://www.cdc.gov/injury/pdfs/policy/Brief%201-a.pdf>
- Famakinwa, J. (2020, June 23). *Boom or bust: How COVID-19 impacted the concierge home care business*. Home Health Care News. <https://homehealthcarenews.com/2020/06/boom-or-bust-how-covid-19-impacted-the-concierge-home-care-business/>

- Hillhouse, V. (2020). *PPE shortage reaches patients receiving in-home care*. Union Bulletin. https://www.union-bulletin.com/news/health_fitness/coronavirus/ppe-shortage-reaches-patients-receiving-in-home-care/article_a928b0e8-bc5a-5194-94a0-1ae8a1e7287c.html
- Holly, R. (2020, June 10) *Predicting COVID-19's long-term impact on the home health care market*. Home Health Care News. <https://homehealthcarenews.com/2020/06/predicting-covid-19s-long-term-impact-on-the-home-health-care-market/>
- Hsieh, C., & Kenagy, G. P. (2020). Exploring the association between quality of homecare services and older adults' well-being. *Home Health Care Services Quarterly*. 39(2), 65-79. <https://doi.org/10.1080/01621424.2020.1726849>
- Hubbard, R. G., & Strain, M. R. (2020). *A business fiscal response to a COVID-19 recession*. American Enterprise Institute. <https://city2city.network/business-fiscal-response-covid-19-recession>
- Jaffe, S. (2020). Home care workers have our lives in their hands. They're paid only \$10 an hour. *The Guardian*. <https://www.theguardian.com/us-news/2017/jul/13/home-care-workers-wages-obamacare-trump-seniors>
- Johns Hopkins University & Medicine. (2020). *COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at John Hopkins University (JHU)*. Retrieved June 27, 2020 from <https://coronavirus.jhu.edu/map.html>
- Kane, T., & Cadmus, M. (2020, May 14). Pressure mounts for federal legislation protecting businesses from COVID-19 lawsuits, but don't count on it. *New Jersey Law Journal*. <https://www.law.com/njlawjournal/2020/05/14/pressure-mounts-for-federal-legislation-protecting-businesses-from-covid-19-lawsuits-but-dont-count-on-it/?slreturn=2020052701806>
- Lazarus, J. M. (2020, June 25). Home health workers often overlooked in state COVID-19 protection efforts. *Richmond Free Press*.

<http://richmondfreepress.com/news/2020/jun/25/home-health-workers-often-overlooked-state-covid-1/>

Lewis, T. (2020, May 12), How coronavirus spreads through the air: What we know so far. *Scientific American*. <https://www.scientificamerican.com/article/how-coronavirus-spreads-through-the-air-what-we-know-so-far1/>

Ma, J. (2020, March 13). Coronavirus: China's first confirmed Covid-19 case traced back to November 17. *South China morning Post*. <https://www.scmp.com/news/china/society/article/3074991/coronavirus-chinas-first-confirmed-covid-19-case-traced-back>

McCool, C. (2020, March 15). *How Quickly Does Coronavirus Spread?* University of Michigan Health Lab. <https://labblog.uofmhealth.org/lab-report/how-quickly-does-coronavirus-spread>

Mckinley J., & Sandoval E. (2020). Coronavirus in N.Y.: Cuomo declares state of emergency. *The New York Times*. <https://www.nytimes.com/2020/03/07/nyregion/coronavirus-new-york-queens.html>

Moskowitz, H. (2020, April 23). *What is an essential worker in New York State?* ILR School at Cornell University. <https://www.ilr.cornell.edu/work-and-coronavirus/work-and-jobs/what-essential-worker-new-york-state>

Mount Sinai Hospital. (n.d.). *FAQ: Methods of Disease Transmission*. <https://eportal.mountsinai.ca/Microbiology/faq/transmission.shtml>

New York State. (n.d.). *New York State on pause*. <https://coronavirus.health.ny.gov/new-york-state-pause>

New York State Disaster Preparedness Commission. (2020). *New York State comprehensive emergency management plan: Pandemic Annex*. <http://www.dhSES.ny.gov/planning/cemp/documents/Pandemic-Annex.pdf>

- New York State Department of Health. (2016). *Guidance documents for LHCSA applicants*.
https://www.health.ny.gov/facilities/home_care/guidance_docs_for_lhcs_applicants.htm
- New York State Department of Health. (2018). *Infection Control*.
<https://www.health.ny.gov/professionals/diseases/reporting/communicable/infection/>
- Partlow, J., & Miroff, N. (2020). States mandate masks, begin to shut down again as coronavirus cases soar and hospitalizations rise. *The Washington Post*.
https://www.washingtonpost.com/national/coronavirus-rises-states-shutdown/2020/07/06/d8805d18-bf9e-11ea-9fdd-b7ac6b051dc8_story.html
- Paying for Senior Care. (2019, November 8). *Should we hire a home care agency or an independent, private caregiver?* <https://www.payingforseniorcare.com/homecare/agency-or-independent-caregiver#:~:text=Home>
- Qualls, N., Levitt, A., Kanade, N., Wright-Jegede, N., Dopson, S., Biggerstaff, M., Reed, C., & Uzicanin, A. (2017). Community mitigation guidelines to prevent pandemic influenza — United States, 2017. *Morbidity and Mortality Weekly Report*, 66(1), 1–34.
<http://dx.doi.org/10.15585/mmwr.rr6601a1>
- Right at Home. (n.d.). *The right care, Right at Home*. <https://www.rightathome.net/>
- Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*, 24, 91-98. <https://doi.org/10.1016/j.jare.2020.03.005>
- Sohrabi, C., Alsafi, Z., O’Neill, N., Khan, M., Kerwan, A., Al-Jabir, A., Losifidis, C., & Agha, R. (2020). World Health Organization declares Global Emergency: A review of the 2019 Novel Coronavirus (COVID-19). *International Journal of Surgery*, 76, 71-76.
<https://doi.org/10.1016/j.ijsu.2020.02.034>

- Wasson, E., & House, B. (2020). Hoyer says house and senate close on PPP loan extension. *Bloomberg*. <https://www.bloomberg.com/news/articles/2020-05-26/hoyer-says-house-and-senate-close-on-ppp-loan-extension>
- Wellford, B., & Yohey, L. I. (2020). *COVID-19 health care provider immunity update*. JD Supra. <https://www.jdsupra.com/legalnews/covid-19-health-care-provider-immunity-19417/>
- Woo, P. C. Y., Lau, S. K. P., Lam, C. S. F., Tsang, A. K. L., Lau, J. H. N. Bai, R., Teng, J. L. L., Tsang, C. C. C., Wang, M., Zheng, B., Chan, K., & Yuen. K. (2012). Discovery of seven novel mammalian and avian coronaviruses in the genus deltacoronavirus supports bat coronaviruses as the gene source of alphacoronavirus and betacoronavirus and avian coronaviruses as the gene source of gammacoronavirus and deltacoronavirus. *American Society for Microbiology: Journal of Virology*, 86(7), 3995-4008. <https://doi.org/10.1128/JVI.06540-11>
- World Health Organization. (2006). *Constitution of the World Health Organization*. https://www.who.int/governance/eb/who_constitution_en.pdf
- World Health Organization. (2013). *Health Policy*. https://www.who.int/topics/health_policy/en/
- World Health Organization. (2020). *Shortage of personal protective equipment endangering health workers worldwide*. <https://www.who.int/news-room/detail/03-03-2020-shortage-of-personal-protective-equipment-endangering-health-workers-worldwide>
- Zhou, P., Yang, X., Wang, X., Hu, B., Zhang, L., Zhang, W., Si, H., Zhu, Y., Li, B., Huang, C., Chen, H., Chen, J., Lou, Y., Guo, H., Jiang, R., Lui, M., Chen, Y., Shen, X., Wang, X., ... & Shi, Z. (2020). A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature*, 579, 270-273, <https://doi.org/10.1038/s41586-020-2012-7>

Appendix A: Survey Consent Form and Survey Questions

Informed Consent Agreement for Participation in a Research Study

Investigator(s): Dennis Chavez Romero, Natalie Mathews, Brian Phillips, Dawson Scheid

Contact Information: gr-e20wpi-covidcoms@wpi.edu

Title of Research Study: COVID-19 in Right at Home

Sponsor: N/A

Introduction: We are a group of students from Worcester Polytechnic Institute in Massachusetts working with Right at Home and our aim of this project is to identify and evaluate the administrative policies within the home care agency, which were successful and unsuccessful against the COVID-19 pandemic. To accomplish this, we will conduct a series of interviews and surveys among the staff of Right at Home to determine the effectiveness of these regulations.

Purpose of the study: The goal of this project is to evaluate the performance of the administrative policies and procedures implemented due to the emergence of COVID-19 within the Right at Home home care agency, and to report on how the administrative staff is supporting its caregivers in response to the effects of the virus.

Procedures to be followed: The underlying procedures to conduct this research rely on the participation of the Right at Home staff in the team's surveys and interviews. These will take approximately 5-7 minutes and 15-25 minutes to complete, respectively.

Risks to study participants: Staff may feel uncomfortable answering some of the questions during the interviews or surveys. However, withdrawal from these is acceptable.

Benefits to research participants and others: None.

Record keeping and confidentiality: Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identify you by name. Any publication or presentation of the data will not identify you.

Compensation or treatment in the event of injury: The participant will not experience risk of injury at any time. Note that you do not give up any of your legal rights by signing this statement.

For more information about this research or about the rights of research participants, or in case of research-related injury, contact: please refer to the contact information at the top of this document.

If you wish to contact the IRB staff at Worcester Polytechnic Institute, please refer to the following contact information:

Manager (Ruth McKeogh, Tel. 508 831-6699, Email: irb@wpi.edu) and the Human Protection Administrator (Gabriel Johnson, Tel. 508-831-4989, Email: gjohnson@wpi.edu).

Your participation in this research is voluntary. Participation in the survey or interview is voluntary and withdrawal is acceptable at any time. Your refusal to participate will not result in any penalty to you or any loss of benefits to which you may otherwise be entitled. The project investigators retain the right to cancel or postpone the experimental procedures at any time they see fit.

By clicking next, you acknowledge that you have been informed about and consent to be a participant in the study described above. Make sure that your questions are answered to your satisfaction before signing. You are entitled to retain a copy of this consent agreement.

Survey Questions:

- What form of care do you provide?
 - Companion Care
 - Personal Care
 - Skilled Nursing
 - If other, please state your form of care

- In the majority of your clients, what types of diseases and disabilities do they have?

OPEN ENDED QUESTION

- Are you currently working with a Right at Home client?
 - Yes
 - No
 - If No, explain briefly for what reasons

- How do you describe the intensity of your work now, as compared to before the COVID-19 outbreak?
 - Higher than average
 - Lower than average
 - Around the same

- Is staff testing for COVID-19 available to you given your current circumstances?
 - Yes
 - No
 - Unsure

- Have your assignments (hours per week worked) been more or less affected since early April until now with the current COVID-19 pandemic?
 - Higher
 - Lower
 - Same
 - Unsure

- Do you have access to adequate supplies of PPE (masks, gloves) to work with patients/clients?
 - Yes
 - If no, please elaborate as to what is lacking.

- What types of training and support does RAH offer to work in the present COVID-19 environment?

- Does Right at Home provide adequate training and support to work in the present COVID-19 environment?
 - Yes
 - No
 - Elaborate.

- Have you been offered hazard pay to handle clients?
 - Yes
 - No
 - Not Applicable

- How has your mental health been negatively affected by your current work environment?
 - A great deal
 - A lot
 - A moderate amount
 - A little
 - None at all

- How has your daily life been negatively affected by your current work environment?
 - A great deal

- A lot
 - A moderate amount
 - A little
 - None at all

- How has your relationship with non-patients (family, friends, acquaintances, etc) been negatively affected by your current work environment?
 - A great deal
 - A lot
 - A moderate amount
 - A little
 - None at all

- What other support have you received from Right at Home in this COVID-19 environment?
 - Wellness checks
 - Sick time
 - Bonuses
 - Child Care
 - If other support please specify.

- Which of the operational changes within Right at Home has affected you the most?
Please give a brief explanation.

- Are you willing to participate in an interview? (We will email you with the questions and let you decide from there if you want to finalize the meeting)
 - Yes
 - No
 - If yes please put your name and an email we can contact you with

Appendix B: Interview Consent Forms for RAH Employers & Employees and Interview Questions

Informed Consent Agreement for RAH Employer Participation in a Research Study:

Investigator(s): Dennis Chavez Romero, Natalie Mathews, Brian Phillips, Dawson Scheid

Contact Information: gr-e20wpi-covidcoms@wpi.edu

Title of Research Study: COVID-19 in Right at Home

Sponsor: N/A

Introduction: We are a group of students from Worcester Polytechnic Institute in Massachusetts working with Right at Home and our aim of this project is to identify and evaluate the administrative policies within the home care agency, which were successful and unsuccessful against the COVID-19 pandemic. To accomplish this, we will conduct a series of interviews and surveys among the staff of Right at Home to determine the effectiveness of these regulations.

Purpose of the study: The goal of this project is to evaluate the performance of the administrative policies and procedures implemented due to the emergence of COVID-19 within the Right at Home home care agency, and to report on how the administrative staff is supporting its caregivers in response to the effects of the virus.

Procedures to be followed: The underlying procedures to conduct this research rely on the participation of the Right at Home staff in the team's surveys and interviews. These will take approximately, 5-7 minutes and 15-25 minutes to complete, respectively. However, employers are not expected to partake in the survey.

Risks to study participants: Staff may feel uncomfortable answering some of the questions during the interviews. However, withdrawal from these is acceptable.

Benefits to research participants and others: None.

Record keeping and confidentiality: Employees of Right at Home will not have access to your responses. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identify you by name. Any publication or presentation of the data will not identify you.

Compensation or treatment in the event of injury: The participant will not experience risk of injury at any time Note that you do not give up any of your legal rights by signing this statement.

For more information about this research or about the rights of research participants, or in case of research-related injury, contact: To contact the team, please refer to contact information at the top of this document.

If you wish to contact the IRB staff at Worcester Polytechnic Institute, please refer to the following contact information:

Manager (Ruth McKeogh, Tel. 508 831-6699, Email: irb@wpi.edu) and the Human Protection Administrator (Gabriel Johnson, Tel. 508-831-4989, Email: gjohnson@wpi.edu).

Your participation in this research is voluntary. Participation in the interview is voluntary and withdrawal is acceptable at any time. Your refusal to participate will not result in any penalty to you or any loss of benefits to which you may otherwise be entitled. The project investigators retain the right to cancel or postpone the experimental procedures at any time they see fit.

By signing below, you acknowledge that you have been informed about and consent to be a participant in the study described above. Make sure that your questions are answered to your satisfaction before signing. You are entitled to retain a copy of this consent agreement.

Date: _____

Study Participant Signature

Study Participant Name (Please print)

Date: _____

Signature of Person who explained this study

Informed Consent Agreement for RAH Employee Participation in a Research Study:

Investigator(s): Dennis Chavez Romero, Natalie Mathews, Brian Phillips, Dawson Scheid

Contact Information: gr-e20wpi-covidcoms@wpi.edu

Title of Research Study: COVID-19 in Right at Home

Sponsor: N/A

Introduction: We are a group of students from Worcester Polytechnic Institute in Massachusetts working with Right at Home and our aim of this project is to identify and evaluate the administrative policies within the home care agency, which were successful and unsuccessful against the COVID-19 pandemic. To accomplish this, we will conduct a series of interviews and surveys among the staff of Right at Home to determine the effectiveness of these regulations.

Purpose of the study: The goal of this project is to evaluate the performance of the administrative policies and procedures implemented due to the emergence of COVID-19 within the Right at Home home care agency, and to report on how the administrative staff is supporting its caregivers in response to the effects of the virus.

Procedures to be followed: The underlying procedures to conduct this research rely on the participation of the Right at Home staff in the team's surveys and interviews. These will take approximately, 5-7 minutes and 15-25 minutes to complete, respectively.

Risks to study participants: Staff may feel uncomfortable answering some of the questions during the interviews or surveys. However, withdrawal from these is acceptable.

Benefits to research participants and others: None.

Record keeping and confidentiality: Employers of Right at Home will not have access to your responses. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, or its designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identify you by name. Any publication or presentation of the data will not identify you.

Compensation or treatment in the event of injury: The participant will not experience risk of injury at any time. Note that you do not give up any of your legal rights by signing this statement.

For more information about this research or about the rights of research participants, or in case of research-related injury, contact: To contact the team, please refer to contact information at the top of this document.

If you wish to contact the IRB staff at Worcester Polytechnic Institute, please refer to the following contact information:

Manager (Ruth McKeogh, Tel. 508 831-6699, Email: irb@wpi.edu) and the Human Protection Administrator (Gabriel Johnson, Tel. 508-831-4989, Email: gjohnson@wpi.edu).

Your participation in this research is voluntary. Participation in the survey or interview is voluntary and withdrawal is acceptable at any time. Your refusal to participate will not result in any penalty to you or any loss of benefits to which you may otherwise be entitled. The project investigators retain the right to cancel or postpone the experimental procedures at any time they see fit.

By signing below, you acknowledge that you have been informed about and consent to be a participant in the study described above. Make sure that your questions are answered to your satisfaction before signing. You are entitled to retain a copy of this consent agreement.

Date: _____

Study Participant Signature

Study Participant Name (Please print)

Date: _____

Signature of Person who explained this study

Interview Questions for Owners of Right at Home:

- What are some of the challenges you are facing during the pandemic within the agency?
- What is your agency doing to mitigate these challenges?
 - How is the government playing a role in mitigating these challenges?
- What precautions have been set in place to protect the health of the caregivers working with clients with COVID-19?
- Has the company strictly adhered to the policies and procedures published by the CDC and DOH throughout the pandemic thus far?
 - If not, what kinds of adjustments have been made to these regulations in order to support the agency's caregivers?
- To prevent the spread of COVID-19, how did the company conduct safety assessments and develop a plan of care when caregivers were unable to visit a client's house?
 - Has the business been actively enforcing the DOH's screening guidelines for its frontline workers?
- Does the company believe that there is a sufficient amount of PPE being provided to its caregivers?

Interview Questions for the Director of Client Relations and Nursing:

- What would you say are the major challenges that RAH has faced during this pandemic?
- What is your agency doing to mitigate these challenges?
 - How has the government played a role in mitigating these challenges?
- How has the training of caregivers/nurses been affected in the COVID-19 environment?
 - How has the recruitment and supervision of new caregivers been affected?

- What are your thoughts on telehealth?
- How have you been able to oversee the care in client's homes in the past 3 months?
- What precautions have been set in place to protect the health of the caregivers?
- How have the regulations (policies and procedures) related to your role at RAH changed due to the pandemic?
 - How has this altered patient care?
 - How has it influenced Right at Home operations?

Interview Questions for Caregivers:

- What are your experiences during the COVID-19 pandemic at work?
- Do you feel like there is a shortage of personal protective equipment in your line of work?
 - If so, how has it been affecting your job?
- Are there any major, work-related challenges that you have been facing during the past 3 months?
 - If so, what are some of these challenges?
- Do you believe that the COVID-19 questionnaires and the “in-services” provided by RAH have prepared you enough to [continue to] work with clients?
- Do you believe that the financial aids provided to you during the pandemic (like the payroll protection plan, and hazard pay) have been beneficial so far?
- How have social distancing regulations had an effect on your well-being while having to be at risk of exposure?
 - How has this influenced the work environment?

- How has this affected your daily life?