

2020: A FIGHT TO SAVE LIVES INSIDE A NOT-FOR-PROFIT MILITARY RETIREMENT COMMUNITY

KNOLLWOOD COVID-19 HISTORY CASE STUDY

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EXECUTIVE SUMMARY

This case study uses extensive oral history interviews and documentation from ADF (Army Distaff Foundation) records and outside published media to trace how the organization stopped the disease Covid-19. This study is also an examination in leadership, detailing the leadership qualities that proved essential for victory. These leadership qualities include agility, integrity, creativity, persistence, integrity, courage, and compassion. By using an intentional leadership style that valued communication and collaboration, ADF's high-level managers set the environment for fostering leadership throughout the organization. Lessons learned close out this case study to reinforce actions taken and provide a blueprint for future pandemics.



BACKGROUND: ADF AND KNOLLWOOD

ADF, a 501(c) (3) organization, was founded in 1959 and it built, manages, and operates Knollwood Military Life Plan Community in Washington, DC, which opened in 1962. Knollwood, in addition to independent living, provides skilled nursing, rehabilitation therapies, long-term care, and memory care. Knollwood residents are largely officers or their immediate family members from the seven uniformed divisions.

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THE PROBLEM: COVID-19 AND THE 2020-2021 PANDEMIC

Covid-19 is a novel (new) coronavirus, thought to have started in Wuhan, China. There were no known treatments when it first appeared, and it spread worldwide within a few months' time. The virus spreads primarily through respiratory droplets and many infected people have few or no symptoms but can transmit the disease. People with co-morbidities and older adults have a greater chance of negative outcomes from Covid-19, including death.

KNOLLWOOD PHILOSOPHIES: CAV

Knollwood's military history, military resident population, and retired military upper managers all contributed to a military approach to defeating Covid-19. Knollwood applied an Army term, CAV, which stands for Coordinate, Anticipate, and Verify. As implemented at Knollwood, CAV meant that directors had daily calls to coordinate actions, anticipate where each director may need assistance, and verify actions through regular rehearsals for key events.

KNOLLWOOD PHILOSOPHIES: COMMUNICATION

Knollwood embraced transparent communication. For residents, Operational Updates shared key information about Covid-19, testing, the vaccine, and daily life and wellness actions. For families, virtual town halls led by upper management answered questions. In fall 2020, Knollwood also held a listening tour to hear from Independent Living residents.

KNOLLWOOD ACTIONS: UNIVERSAL TESTING

Knollwood recognized early on that testing everyone, from staff to residents, was the only way to identify, contain, and stop the virus from spreading. The organization established a relationship with LabCorp when the DC Department of Health refused to support universal testing. Knollwood also obtained the ability to do Abbott rapid testing. Regular testing helped Knollwood contain the virus.

KNOLLWOOD ACTIONS: MANDATED VACCINATION

Knollwood required all staff and residents, except under certain prescribed and limited conditions, to be vaccinated. The site held mass vaccination clinics beginning in January 2021.

CONCLUSION

Knollwood fostered a supportive environment that relied upon upper managers' military training to contain and arrest Covid-19. Staff up and down the organizational chart displayed critical leadership traits, including agility, creativity, persistence, courage, and compassion. The numbers indicate the success from this approach, with only one outbreak of Covid-19 in Knollwood at the start of the pandemic, resulting in nine resident deaths and two staff deaths.



INTRODUCTION

Knollwood Military Life Plan Community stopped Covid-19 from rampantly spreading throughout the facility by using a military mindset against this silent insidious disease. Knollwood's military roots, from its upper management to its residents, informed every aspect of Knollwood's response to the pandemic, beginning in March 2020. Leadership built a collaborative working environment (from nursing to wellness to building and grounds to engineering) which followed the US Army model. Directors would have the knowledge they needed to act swiftly and make informed decisions without waiting for approvals from top leadership. Top leadership established goals and set boundaries for action. They established a Covid Review Board to ensure everyone acted based upon scientific and medical knowledge. Top leadership also built an environment of appreciation and reward to honor the initiative and sacrifices of their staff.

How Knollwood personnel responded to Covid-19 is a case study in leadership. Six leadership qualities rise to the top for examination: agility, creativity, persistence, integrity, courage, and compassion. Personnel embodied these qualities whether caring for residents in memory care or tracking down Personal Protective Equipment (PPE), picking up prescriptions for residents or communicating with residents and their families. Knollwood adopted the US Army term CAV, standing for Coordinate, Anticipate, Verify, to encourage leadership and responsibility in acting against Covid-19.



Knollwood, with full support of division directors and the Board, pursued universal testing and mandated vaccinations as the best options for fighting the coronavirus. The recognition that asymptomatic people could carry the virus into Knollwood and that staff members worked at multiple locations made clear that universal testing was the only option to track and eradicate Covid-19 from the premises. Test kit availability complicated this stance at the beginning, and the DC Department of Health refused to approve asymptomatic testing in the early days of the pandemic. When a vaccine became available in late 2020-early 2021, Knollwood leadership mandated that residents and staff all be vaccinated, except for limited approved exceptions.

The numbers speak to this strategy's success. Knollwood lost nine residents and two employees in the first few months of the pandemic and then went 150 days without any cases. This remarkable record has prompted local (NPR) and national (US News) reporting on the facility. Many people acknowledge that other pandemics may be on the horizon, and thus Knollwood serves as an example for preparing for these possibilities.

This case study uses extensive oral history interviews and documentation from Knollwood records and outside published media to trace how Knollwood stopped the enemy, Covid-19. This study is also an examination in leadership, detailing the leadership qualities that proved essential for victory. By using an intentional leadership style that valued communication and collaboration, Knollwood's high-level managers set the environment for fostering leadership throughout the organization. Lessons learned close out this case study to reinforce actions taken and provide a blueprint for future pandemics.



Knollwood Military Life Plan Community sits in Northwest Washington, DC, next to Rock Creek Park. ADF built, owns, and operates Knollwood as a 501(c)(3) non-profit organization. The foundation was established in 1959 to provide housing, health, and wellness services for military widows who had served the nation, regardless of financial status. The call to establish ADF dates to the post-World War II period and the realization that widows and female relatives of US Army servicemen could not live on the small pensions they received. ADF bought the current 16-acre property and built the Knollwood facility, which by 1963 housed 166 women.

Notably, ADF's mission has expanded beyond the immediate needs of its residents and looks broadly at healthcare for older adults. The foundation strives to be, according to Deputy Operations Officer James Michels, a "thought leader" and "shining example," exploring innovative approaches to caring for older adults. Knollwood has been involved with studies on how well robots might assist older adults. During the pandemic, Knollwood applied new technologies for cleaning and sanitizing. Knollwood staff has sought ways to share its knowledge with other nursing facilities through conferences, publications, and media outreach. This mission to be a thought leader has primed Knollwood leadership and staff to think creatively about technology during the pandemic and beyond.

On average 165 people reside in apartments in Independent Living. Another 43 people live in Assisted Living. Skilled Nursing, which also provides rehabilitative services, includes Memory Care for 44 people. Most residents served as officers in one of the seven uniformed branches or are immediate family members of an officer. Other residents include federal workers with a grade of GS-14, or equivalent, or higher; foreign service members of Class 1, 2, or 3; and non-government or non-military individuals with strong connections to the DC metro area.

The military background of most residents and the leading staff members is an important factor in how Knollwood approached care, both every day and especially during the Covid-19 pandemic. Both the Chief Executive Officer and Chief Operating Officer are retired Army officers. They and their staff (Diane James and Laura Van Eperen) have used words and phrases like "military exercise," "getting their troops in order," "attack," "invisible enemy," "at war," "battle," "agile," and "fight the enemy" to describe their responses to the pandemic.

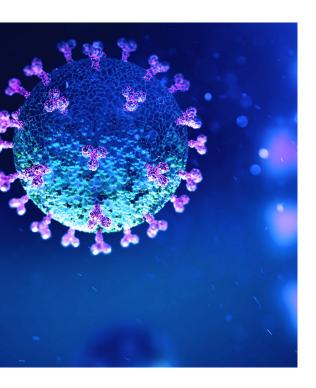
Residents who were retired from the military also saw the Covid-19 pandemic in military terms and noted how they reacted to such an approach. Col. Marie Hilliard, USA, (Ret.), retired from the Army Reserve, called Easter Weekend "D-Day" since that was the start of testing. She also referred to the "military culture from top down," and said the residents dealt well with the pandemic and restrictions because of their past military service. RADM Julia Plotnick, USN, (Ret.), retired from the US Public Health Service, agreed with Hilliard, saying that residents complied with orders to remain in their apartments in part due to their military backgrounds. Nancy Roderer, whose husband had served in the Navy, remarked that the













military mindset of fighting an enemy benefited residents and was seen positively by them.

CONTEXT: COVID-19 ORIGINS, EARLY SCIENCE, AND CHARACTERISTICS

A key point about Covid-19 is that it is a novel (new) coronavirus that has not been previously seen in humans. The US Centers for Disease Control (CDC) acknowledges on its website that scientists are learning more about the virus each day. since its first publicized appearance in Wuhan, China, in December 2019, scientists have been trying to understand its transmission, its symptoms, its treatment, and its prevention. What is known is that as of July 6, 2021, medical professionals have logged 184.5 million cases worldwide and almost 4 million deaths. In the United States, according to Johns Hopkins University, there have been 33.7 million confirmed cases and 605,900 deaths.

Some important aspects of Covid-19 have shaped how Knollwood has responded. First, early reports, as noted in *Nature* in late March 2020, emphasized how Covid-19 might be spread through surface contamination. Hand sanitizer and disinfectants flew off grocery store shelves. The CDC and other agencies worldwide emphasized the need to wash hands for at least 20 seconds. This concern magnified when investigators found remnants of Covid-19 on surfaces of cruise ships that had been quarantined for several days before being allowed to disembark passengers. These findings raised alarms about how people might get infected since the cruise ships, such as one in Japan and another in California, registered high numbers of infected passengers.

Second, research has shown that the virus spreads most easily through close (less than six fee) physical contact. Transmission happens through respiratory droplets, which are produced when a person sings, coughs, talks, sneezes, or breathes. The further away two people are, the less concentrated the droplets are, decreasing the possibility of passing the virus. Keeping socially distant by more than 6 feet thus helps to decrease the chance of infection. Wearing face masks protects people from the airborne droplets. The combination of hand washing, keeping socially distant, and wearing a face mask have consistently shaped the fundamental response to Covid-19. Knollwood's leadership has emphasized these three actions throughout the pandemic.

Third, a person infected with Covid-19 may have minor or no symptoms. With the *Diamond Princess* cruise ship, which sat in Japanese waters for a month in February 2020 after a Covid-19 outbreak onboard, authorities conducted more than 3,000 tests. They found that 700 people of the 3,711 total tested positive for the virus. Of those positives, 18% showed no symptoms, including older adults. The asymptomatic nature of Covid-19 would prove vexing.

That asymptomatic character also belied another finding from this cruise ship: the highly infectious nature of the virus. The data, reported in Nature, showed that before quarantining on the ship, one person could infect seven others. But once people stayed in their cabins for two weeks or more, the level of infection dropped to below one. The researchers noted obvious differences between a ship and a country, but the findings still highlighted two significant aspects of Covid-19 that would shape recommendations for action to safeguard public health, internationally and also at Knollwood.

CONTEXT: KEY US AND WORLD-WIDE EVENTS RELATED TO COVID-19

The novel coronavirus elicited concern and action from the end of December 2019 onward. China informed the World Health Organization (WHO) Country Office on December 31, 2019, of the disease. A month later, WHO declared a Global Public Health Emergency, and on February 11, 2020, the organization named the disease Covid-19. On March 11, WHO made clear the severity of the situation by declaring a global pandemic.

Italy was one of the first countries outside China to see a dangerous spike in cases, as early as February 21, 2020. The situation quickly worsened, with 463 deaths and 1900 infections reported by March 10. The disease had a 4% mortality rate in Italy, with the average age of people dying being 81. The government responded by locking down the entire country, closing schools and ending all public activities. People faced heavy fines and even imprisonment for breaking the lockdown or traveling.

Within the United States, New York and particularly New York City experienced a surge of Covid-19 cases by mid-March 2020. By March 23, New York reported 20,000 cases. Gov. Andrew Cuomo began giving daily press briefings on Covid-19 and his administration's actions to contain it. These actions, eventually followed by other states, included extending stay-at-home



KEY DATES ON CDC/WHO ACTIONS:

FEBRUARY 1, 2020:
WHO report states that
asymptomatic transmission
of Covid-19 is rare.

MARCH 11, 2020:CDC recommends against thepublic wearing masks.

MARCH 15, 2020:CDC recommends gatheringsof no more than 50 people.

MARCH 29, 2020:
WHO reports that Covid-19
does not linger in the air and
thus is not transmitted via
aerosol.

O APRIL 3, 2020:∴ CDC recommends people∴ where face masks.

APRIL 30, 2020:US airlines require face masks.

O JULY 2020:

200 scientists urge WHO to recognize the potential for airborne spread of the disease.

JULY 2020:WHO revises its guidance onairborne nature of the virus.

O SEPTEMBER 2020:
Annals of Internal Medicine reports that 40 to 45% of all Covid-19 infections may come from people not showing any symptoms.

orders, closing schools, switching bars and restaurants to takeout only, reducing the number of people at gatherings, and requiring that people wear face masks. Despite these steps, New York City between March and May 2020 saw 203,000 confirmed cases with a 9.2% crude fatality rate overall and 32% rate for hospitalized patients. More people died of the virus in New York City during this period than died in all of Italy or Spain or France or Germany. The highest rates of cases, hospitalizations, and deaths involved communities of color, high-poverty areas, and among persons aged 75 or older or with underlying health conditions (comorbidities). Other locations in the US repeated these shared characteristics of the most vulnerable, as reported by the CDC.

The pandemic proceeded in waves across the globe, visualized in the website Our World in Data. In the US, peak deaths occurred in the April-May 2020 time period, then January-February 2021. Brazil, in contrast, had its steepest rise in deaths in April through July 2021, though a secondary peak had occurred through summer 2020. India had a delayed response to Covid-19, remaining flat until its peak in May-June 2021. Italy has seen three peaks in the number of deaths, first in March-April 2020, then November-December 2020, and again in March-April 2021.

Vaccinations helped arrest further spread of the disease. In December 2020, the US Food and Drug Administration (FDA) granted Emergency Use Authorization (EUA) to the Pfizer and Moderna vaccines for individuals aged 16 and older. Nature reported that these two vaccines used mRNA (messenger RNA) technology that scientists had done years of advance research and testing on against other coronaviruses, SARS (severe acute respiratory symptom) and MERS (Middle East respiratory symptom). In February 2021, the US FDA granted EUA to the Janssen Covid-19 vaccine, manufactured by Johnson & Johnson. The Janssen vaccine used more traditional vaccine technology with DNA as its basis. In response to six cases of rare blood clots, FDA on April 13, 2021, recommended a pause in using the Janssen vaccine, which was lifted on April 23. On May 10, 2021, FDA expanded use of the Pfizer vaccine to individuals aged 12-15.

Knollwood held vaccination clinics for its staff and residents beginning in January 2021. Knollwood partnered with Walgreen's to administer the Moderna vaccine. These vaccination clinics continued through April 2021, administering a total of # vaccines. Knollwood continues to coordinate

vaccinations for new employees and residents. As of August 2021, 98% of all residents and 92% of all staff are fully vaccinated.

CONTEXT: COVID-19 THREAT AND EARLY US RESPONSE

The US response to Covid-19 involved many different layers. President Donald Trump in March 2020 named Vice President Mike Pence to lead the coronavirus response. Deborah Birx, a physician and diplomat who served as the US global AIDS coordinator, was named the Coronavirus Task Force chair. Anthony Fauci, MD, as director of the National Institute of Allergy and Infectious Diseases, had the longest-serving record within the federal government for fighting infectious diseases, including HIV/AIDS in the 1980s-1990s. The CDC and the Food and Drug Administration have been two key federal agencies addressing the pandemic. President Joe Biden named Dr. Fauci as Chief Medical Advisor, thus making Dr. Fauci a key resource during the pandemic.

Knollwood, located in Washington, DC, follows the regulatory requirements of the DC Department of Health (DOH), headed by Dr. LaQuandra Nesbitt. Dr. Nesbitt determined testing protocols. DC Mayor Muriel Bowser has directed such regulations as maskwearing and carrying capacities for indoor dining.

Covid-19 has traumatized life in profound and lasting ways across the globe, comparing in severity and impact to the Spanish flu pandemic of 1918-1919. Scientists and everyday people worry that this pandemic of 2020-2021 is not a oncea-hundred-year event but a harbinger of more frequent and equally deadly and disruptive health emergencies. Medical scientists agree on this likelihood. Prof. Matthew Baylis from the University of Liverpool told BBC News in June 2020 that in the last 20 years, "We've had six significant threats - SARS, MERS, Ebola, avian influenza and swine flu. We dodged five bullets but the sixth [Covid-19] got us." He went on, saying that "And this is not the last pandemic we are going to face." Officials at the World Health Organization have warned that deadlier viruses have the potential to cause future pandemics unless countries act to stop potential transmission of viruses between humans and animals (Covid-19 is thought to have been caused by transmission from bats).

For this reason, Knollwood has called for extensive documentation of its handling of the Covid-19 pandemic. The hope is that, according to Knollwood's Chief Operating







Officer Col. Paul Bricker, in this case study, "they'll [future Knollwood leaders] find some small amount of comfort and knowledge and learning from our actions. And that it will protect lives because if it protects one life, it's worth it."

COVID-19 SWEEPS INTO THE US AND KNOLLWOOD PREPARES FOR THE STORM

Knollwood watched as Covid-19 moved with deadly force into the United States. Authorities reported on February 28, 2021, that a woman in a long-term care facility in King County, Washington, had contracted Covid-19. This was the first reported case of the disease in the United States. The virus quickly spread. A day later, a man with Covid-19 died in Washington state, the first reported death in the United States. The highly infectious nature of the disease resulted in 129 cases (81 residents) of Covid-19 in that facility, with 23 deaths. Eight other long-term care facilities in King County reported by March 9 to have one or more confirmed Covid-19 cases. The CDC warned on March 27, after seeing the results of investigations in Washington state, that once Covid-19 had entered a long-term care facility, it could potentially result in "high attack rates among residents, staff, and visitors."

When Covid-19 hit New York City, a little more than 200 miles from Washington, DC, Knollwood initiated preliminary actions. On March 3 at a hall coffee, Knollwood managers answered questions about the virus. The organization then started imposing restrictions, first against anyone who traveled from China and other high-risk areas, and then restricting access to Skilled Nursing to family only.

In response to increasingly dire news reports on the virus and its spread, Knollwood accelerated its adoption of actions to keep its residents and staff safe. On March 10, Knollwood put posters up at all entrances and closed all access points to its interior campus with only immediate family allowed in. Beginning March 11, all people wanting entry had to agree to a health screening. These screenings involved taking temperatures with a heat gun thermometer and having individuals complete a questionnaire to ascertain the likelihood of Covid-19 exposure or symptoms.

Knollwood put further restrictions into place in reaction to events on March 11. Dr. Fauci and others appeared before the House Oversight and Reform Committee to report on the seriousness of the disease and steps being taken to develop a vaccine. Dr. Fauci at one point noted that the situation would get worse and that vaccines would take several months before approval for mass administration. That evening, President Trump described the country's emergency response to the virus. On this same day, the World Health Organization declared Covid-19 a global pandemic.

The combination of these events, plus reading journals and trade publications, convinced Knollwood's leaders to take additional preventative steps to defend against the virus. On March 14, Knollwood shut down completely, restricting access to only mission essential personnel and thus locking out family and friends of residents. Residents needed to stay in their own living communities, which also meant that a spouse in Independent Living could not, for example, visit his/her spouse in Skilled Nursing.

KNOLLWOOD'S ACTIONS: LINES OF DEFENSE AND FLATTENING THE ORGANIZATION

Top leadership announced these, and other, significant changes in Urgent Update #4, dated March 12, and thus March 12 stands as the turning point at Knollwood. From this point on, Knollwood specifically and aggressively fought Covid-19. Knollwood adopted lines of defense, as if in a war. These lines of defense were like concentric circles so that if one defense line was breached, there was another and another behind it to protect residents and staff. First, Knollwood established its outer perimeter by hiring security people to keep unauthorized people out. The organization placed outside cameras and roving security details. The next line of defense was obtaining adequate Personal Protective Equipment (PPE). PPE includes face masks, gowns, gloves, and sanitizing cleaners that help keep the disease from spreading through contact. Other lines of defense included communications, standards, testing, and procedures, the latter of which involved constant reminders for all to wear their masks, wash hands frequently, and keep 6 feet apart. Distancing also meant turning semi-private rooms in the skilled nursing facility into private rooms. Mandating vaccination at the start of 2021 was another line of defense.

One key aspect of this military approach was flattening the organization and powering down to directors. Upper management, giving broad guidance of expectations, encouraged directors to collaborate. The leadership understood that directors needed information to make

MILITARY LEADERSHIP:

The military background of Knollwood's top managers and much of its resident population framed how this long-term care facility battled Covid-19. Military leadership defines levels of authority and responsibility, but leadership also relies upon a collaborative model of information gathering and decision-making. The US Army sets itself apart from other military units by powering down to junior officers and letting them take initiative. Knollwood adopted this tactic and saw impressive success.

CAV: COORDINATE, ANTICIPATE, VERIFY:

An important leadership tactic that Knollwood used is related to the Army's historic use of the cavalry. The cavalry on horseback had sought reconnaissance information on the enemy and then had coordinated with other divisions for action. Knollwood sought situational dominance by becoming aware of situations, understanding their nuances, and verifying actions through practice.



COVID REVIEW BOARD:

The CRB was atypical for retirement communities:
According to Deputy Director of Operations James Michels, not many retirement communities established similar review boards to guide decision-making...-need some citations here, a quote...

INTEGRITY:

Members of the Covid Review
Board modeled integrity as
a leadership trait. They were
honest in assessing individual
situations and avoided playing
favorites. They met reliably and
implemented the CRB findings
across the board. They gained the
respect of the Knollwood staff and
residents for their trustworthy
findings.

immediate and "wise decisions," given that they managed the front-line workers. Everyone would have the information needed to make decisions as quickly as possible to fight this killer virus, "racing to protect the residents and the staff," as COO Bricker recalled.

COVID REVIEW BOARD ESTABLISHED

Some of this decision-making passed through the lens of the Covid Review Board (CRB), established on March 12. The CRB was composed of the Medical Director (Dr. Nicholas Polis), Administrator (Tina Sandri at first), Director of Nursing (Arlette Kesseng-A-Mbassa), and Infection Control Nurse (Cheryl Lucas). The CRB drew upon its expertise and reviewed the relevant regulations from the DC Department of Health to recommend actions on a case-by-case basis. The CRB provided crucial medical input from the highest level of staff training and insight to help inform operational decisions.

The CRB addressed many different questions. Residents in Independent Living often asked about visiting their children. What steps should the residents and staff take to facilitate such visits and what should residents do when they return to Knollwood? Sometimes, a staff member was diagnosed with Covid-19. They had to stay home on quarantine and could not test out of the 14-day quarantine regulation. Even if they tested negative, the CRB would not give an exception because the regulations required 14-day quarantine.

However, sometimes the CRB did not have hard-and-fast rules from the DC Department of Health but instead guidelines to follow. In these cases, the CRB would review a situation and make recommendations to Knollwood's top leadership. Top leadership then considered this recommendation along with the mental well-being of residents. Clinic Nurse Margo Buda explained that leadership wanted "to decrease the feeling like [residents are] in a prison" and thus made Knollwood-specific guidelines.

DAILY CONFERENCE CALLS BEGIN

Top leadership relied upon transparent communication with staff, residents, and families to battle Covid-19. For staff, that meant the establishment of daily conference calls, every weekday at 10 am and on weekends at 12:30 pm. In the beginning, these calls might last two hours. To support this communication, top leadership turned Knollwood's

development team into an operations cell, with James Michels becoming the deputy operations officer and Diane James assisting him with communications. James coordinated with directors to publish regular newsletters with urgent information.

Michels immediately instituted a standing agenda for the calls so that the different directors--from nursing to housing to security to dining to engineering--on the calls would hear what each was doing. As Michels said later, "How do you pool all those people together?" He gave structure with an agenda so that everyone "can get your arms around the problem and wherever the challenges are." The calls with the agenda integrated communication among different departments. Under normal circumstances, nursing and engineering, as an example, did not need to talk to each other on a regular basis. With the pandemic, though, they did.

The calls fostered collaboration, providing a forum for "crosstalk" among the directors. People on the calls developed a common operational picture of Knollwood's status so that everyone knew what was going on. Directors then had the information they needed to make decisions without going back to top leadership. The goal, according to COO Bricker, "was that we continued to be a learning organization throughout this whole process" by fixing directors with responsibility, providing guidance, and "resourc[ing] them for success."

CAV: COORDINATE, ANTICIPATE, VERIFY

Top leadership adopted an Army term, CAV, to bolster coordination and teamwork. CAV referred to the US Army calvary, which had reconnaissance responsibility. CAV stood for Coordinate, Anticipate, and Verify. CAV discouraged stove piping, or siloing, of divisions. The daily calls reinforced CAV and served as part of a larger trajectory of situational awareness, situational understanding, and finally situational dominance. Directors, according to CEO McHale, gained situational awareness as they updated each other on the daily calls. Situational understanding came from watching as events and issues evolved. Situational dominance over the enemy, over Covid-19, resulted from the directors gaining that cross-knowledge and working together toward solutions. Directors learned to count on each other, to coordinate their actions, and achieve success.

AGILITY:

James Michels and Diane James pivoted from their assigned roles in development to support Knollwood operations. They made smart and effective decisions in the rapidly changing world of the pandemic. They demonstrated flexibility and adaptability to change. But they also contributed ideas and turned them into actions. Michels developed an agenda to make the daily calls effective and efficient. James turned information into essential communication via published updates.

INTENTIONAL LEADERSHIP:

Top management at
Knollwood applied their military
training to the pandemic situation
through an intentional model. Top
managers understood that overall
success came from intentionally
including more junior members
of the team, equipping them with
the information they needed, and
allowing them to apply their own
expertise to the rapidly changing
circumstances. Top managers
fostered leadership development
using this intentional method.

DAILY CALLS:

Margo Buda, Independent
Living Clinic Nurse, stated that
"it was really good"
to have the daily calls
"because we kind of got
a sense as to how every
department, how every
area at Knollwood was
affected by Covid."

"Verify" manifested itself in rehearsals Knollwood held for certain events. All the players would meet in the Anderson Salon off the main entrance and would do "a walk and talk." Upper managers went around the room and asked each player what their duties were, paying attention to each aspect of the operation. Knollwood would document the rehearsal to have that record and ensure success. This "disciplined approach," according to Gen. McHale, made sure that on "game day, you're ready." Directors would have practiced and were ready to execute.

Knollwood saw its staff mature over the course of the pandemic. The discipline in approaching tasks raised confidence levels. The focus on "care and compassion and saving lives," according to CEO McHale, "also brought people together as a team who cared for each other. This effect further built confidence and helped keep everyone safe. Director of Nursing Kesseng-A-Mbassa gave Knollwood's response to Covid-19 a "12 out of 10. I am so proud and humbled to work for this company" she said. Top leadership, she went on, "pushed us to do the very best that we can do to serve the residents. And it's not out of ego because it's the right thing to do."

This approach kept the entire operation functioning at the speed necessary to attack and defeat Covid-19. A top-down leadership model, upper managers knew, would not be successful in fighting the virus. Such a top-heavy approach, as COO Bricker later said, would leave the directors paralyzed, and "we couldn't have them paralyzed. We needed to equip them with the knowledge."

Robert Royer, Knollwood's General Counsel, called the daily calls "critical." Directors shared when they saw something that might need fixing or changing. They came up with ideas together. A year after Covid-19 appeared, Royer sees the calls, eventually reduced to Monday-Wednesday-Friday and then just on Wednesdays, as even more useful for communicating across departments, such as during an elevator shutdown.

TRANSPARENT COMMUNICATION WITH RESIDENTS

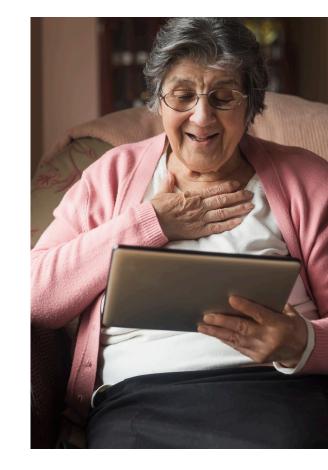
Transparent communication with residents advanced trust in Knollwood's handling of the crisis. This trust would translate into action, such as following protocols, and result in greater safety for everyone. Once leadership had to stop in-person town halls, the newly created operations team spearheaded

written communications through Urgent Updates and then Operational Updates. James Michels explained that "we figured the best way to manage . . . a challenge like this, is just to be transparent." He went on, saying that "communities create problems, if they throw up the walls." Such a scenario, according to Michels, would leave people to "speculate, and we didn't want to do that."

The updates went to each resident as "rail mail," placed on the rails by the doors where they lived. These hard copies had a couple advantages. Residents not computer-savvy, as CEO McHale said, could easily access the information. They could refer to the updates multiple times in different settings. And they could share the updates with family members when they called. Eventually, Knollwood sent digital versions of the updates to family members. Because the updates contained guidance from DC Mayor Muriel Bowser, the DC Department of Health (DOH), and the Centers for Disease Control (CDC), the updates presented an authoritative summary. Plus, people could refer to the updates for Knollwood-specific policy changes, such as with food service or wellness programming.

Top leadership also communicated directly with residents, beyond the written notices. In September-October 2020, Gen. McHale and James Michels conducted interviews with about 40 Independent Living residents, either in-person or on the phone. Michels and his team compiled a welcome package about ADF to describe what the foundation had been supporting during the pandemic and how donations could help expand these offerings. These sit-down talks, more importantly, allowed the general and staff to check on residents and see how they were doing. Residents had "military sensibilities" and understood the "get-in line" approach, according to Michels. They shared in these interviews that they liked that Knollwood "created a lot of sense and order, and our decisions were reasoned and transparent." Wellness Director Sarah Prowitt remarked about the listening tour, as she called it, that "it was really cool to have them [the residents] come back and say, 'You and your team are doing a good job."

Resident Marie Hilliard greatly appreciated her call from the general. She saw this outreach as expressing "sincere interest in how we are doing" and being "very responsive to concerns." Hilliard found remarkable that Gen. McHale walked the campus regularly, especially on Fridays, and stopped and talked with residents sitting in the Anderson Room, just off the







HOW STAFFING WORKS IN A LONG-TERM CARE FACILITY:

Knollwood has # full-time and # part-time employees on its payroll. These employees work in a range of positions, from nursing to business services and from human relations to grounds and maintenance. Knollwood also has contractors provide food services and other specific services. Given the realities of nursing care, Knollwood and other long-term care facilities share from a rotating supply of skilled caregivers and nurses who might work at multiple facilities on varying shifts. Some of these individuals work through companies that coordinate their schedules. Others might work as their own agents. There is no overall database keeping track of these different caregivers and nurses, which complicated contact tracing with the pandemic.

main lobby. One time a woman was playing the piano, and Hilliard saw the general start to dance to the music. Another time, Hilliard saw a woman resident ask Gen. McHale about an issue when he was walking in the building. He stopped and talked privately with the resident for ten minutes, Hilliard recalled, not asking the woman to make an appointment but addressing her situation in the moment. "He stopped, and he listened," Hilliard stated.

TOWN HALLS WITH FAMILY MEMBERS

Knollwood fostered further trust through communication with six call-in town halls with family members. Laura Van Eperen, a media consultant, helped facilitate these calls, in which those family members were often the adult children of "Mom and Dad" living at Knollwood. They were "eager to hear the latest" on Knollwood's actions, especially given the fact that so many other senior living places had been struggling during the pandemic. Van Eperen was "amazed" that Gen. McHale, Col. Bricker, and the Administrator were always available for these calls. Top leadership demonstrated their knowledge of every detail and made clear their dedication and commitment to the residents. Van Eperen said later that, "I think that transparency moved mountains and built huge advocates within those families." In fact, the numbers of people doing the calls dropped, and Van Eperen believes this decrease resulted from family members feeling confident in top leadership, knowing that if they had a concern, they could reach out through the open lines of communication.

KNOLLWOOD IS EXPOSED FOR THE FIRST TIME TO COVID-19

Late on March 14, Knollwood received a call from the DC Department of Health that brought Covid-19 into the facility's immediate circle of concern. Through contact tracing, DOH reported that a female not associated with Knollwood on March 6 attended a memorial service at the facility and later tested positive for the virus. The memorial had included a service in the Knollwood chapel, with singing, and a reception. About 75 Knollwood residents and outside visitors had attended. Visitors had signed in when arriving at Knollwood, but no one wore masks as this action had not been recommended (and was discouraged) by the CDC at this time.

This notification prompted contact tracing within Knollwood, determining who had attended the memorial service and then

who those people had had contact with. Thirty residents went into quarantine for six days, in consideration of the 14-day period it may take for the virus to manifest itself, to watch for anyone exhibiting symptoms. Knollwood delivered meals to people's apartments and checked on the residents remotely. Those quarantining could not leave for trips to the store or routine doctor visits, only for emergency hospital visits.

Michels, in February 2021, described the situation as it existed in early March 2020. People "really didn't know a lot" about Covid-19 back then. He went on, saying, "people didn't have their arms around it." He admitted that "we're holding our breath for that first week [during quarantine] because if you had 20 people that were in contact with that person, if you had half that were all then again positive," then exponentially, you would have a serious outbreak.

Knollwood did not test residents during this scare. Test availability was non-existent. But no one exhibited symptoms after the six days, and Michels stated, "we were fortunate... so that was a big sigh of relief."

But, what next? Michels acknowledged that it became a "quick pivot" to figuring out how to keep the community safe. Leadership understood that if the residents stayed inside Knollwood, and no family or friends could visit, then the disease would have to be brought in through staff or contractors. The problem was that even full-time staff at Knollwood may work part-time somewhere else. Plus, some residents hired their own private duty aides who would come and go to a variety of locations. No universal database existed for tracking where these people worked and thus where they might get exposed to the virus. These rotating staff members were almost like the Greek Trojan Horse, said CEO McHale, because they could bring the deadly virus in, despite screening and security.

MONITORING THE MEDIA TO KEEP TRACK OF COVID-19

Knollwood attacked this problem in part by having Laura Van Eperen's company, Van Eperen Communications, monitor media. Her company watched where people in senior living communities were getting sick. She then cross-referenced personnel from one community to another to check for the possibility of exposures. Her company also shared top newsinformation and data related to senior living communities.

CREATIVITY:

Laura Van Eperen and her company demonstrated creative leadership by finding innovative solutions to the essential question of how Covid-19 entered Knollwood. Van Eperen and her company overcame the quickly changing pandemic landscape and traced where Covid-19 appeared in other long-term care facilities, checking if employees at one may be carriers to Knollwood. Van Eperen and company carried out this meticulous process without the help of databases.



This work helped Knollwood leadership, as Van Eperen stated, "assess the situation and empower them to be more informed as they were making critical, daily decisions." She believes that "they wrote the playbook" on assessing the pandemic and managing it in a senior life plan community. They used their military training, Van Eperen noted, to "make sound decisions quickly." They were "proactive," she continued, using "excellent judgment [to] act fast to protect" Knollwood.

KNOLLWOOD DINING RESTRICTIONS BUT ALSO ACCOMMODATIONS

Once a person moves into a senior life plan community, they know that this move is likely their last. For military officers and their families, that move is momentous because many had moved in and out of housing for their entire service careers. Now, these residents had to rely upon the staff to keep them safe and in good mental and physical health. Col. Bricker stated that the residents "put a lot of faith, trust, and confidence in us" to keep them safe. "We take this very serious," he said. Bonnie Pack, who heads Knollwood's Payroll department and is also in charge of the weekly Covid-19 testing, described this serious commitment to residents, saying that "they're people who gave in their day, and now it was our turn to give back." She characterized many staff members as wanting to work at Knollwood "because they want to give back to them," the residents who had served the country.

Giving back meant making those last years as comfortable and meaningful as possible, but Covid-19 threatened Knollwood's efforts. Knollwood had survived the first potential exposure to the virus from the memorial service visitor. With each day, leadership assessed the situation, following guidelines from the CDC and DC Department of Health, and implemented more and more restrictions to stave off any further incursions. Urgent Updates communicated these new rules. In-person dining in the Bistro went from restricted dining by floor for Independent Living residents to carry-out and no-charge delivery only, beginning on March 24. Assisted Living and Skilled Nursing residents had meals delivered to their rooms at no charge beginning March 15. This same day, staff began offering to deliver all meals, supplies, and prescription medicines to resident apartments. Four days later, Knollwood made shopping and mail delivery available. On March 23, Knollwood closed the pool.

Knollwood helped residents adapt to these restrictions. Beginning March 18, staff introduced residents to free skype and FaceTime sessions to reach out to loved ones. To ensure safety and remain in touch with residents, Knollwood instituted "Director on Duty" on weekends and holidays. All directors, including the CEO and COO, took turns being at Knollwood to address questions and keep a presence.

KNOLLWOOD ISOLATED

Beginning on March 23, Knollwood saw an increasing number of its employees call out sick. Recognizing the increased threat from outside exposures, Knollwood made effective on March 27 that any resident leaving Knollwood grounds would be screened upon re-entry and required to selfquarantine for 14 days, the standard number of days found to rule out Covid-19 exposure. Residents did not need to self-quarantine if they returned in a Knollwood vehicle and were continuously escorted by a Healthcare Assistant with credentials on file at Knollwood. Leadership also stopped all visitation on Knollwood grounds, leaving the campus accessible only to residents, employees, delivery trucks, mail delivery, law enforcement and emergency vehicles, healthcare professionals, advance-notice visits for safe business operations, and those entering for hospice or imminent death visits. This campus lockdown effectively isolated residents from the outside world. If Covid-19 entered Knollwood, it would come from the few categories of people still allowed access, most notably staff.

FIRST RESIDENT COVID-19 DEATH AT KNOLLWOOD

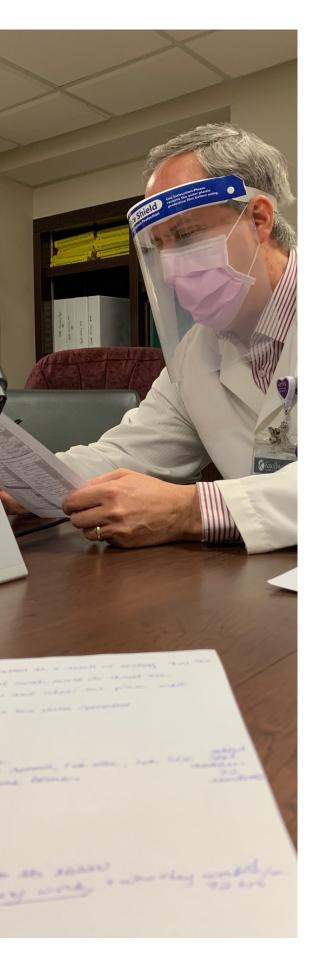
Despite more than a dozen nursing homes in the DC area reporting Covid-19 cases in March 2020, Knollwood had no known cases going into April 2020. That situation quickly changed after one resident, a 90+ year old woman living in Skilled Nursing, died on April 6. A few days later, the Medical Examiner, who by this point routinely tested for the virus, called to say this resident had died of Covid-19. Col. Bricker said later that "we're blown away." Director of Nursing Arlette Kesseng-A-Mbassa reported later that this patient had had a fever, one of the signs of the virus and had declined quickly. But she and other nursing staff did not think the patient had the virus. When the news came of the cause of her death, Kesseng-A-Mbassa said that "I can tell you, you could have cut



WASHINGTON, DC DURING THE PANDEMIC:

Within DC, testing ramped up and so did the number of positive results, adding urgency to Knollwood's efforts. The District reported on March 22 two deaths from Covid-19. Each subsequent day in March, two or more people died of the disease in the city, and the numbers of positive test results jumped from 32 to 586 positives on March 31. In response, Mayor Muriel Bowser on March 20 directed that all DC residents stay home.





the air with scissors, it was so thick around people." She went on, repeating what her co-workers wondered, "'Now what do we do?" The DC Department of Epidemiology directed mask wearing, which in April 2020 became a required preventative measure in sections of the United States for indoors or when people could not maintain 6-foot distancing outside.

EMPLOYEE DEATHS FROM COVID-19

Around the same time as this resident's passing, one employee and then another tested positive for Covid-19. The first employee, who worked in the Environmental Department, tested positive on April 7, went on a ventilator, and lived until May 5. Another employee tested positive on April 14 and passed away five days later. The latter employee, a Registered Nurse who worked fulltime at one facility and then worked part-time at Knollwood on weekends, had not been to Knollwood for nine days prior to testing positive.

Meanwhile, Knollwood saw five residents exhibit signs of Covid-19. It took the city four days to come and test these patients. Employees continued to call out sick. Covid-19 had arrived at Knollwood.

UNIVERSAL TESTING: WHY PURSUE IT?

It is at this point that Knollwood relentlessly pursued universal testing. COO Col. Bricker wondered, how do we approach this and how do we figure out how the virus entered Knollwood? "If you can't figure out how it got in," he asked, "then how do you defeat it and how do you defend against it? How do you know that the actions that you've taken are making a difference?" This realization became even more clear based upon information provided by Director of Nursing Kesseng-A-Mbassa. She described how Covid-19 created a web due to the interactions between staff and residents. Based upon staffing ratios, one Certified Nursing Assistant (CNA) worked with five residents, so that CNA would go into one room then the next, potentially spreading the disease. Medication nurses worked with 12 patients, so they went into each of 12 rooms. "You can just see [how] the web was woven," she said. If one CNA had the disease, it could easily spread amongst the residents, plus any staff members who interacted with the CNA or medication nurse.

Col. Bricker compared the situation to when he was a US Army helicopter pilot in Afghanistan. He told *US News* reporter Ruben Casteneda in October 2020 that "When you fly into

fog, you're flying blind." Col. Bricker explained that "Testing provides a light through the (fog) to better understand what you're dealing with." Instruments, like those in the helicopter or testing during the pandemic, tell where you are and where the disease is, making it possible to fly safely or stop the virus from spreading.

James Michels, who pivoted from being Vice President of Development to Deputy Director of Operations during Covid-19, emphasized the disarrayed state of the situation. He described how Independent Living residents might hire private duty aides, who had no official affiliation with Knollwood, to come in. Knollwood could not be sure if those aides might be free of Covid-19 or not. Another complication came from Skilled Nursing at Knollwood, which has 24-hour care and memory care. Memory care residents cannot follow masking and isolation requirements, making it challenging for nurses to keep possibly infected people from spreading the disease. Finally, many Covid-19 symptoms, according to Michels, are similar to other illnesses, such as colds or the flu. He said, "It's very ambiguous, very murky to try to sort through it. Is someone having Covid or are they someone who's older, who's got other health issues?"

Michels explained that Knollwood staff and managers understood that universal testing would answer questions. He stated that "We [have] got to be able to figure out how we get a test. I mean, there's no other way. We're kind of guessing." He went on, saying that "We have to be able to test the building and test the residents, so we can parse through and see who is positive and who is not. And then from there, we can make informed decisions about the community." With testing and the information that it provided, Knollwood could establish protocols and processes to address the situation.

DC DEPARTMENT OF HEALTH SAYS "NO" TO UNIVERSAL TESTING

Despite this recognition of the need for universal testing, the CDC and the DC Department of Health had determined as early as March 3 that only symptomatic people would be tested. This decision may have been made based upon the availability of Covid-19 tests at the time, which was low. But this approach did not correspond to what leadership at Knollwood knew had to happen. After its first resident death on April 6, Knollwood held a tense phone call with DOH's chief medical officer Dr.



TESTING:

In the early months of the pandemic, the United States did not have a reliable supply of tests for Covid-19. To address this shortage, the CDC recommended that only people exhibiting symptoms should be tested. However, research made clear that as many as 40 to 45% of infected people displayed no symptoms and could transmit the disease unknowingly to others. Given this research, leadership at Knollwood pursued universal testing as the only way to know exactly who may have the disease and thus spread it to others.



Nesbitt. Col. Bricker remembered, "I plead[ed] with her for testing," but Dr. Nesbitt stuck to "No," only approving testing of symptomatic patients. Thus, DOH did send Knollwood tests for its symptomatic patients. Laura Van Eperen was on that "very tense phone call," and she saw it as "a turning point for the Knollwood leadership." With the hard "no" from Dr. Nesbitt, Knollwood realized they would have to go to the private sector.

Universal testing, Knollwood's managers knew, was the only way to identify, contain, and fight the virus. Many people at Knollwood contributed to make that vision possible. CEO Gen. McHale, who had worked in logistics throughout his Army career, explained that "I've been trained to go aggressively after solutions," maneuvering around bureaucracy when needed to accomplish goals. He called the DC Department of Epidemiology and FEMA for help. ADF Board members called their contacts at the White House to ask the CDC to come to Knollwood to conduct testing.

LABCORP AND INITIAL TESTING

Separately, Col. Bricker worked with Dr. Eric De Jonge, Chief of Geriatrics from Capital City Caring, to identify an alternative testing company. This company, LabCorp, agreed to provide initially 150 tests so long as Knollwood used the tests. LabCorp had found that other communities had hoarded their tests. Col. Bricker knew he would use those tests and more. Dr. De Jonge agreed to train Knollwood's staff and help them with the testing.

KNOLLWOOD MEETS WITH DC DEPARTMENT OF HEALTH AND CDC

The phone calls from Board members and others prompted three CDC representatives flying from Atlanta to DC on Easter weekend 2020 to discuss testing at Knollwood. The CDC is required to notify the local Department of Health when entering a state jurisdiction. This notification prompted the DOH to join the CDC at Knollwood on Easter Sunday. Dr. Jonge also met with the group. Debate ensued about testing. Walter Reed Army Hospital refused to process any tests beyond those of symptomatic patients' tests, arguing that Knollwood was a non-profit, not governmental.

After nearly two hours, Knollwood opted for the path of least resistance. DOH agreed to test the five symptomatic Skilled Nursing residents. LabCorp agreed to provide tests for residents and staff in Skilled Nursing and Assisted Living

and to process them. Each test cost \$50, and Gen. McHale approved the decision to spend Knollwood money to obtain that vital information. Dr. De Jonge oversaw this initial testing effort, with a rehearsal on Monday, April 13 and testing April 14 through 17. Col. Bricker expressed extreme admiration for Dr. De Jonge and the Knollwood staff. Capital City Caring and Dr. De Jonge's team, Col. Bricker said, "they were awesome." And Knollwood's "nurses had all the PPE," according to Col. Bricker. "They were literally like infantry soldiers. They were brave. They were fearless. They trusted their leadership. They put their stuff on, and they went in there, and they swabbed those poor souls to get those tests." First, they tested Skilled Nursing residents. Then the next day, they tested the nursing staff. Bonnie Pack, who is in charge of testing, said that De Jonge had set up stations outside in the front circle, and people drove by to get tested.

RESULTS FROM FIRST ROUND OF TESTING

With that first round of testing in early April 2020, Dr. Polis, Knollwood's medical director, was the ordering official. His name and the charge nurse's fax number went on the lab slip. A day or two later, the faxes with test results started coming in. At first, the results were all black, or negative. But then red started showing up, indicating positives. Col. Bricker captured the scene, saying that "we're literally running down the hallway, grabbing employees and sending them home." The infected staff heard that "'You're positive. You need to go home. You need to isolate. We'll keep in touch with you. You need to call your doctor. You're positive for Covid. You need to get out of here right now." That first round of testing identified 18 residents (11 asymptomatic) and 11 employees as Covid-19 positive, out of 48 SNF residents and 198 staff. Assisted Living testing resulted in zero residents and one employee positive.

SOME RESIDENTS DIED OF COVID-19 AND MANY SURVIVED

Universal testing did not mean that those residents already infected with the virus would recover. In total, nine residents, all with underlying medical conditions and in their 80s and 90s, passed away from Covid-19 in April-May 2020. Knollwood has not had any deaths since those early months, a remarkable feat. Equally significant, as of February 7, 2021 [updated date?], all 20 residents who tested positive recovered, and all 78 employees tested positive recovered.

COURAGE:

With so little known about Covid-19 in early 2020, except how deadly it could be, the nurses and other medical staff who conducted the first testing at Knollwood exhibited courageous leadership, reassuring others through their example that with proper procedures and PPE, they could safely do their jobs.

PERSISTENCE:

Knollwood's leadership team did not take "No" from the DC Department of Health as the final word. Knollwood knew to its core that keeping everyone safe meant testing everyone. When DOH refused to take such action, Knollwood's senior leaders persisted until they found a way to do what they saw as the only option.



KNOLLWOOD AND CONTACT TRACING

Knollwood conducted its own contact tracing to determine how the virus got into the facility. This analytical approach represented how leadership handled the myriad challenges presented by Covid-19. Top leadership wanted to know everything it could about the disease and its trajectory into Knollwood. This information was the only way Knollwood knew it could keep people safe. Administrators at other life plan communities, according to many people at Knollwood, did not pursue testing because they feared the results. Director of Nursing Arlette Kesseng-A-Mbassa completed an in-depth review of the Skilled Nursing unit, looking at who specifically worked with which residents at what times over the course of several weeks leading up to the first resident death. This contact tracing identified one likely person who brought Covid-19 into Knollwood. Knowing this information, top leadership could defend against further incursions.

Testing had identified an asymptomatic resident in memory care. Not surprisingly, this person was not following protocols with mask-wearing or staying 6 feet apart and was thus spreading the disease. During one of the daily calls, directors brainstormed how to stop the Covid-19-positive resident from spreading the disease without physical or chemical restraints, which were against regulations. The action had to detain but not restrain or pose a barrier. Gen. McHale challenged his directors, "I'm talking about a deeper solution." He pushed, "How do we set the conditions?" After much back and forth, General Counsel Robert Royer suggested the idea of using "Authorized Access Only" tape across doorways that stuck to the doorjambs via magnets. Knollwood bought more than a dozen tapes, and they did the trick. Residents stayed in their rooms and any spreading of the disease stopped. Knollwood contained Covid-19.

Knollwood tested routinely to keep track of where the virus may next appear. At first, that meant testing the nursing staff, but beginning in June 2020, Knollwood tested all staff. The testing went from roughly monthly to weekly when DOH stepped in [possibly August 3, 2020—needs confirmation] and required all DC long-term care facilities to test weekly. Knollwood tested Independent Living residents twice, once in May and the other time in mid-October. The first IL testing found no positives, but the second round identified two people (a couple) with Covid-19. They likely contracted the virus while away from Knollwood, as opposed to getting it from staff coming into the facility.

Universal testing has resulted in sending asymptomatic staff home. Staff could have abused this scenario by not quarantining. But Knollwood decided to keep paying quarantined staff, so long as they did not abuse the system. General Counsel Royer explained to the union that Knollwood would not dock pay for quarantining, but if Knollwood determined staff was taking advantage of the system, then pay would come out of vacation days. The union, according to Royer, was "very happy about our approach" and sent a note to union members saying to go home, do their quarantine, and "get back to work."

ABBOTT RAPID TEST

One of ADF's Board members decided to bolster Knollwood's testing program by donating the money to acquire the Abbott Rapid Test. The DC Department of Epidemiology certified the lab for handling the Rapid Test. The test could identify a positive result within 20 minutes of taking a swab, making it essential for when approved visitors or contractors arrived at Knollwood. The ability to test for Covid became a regular testing regiment that gave Knollwood an accurate understanding of the disease within the community.

OUT OF THE BOX THINKING

These examples about testing illustrate the "out of the box" thinking Knollwood used throughout the pandemic. Gen. McHale stated that "we're always trying to think outside the box, set the conditions for not transmitting the disease and looking." Col. Bricker made the point starkly, saying "Think out of the box. This is the box, we're staying in the box. And staying in the box, people die." He emphasized that "In a pandemic, you've got to have the capacity to get out of the box." Bonnie Pack, in charge of testing, stated that "It just required a lot of us doing things we don't normally do."

The numbers indicate how this out of the box thinking set Knollwood apart. According to *The Atlantic's* Covid Tracking Project, the District of Columbia in April-May-June saw nearly 200 daily positive cases of the virus. In April and May, hospitalizations from Covid-19 reached as high as 450 people on a 7-day average, and deaths on a 7-day average exceeded 12 per day. For long-term care facilities and nursing homes in the District, by the end of June in 30 facilities, 975 residents of long-term care and nursing home facilities had tested positive and 162 had died of the disease. Knollwood stood strong

INTEGRITY:

Robert Royer and top leadership expressed integrity by being honest with the union and explaining the conditions under which Knollwood would keep paying its employees if quarantined. Royer and top leadership reliably maintained this stance throughout the pandemic so that staff members would know what would happen if they tested positive to Covid-19.

AGILITY:

Covid-19 required agility of leaders to try new things and remain open to change. Medical researchers knew so little about the disease and the immediacy of the crisis forced leaders to practice agility.





with only 9 residents dying from the disease, and there was a remarkable 150 days with no Covid-19 in Knollwood.

KNOLLWOOD STRONG

This record of success could not have been possible without everyone—leaders, directors, staff, residents—pulling together for a common cause. Diane James remembers that a nurse put a tagline to that commitment, "Knollwood Strong." As James said, "this spirit of we're going to do what we need to do. We're just going to band together here and even at all levels." That tagline got expanded, in part for fundraising and marketing purposes, to "Stronger, Smarter, Safer." Through this tagline, Knollwood drew attention to what it had accomplished and what it wanted to do with new technology and other means to keep residents and staff safe from Covid-19.

Staff members modeled Knollwood Strong to the residents through their compassion and courage. Resident Marie Hilliard noted that staff "did everything they could to keep some sort of social life alive." Staff had to follow District of Columbia orders on social distancing, but they also found ways to still have programming. Hilliard mentioned exercise classes both in-person and on Zoom or BINGO with disposable cards to discourage spreading the virus. Resident Julia Plotnick, a Knollwood resident since 2013, routinely took advantage of the Sit and Fit offerings.

Plotnick, who had served as Assistant Surgeon General—the country's "Chief Nurse"—recognized Clinic Nurse Margo Buda for her Knollwood Strong presence. Plotnick described Buda as doing a "marvelous job" in part because she "is not excitable." Plotnick said that Buda "present[s] a sense of calm when she speaks. It's not erudite." Instead, Buda states the rules, tells residents they must follow them, and that "this is how we're all going to get along," according to Plotnick. Plotnick said residents "appreciate[d] that" approach and responded positively. Hilliard commended Buda for her responsiveness with resident questions and concerns.

Residents also looked out for each other and the staff. Plotnick described how "there is that camaraderie, even if it's by phone or you pass someone in the hall and you see that they are okay." She went on, saying, "It's a family, I feel it's a family, I am very comfortable here." Marie Hilliard compared when she had lived in a high-rise apartment building. She might have known her immediate neighbors but no one else. "This is different,"

she said. "This is community. This is family. And we do check on each other. We do. So that all makes it livable."

Residents have expressed their heartfelt appreciation for the staff and wished them well during the pandemic. Marie Hilliard said that when she and others say the Rosary every afternoon, they open with a prayer for Gen. McHale and Col. Bricker by name. She said that people understood the "responsibility on their shoulders that they bear to keep us alive. It's respected. It's respected."

PURSUING PPE

General Counsel Robert Royer epitomized Knollwood Strong in his unrelenting effort to obtain sufficient Personal Protective Equipment (PPE). Long-term care facilities generally did not store large quantities of PPE because it did not get used, and sometimes the PPE would expire before it was needed. But Covid-19's high infection rate required masks, gowns, face shields, gloves, and sanitizers. Knollwood found itself competing with other long-term care facilities, according to Michels, plus workplaces and homes to obtain these precious items.

Royer stepped in, with an interest in thinking outside the box. He had done a lot of construction in his life, and he knew for example that painters wore gowns and shop workers wore goggles. When the medical supply stores ran empty, he went to the big box hardware stores, scrounging for whatever he could find. At times, the nurses looked odd wearing black rubber gloves instead of blue or logger's face shields instead of medical ones, but the improvisation still met the nurse's needs. At one point, Royer admitted that Knollwood almost ran out of gowns, and staff started making them, but the supply soon caught up. Different facilities also began to share their extras and conduct exchanges. Knollwood kept a careful inventory of its PPE stock and locked it up like it was gold.

Having enough PPE added confidence to staff. Testing required changing the gown and the top of two layers of gloves with each test. Staff also wore a surgical mask over an N-95 mask, a face shield, a hair cover, and shoe covers. Knollwood, as of July 2020, according to Bonnie Pack, completed on average 220 tests each week, doing the testing in-house by its own staff. The facility has thus gone through a lot of PPE simply to complete this task. Staff also needed sufficient PPE to go into memory care and other skilled or assisted living rooms

COMPASSION:

Clinic Nurse Margo
Buda's no-nonsense
personality underlies her deep
compassion and commitment to
her charges in Independent Living.
She had been in the Emergency
Room at the hospital closest to
the Pentagon on September 11,
2001, and she had treated people
following the terrorist attack. She
admitted she

"has seen so much"
but continues to learn and apply
her skills to Knollwood's residents.
Col. Bricker said of Buda,
"she would test literally
until she couldn't stand
up because she gets it,
and she's a nurse, and
she hates freaking Covid.
She's a fighter. I'd have
taken her to war."

PERSISTENCE:

Robert Royer did not let the worldwide PPE shortages stop him from relentlessly tracking down masks, gloves, and other essential items for Knollwood. He demonstrated flexibility by searching in unconventional places. He continued in his quest even after a costly defeat. He helped ensure that Knollwood nurses and staff had the protection they needed.





to directly help residents. Gen. McHale observed that having enough PPE, "that was a confidence builder" for nurses and Certified Nursing Assistants (CNAs), but also the engineering and custodial staff who had to go into those rooms to fix or clean something.

Knollwood got swindled once, though, paying a European company for 10,000 face masks. Royer had had a banker friend in Switzerland and an ambassador check out the company before committing any money. Both reviews said the company was legitimate. But the masks never arrived. Further investigation by an American shipping company found that the company was a Hungarian operation that had scraped the website of a German shipping company, changing one letter of the name. Royer turned to a friend in the Secret Service who had just finished an assignment at Interpol. This person took the data to Interpol, which is investigating. Even in the face of this defeat, Royer embodied the persistence and commitment of Knollwood Strong.

WELLNESS FOR RESIDENTS AND STAFF

Wellness programming under director Sarah Prowitt also epitomized Knollwood Strong. Col. Bricker laughed and said that Prowitt and her team "were like Door Dash for 170 [Independent Living] residents." They wore track shoes every day because they kept running errands for the residents. Prowitt relied upon levity and a can-do optimism. She joked recently that she must have bought cases of Preparation H and Depends undergarments. Residents thanked her in their holiday cards for picking up the "embarrassing" items. Prowitt responded with "'Whatever. This is my job now, this is my life now."

Prowitt initiated virtual programming as a substitute for the concerts and plays residents would go to in the DC area. She found a yoga company that used live streaming for residents. But Prowitt also described the Knollwood staff and "made a need known." She "talked about stress and burnout," and the yoga company offered staff free access, recognizing that they "would benefit from some yoga and meditation." Other exercise classes also went virtual. At Christmastime, the Army Chorus recorded a concert and gave Knollwood residents access through a private YouTube channel.

Technology challenges have not kept people from benefiting from varied programming. Prowitt's team devoted a lot of time

to introducing technology for virtual classes to residents and helping them feel comfortable with it. On the other side, some residents have shared their skills and interests with staff and other residents in the new MakerSpace. This space opened during Covid-19 and has such technological marvels as a 3-D printer, cricut machine, and self-threading sewing machines. One resident with advanced Parkinson's discovered that she could send her grandkids handwritten notes using the CriCut machine, programmed to do writing. Residents can make jewelry or masks. The MakerSpace "can unleash so much creativity," Prowitt said.

Skilled-nursing and assisted-living residents had limited opportunities for programming and such programming would be off-and-on based on quarantining. Their nurses encouraged the wellness staff, asking "'What can we do consistently," Prowitt asked, "to do some patient-centered care, some individual seeing this person as a whole-person activities?'" Prowitt and her team came up with "workarounds." They made carts to go door-to-door so that they could stay socially distant but still deliver arts and crafts supplies or reading materials. Once, they did door-to-door sundaes for an ice cream party. She reflected later, saying that "it's important to have some of those joyful moments."

Prowitt admitted that long-term care places in general have taken a bad rap during the pandemic. People saw them as "petri dishes" for Covid-19 and death. But she knew that such a description was not true for all places, and especially not for Knollwood. She agreed that any time people are in confined spaces, there are risks. "But there's also risk management, and there's infection control," she argued. "We've all received such an education in that," Prowitt stated. She went on, saying that "There's ways to gather safely, and there's ways to do the things that residents want to do and love to do that make life worth living." That commitment to Knollwood Strong has driven the Wellness team in helping residents during such unprecedented times.

RE-ESTABLISHING EMOTIONAL WELL-BEING

The pandemic has taken a toll on the emotional well-being of both staff and residents. Knollwood has tried to address this pain. Director of Nursing Kesseng-A-Mbassa admitted that the loss of the two employees, including one person who was in his 20s, "was tough. It's still very tough. You could hear it in my voice. We have not really dealt with it" even a year later.

COURAGE:

Sarah Prowitt
demonstrated courage
by facing her own fears
of Covid-19 and her father's
health, who almost died of
Covid-19. Instead, she creatively
and compassionately addressed
resident needs by running errands
and offering programming to
boost emotional well-being. She
also recognized and initiated
actions to help staff cope with the
overwhelming situation.



COMPASSION:

Knollwood's senior
leaders routinely honored
the compassion and
strength exhibited by their
staff with awards such as the
Santos award. This intentional
recognition further developed
leadership within the Knollwood
team and built a solid foundation
for success.





A hospice company came at the time to help with a virtual ceremony, but she thought the staff needed more. She knew, though, that "I need to make a space" for staff "to release the memory, be able to talk about those people, how they worked with them and what the loss means to them personally." The reality during the pandemic had been "just going and going and going. We have not stopped to do that yet," she said.

The death of one staff person prompted a lasting memorial. Chief Financial Officer Enrico Santos died suddenly in April 2020 from non-Covid-19 circumstances. Diane James remembered the announcement during one of the daily conference calls. Everyone was left speechless, she recalled. Gen. McHale noted that Santos had only recently done the paperwork for Knollwood to receive a crucial \$2.3 million Paycheck Protection Plan loan that would become a grant after Knollwood met the criteria. Gen. McHale said that Santos "was so loved by all who worked for him, by all the residents." Going on, Gen. McHale noted that Santos' "small staff down there was devastated by his loss."

In his memory, Knollwood established the Enrico Santos Exceptional Leadership Award to recognize Knollwood's leaders. The inaugural ceremony in December 2020 honored four outstanding leaders, Director of Nursing Arlette Kesseng-A-Mbassa, Wellness Director Sarah Prowitt, Clinic Nurse Margo Buda, and Controller Taci Merkley. Gen. McHale stated that this memorial award honored Santos but also set "the conditions of caring for your people" by rewarding exceptional service and allowing people to remember and honor one of their own who was now gone.

EFFECTS OF THE PANDEMIC ON RESIDENTS

The pandemic has worn on the residents in visible, painful ways. Kesseng-A-Mbassa described the memory care residents. She believed that we do not know if "someone with a diagnosis of dementia is not aware of what is going on." But she could "see the sadness in their face." She could tell that the residents wanted the nurses to stay longer in their rooms, where they quarantined. They could only see their family through a device (computer screen), and they could not socialize with other residents. Kesseng-A-Mbassa said that that situation "was really heartbreaking."

Independent Living resident Nancy Roderer felt the pain first-hand. Her husband lived in memory care. They saw each

at least once a day, always at lunchtime, holding hands. With Covid-19 restrictions, she had to interact with him over FaceTime or on the telephone. She described how he could not speak, but he seemed to respond to FaceTime, and he even put his hand to the screen when he saw her face. He went into hospice after six weeks in isolation during Covid-19, and she spent his last week with him. She commented later that he might have died faster due to Covid-19 and the isolation. She said, "If you look across all the residents, I feel that there has been more deterioration in all three levels because of the isolation. But it's a pretty hard thing to measure."

Clinic Nurse Margo Buda echoed this observation. She noted that for residents with cognition issues, the nurses had seen a real decline in those residents. They needed family interaction, Buda explained, not just the excellent care from the staff. For residents without cognition issues but feeling sad, Knollwood started virtual visits with a psychiatrist in late 2020. Hilliard could also see visible signs of sadness. "It's taken its toll," she said. "I've seen people with weight loss. I've seen people who aren't socializing," unlike herself who picked up her mail or her meals instead of having them delivered. Hilliard needed that social interaction to care for her emotional health.

KNOLLWOOD AND THE VACCINE

By the end of 2020, medical scientists and governmental agencies created a miracle and developed more than one vaccine against Covid-19 for large-scale public use. Knollwood partnered with Walgreen's and Dr. Laura Gilbert of the Uniformed Services University of the Health Sciences to coordinate administration of the Moderna vaccine. Knollwood held its first vaccination clinic on January 6, 2021, putting shots in arms of all residents and all high-priority staff. A second clinic on January 15 gave first doses to the rest of the staff, plus contractors and other people, including family members of the most vulnerable residents, who come to Knollwood.

Two aspects of Knollwood's approach to the vaccine deserve attention. First, Knollwood mandated that everyone receive the vaccine. Col. Bricker and Gen. McHale knew that they had to be proactive, as with testing, and mandate the vaccine. This decision meant that top leadership had to talk to the union, though he observed that employees had already expressed their interest in getting the vaccine. General Counsel Bob Royer pointed out this fact to the union leader. "'Don't stand in their way," he told the leader. The

COMPASSION:

Arlette Kesseng-a-Mbassa embodied hope and encouragement for staff and residents. She recognized the basic humanity of memory care residents despite their inability to communicate and sought ways to connect them to others. She also pursued ways to help her coworkers process painful emotional upheavals using outside mental health professionals. The sum of these actions meant that Knollwood could continue to serve its residents while uplifting its employees.



PERSISTENCE:

Knollwood directors and staff persisted in ensuring that every drop of usable vaccine went into arms and thus save more lives.

union leader canvassed their members and agreed. The union was behind vaccination. Staff had to show medical or religious reasons not to get vaccinated, and their non-vaccinated status did not guarantee an accommodation if none was available. If Knollwood could not accommodate an unvaccinated staff member, they would be laid off. Almost all residents got vaccinated, except for two with comorbidities and two with religious preferences. Col. Bricker declared by the end of March that Knollwood had herd immunity.

The second distinguishing aspect of Knollwood's vaccination process was its determination to use every drop of vaccine. Nothing was wasted. Gen. McHale had recognized early in the vaccination effort that the bottleneck for the rollout would be efficient retail distribution. The horror stories confirmed his prediction, that pharmacies were wasting vaccine because they had thawed out more than they had arms to give shots to. He made sure Knollwood had a "Maxwell House Moment" at every vaccine clinic, "Good to the Last Drop." He knew that most vials of vaccine were supposed to give 10 doses, but many times, they gave 11 doses. He always made sure that Knollwood had extra people waiting to use up those extra doses. For the first clinic, they had 30 vials and had enough dosages for 326 people. Twenty-six of those vials thus produced 11 doses. In Col. Bricker's words in mid-March 2021, "there are so many people that are just dying, they're just-- they're crying for the vaccine." He vowed to make sure that "It's good to the last drop, and we're going to suck every damn drop out of every single vial to make sure it's going in people's arms."

Mandating vaccination and making sure to use every drop of vaccine illustrate further how top leadership thought outside the box to defeat Covid-19. And Knollwood staff and residents overwhelmingly approved this approach. General Counsel Royer said that employees saw their vaccination "like a badge of honor." Bonnie Pack thought employees might resist the vaccine, but instead they called her and asked when they could get it.

ADF BOARD AND KNOLLWOOD OVERSIGHT

The ADF Board kept close track of how leadership protected staff and residents and commended those actions. At the May 2020 Board meeting, Board Chair Gen. Jack Keane, US (Ret.) commented that it should not be a surprise that Knollwood was impacted by Covid-19, given its most vulnerable age group. He supported the universal testing approach, as noted in the May 21, 2020 Board Minutes, saying that "government"

should have implemented comprehensive testing in senior communities." VADM Frank Pandolfe acknowledged the "proactive, top-notch care" leadership provided at Knollwood.

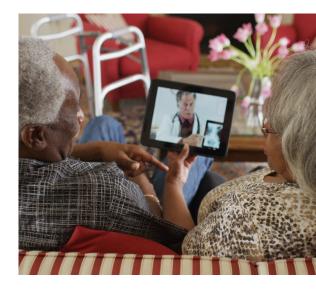
General Counsel Royer had seen firsthand the Board's perspective on Knollwood leadership. Royer stated that the Board "has been very, very supportive of Tim [Gen. McHale] and the operations there." They have stayed updated and made suggestions about visitation, wanting to have more family visits. But the Board, according to Royer, left daily operations and decision-making to Gen. McHale and Col. Bricker.

CONCLUSION: INTENTIONAL LEADERSHIP

This case study has examined how Knollwood responded to the Covid-19 pandemic through the lens of leadership. Six leadership traits have been highlighted: agility, integrity, creativity, persistence, compassion, and courage. Directors have displayed these traits and proven themselves to be strong and effective leaders. Knollwood's staff, from top down, and even its residents, have also exhibited other leadership characteristics that have further fueled success. These traits are collaboration and integration, appreciation, vision, accountability, and resilience. Significantly, the intentional leadership model at the top spilled down to the directors, their staff, and the residents, creating a positive work setting. People felt safe enough to, even during the height of the pandemic, to take some educated risks with an eye toward bettering others. When many other sites may have doubled down in fear and isolation, Knollwood, with its military sensibility, went out fighting against this dangerous disease.

CONCLUSION: COLLABORATION AND INTEGRATION

Knollwood's leadership team recognized the value and necessity of combining forces to succeed against the pandemic. The CEO and COO created an environment that fostered collaboration. They encouraged directors to use CAV—Coordinate, Anticipate, and Verify— to obtain situational awareness, situational understanding, and situational dominance. Top leadership modeled this collaborative approach and continually brought directors and their staff into discussions to build intentional leadership.







One key example was the fact that everyone was expected to work onsite and adjust their assigned work responsibilities to the reality of the pandemic. Gen. McHale managed by walking around the campus, seeing people and hearing their voices. He became closer to the staff and would ask questions to assess how they were doing. If he heard something amiss, he alerted the staff member's supervisor to find ways to support the employee. McHale's little questions also encouraged employees to figure out ways to balance their work and personal lives, a key leadership development.

The daily conference calls advanced collaboration in real time every day. Clinic Nurse Buda noted that the calls were "really good to have" because everyone gained "a sense as to how every department, how every area at Knollwood was affected by Covid." Directors heard what each of them was facing and provide support or guidance.

Deputy Operations Director James Michels described the importance of collaboration and integration. He used the example of cleaning. Pre-Covid, the cleaning crew would just announce that they were cleaning. During the pandemic, though, many questions surfaced. What products do you use? Do you have the products? What method do you use to clean? Is there a better way to clean? He summarized by saying that with day-to-day operations, the goal was "integrity and integration between all the departments and keeping those lines of communications flowing so that we were working together and solving problems."

The directors collaborated with their own staff members, strengthening Knollwood's ability to fight Covid-19. Col. Bricker stated that no matter "how deadly it seemed. They put on their PPE, and they had confidence in their equipment, and they would go out and take care of those residents." They "expected those workers to do the same thing," Col. Bricker noted, acting as true leaders.

Directors guided their own staff members to further build a collaborative workplace. Margo Buda made sure to share information from the daily calls with the two nurses and CNA on her small staff so that they could fulfill their responsibilities. Sarah Prowitt asked her staff to model the wellness steps they tried to teach residents, such as stepping back when frustrated. She described whenever her staff came to her struggling with something, she would say, "'Well, what's your priority right now?" She wanted them to think about why they

were doing what they were doing. "And normally when we can center it back to the residents," Prowitt explained, "it gives them a renewed sense of feeling good about what they're doing, regardless of the tasks."

CONCLUSION: APPRECIATION

Knollwood also implemented ways to appreciate and thus motivate staff members. Col. Bricker complimented directors during the daily conference calls for clear, concise reports. Gen. McHale encouraged staff to address family issues by taking time off if needed. He saw that such an attitude and the resulting work environment "actually brought us closer together." In addition to the annual Enrico Santos award, Knollwood had monthly recognitions of staff. In combination, these recognitions gave directors "a little shot of courage" so that they could be leaders to their staff.

Gen. McHale saw these recognitions as expressions of "deep respect for the people, how much they were serving and sacrificing." He acknowledged that "we were at war with this virus, and we recognized people." The result was "powerful," he said. At times during these award ceremonies, "it was emotional, from loss of loved ones, what was going on, and it was serious," he said. The ceremonies and the tears demonstrated, according to Gen. McHale, "how much the leadership and the residents respected what was going on."

CONCLUSION: VISION

At the CEO's prompting, directors set their sights for the future. Each director reviewed online sources and media and put together a binder encapsulating how their departments needed to change to meet future scenarios. Gen. McHale knew that after 9/11, everything changed, and similarly, after the Covid-19 pandemic, "there's certain things that [we] will never go back to, the new normal will be different." He challenged his directors to envision that new normal. Some of the ideas that came back involved new technology, such as UV lighting for cleaning. Knollwood adopted this technology.

CONCLUSION: ACCOUNTABILITY

Media consultant Laura Van Eperen believed that the excellent leadership by Gen. McHale and Col. Bricker fostered both leadership and accountability in the directors and staff.











She saw how top leadership knew "how to hold people accountable and ask the right questions and empower them to get the answers." Top leadership demonstrated "complete confidence in the team" through this approach, she said. They handle "it the perfect way because it's very empowering and also supportive" to help the team "get those answers" and solutions so that "we all have confidence" that, according to Van Eperen, "we're doing our damn best today."

CONCLUSION: RESILIENCE

Wellness Director Prowitt spoke about how residents taught her one important skill: resilience. She described how residents missed seeing their children and grandchildren or attending weddings and other big family occasions. But then residents would pivot, Prowitt found, and say, "'Yeah, it was weird, but,' and then they kind of shift, and they say, "'I'm happy to be at Knollwood. I feel safe here." Prowitt marveled at their resilience and their ability to reframe, and she tried to apply that ability to herself when she was feeling down.

Resident Nancy Roderer agreed that people had displayed resilience during the pandemic. She said that "I think Covid has demanded reserves of resilience that we didn't know we had." She herself had suffered two devastating losses, her husband and her sister, within a few months of each other. But she continued to serve as president of the resident association and keep communication channels open between management and the residents. She had taken a picture "outside the special care window of a pretty little flower growing out of a brick wall. That's kind of what resilience is about to me," she explained.

ASSESSMENT AND LESSONS LEARNED

National Public Radio's local Washington, DC station WAMU, based at American University, has spotlighted Knollwood on numerous occasions throughout the pandemic. These programs have highlighted the numerous ways that Knollwood has succeeded in fighting the virus and kept residents and staff safe. *US News* and Reuters, nationally, have also featured Knollwood and its positive actions. When the CDC came to Knollwood on Easter Sunday, Clinic Nurse Buda heard them say that Knollwood was "ahead of the game."

There are at least 30 long-term care facilities in the District and dozens more in the DC metro region. Knollwood stands in the very top percent for developing an intentional strategy to defeat the virus and implementing that strategy at all levels of the facility, from staff to residents to family members on the outside. No one at Knollwood has been willing to compare their facility directly with others, saying only, as Col. Bricker has, that "I'd put our record up against anyone."

Some characteristics of Knollwood's response to Covid-19 deserve emphasis:

- ✓ Intentional leadership: The CEO and COO applied their military training to this civilian setting with the clear goal of defeating Covid-19 by lifting up their directors and fostering compassion and care.
- Communication: Top leadership used communication as an integral part of their strategy to defeat the virus. They held daily conference calls with directors. They hosted Town Halls with residents. They offered call-ins with family members. They regularly published updates and shared them via hard copy for residents and digitally with family. They shared their knowledge with NPR and other media sources.
- Agility: Knollwood's leaders were agile in the face of this new virus and its withering toll on people. Directors made decisions with speed and flexibility, to not wait for perfect or complete understanding.
- Creativity: Each of Knollwood's directors thought outside of the box to find solutions. Bob Royer found PPE at Home Depot. Sarah Prowitt gave memory care residents a break from the isolation with ice cream sundaes. Arlette Kesseng-A-Mbassa remembered the humanity of each staff member grieving from losses. James Michels streamlined the daily calls with an agenda. Knollwood adopted telehealth, such as for psychiatric visits, and Face Time or Skype, using technology to meet resident and staff needs.
- Persistence: When the DC Department of Health said no to universal testing, and when Walter Reed refused to process tests, top leadership maneuvered around these roadblocks and arranged with LabCorp to do the testing. Knollwood also became a DC Certified Lab and Test Center, utilizing the Abbott Now Rapid Test to pursue aggressive testing regiments. Top leadership kept their eyes on defeating Covid-19 and did not waver from that goal.
- ✓ **Integrity:** Knollwood's Covid Review Board members were honest in their appraisals of individual situations











- they had to review and reliable in meeting their obligations. They applied similar criteria without favoritism. Top leadership also displayed integrity in its dealings with the employee union, setting expectations and following through with promises.
- Courage: Everyone feared for their own lives, the lives of their families and friends, and the lives of their co-workers and the Knollwood residents. Covid-19 is a deadly, unpredictable, and unforgiving disease. Directors and their staff members overcame these fears and came to work every day to do their jobs and more. They expressed the ultimate leadership trait, courage to face whatever life may throw at them.
- Compassion: A long-term care facility like Knollwood is often the last place people live before passing. Many of its residents had already faced such starkness during their military careers. Yet these residents also expressed care and concern for the staff taking care of them. And staff returned the favor, dedicated to making these last years of life as fulfilling and comfortable as possible. This compassion only intensified during the pandemic.

Each person interviewed shared specific lessons they have learned (or re-learned) from their experience fighting Covid-19. These comments included: pay attention to communication, pay attention to staff needs, provide a range of programming to fit different delivery systems and resident needs and abilities, think outside the box and be creative, practice patience, and keep your mission in mind. Below are the specific comments:

- Gen. McHale: "Mission first, people always." "Have a mission plan. Share that plan, communicate it, dialog with people, rehearse it. Give them the tools as a leader, give them the tools to get the job done. PPE. Care for them, tell them, show them, respect your team, give them positive uplift."
- Col. Bricker: "Have enough PPE. Follow your instincts. Do not keep weak leaders. Have two administrators."
- Arlette Kesseng-A-Mbassa: pay attention to staff, give them space to grieve.
- Margo Buda: Communication is key but make sure to communicate fully to your staff, too.

- Sarah Prowitt: Information needs to be shared by considering human behavior, taking into account lifestyle and other factors so that people will actually listen to the information.
- James Michels: Need multilayered communal experiences. Need to find alternative ways to deliver health and wellness services. Need to think about programming to counteract isolation and loneliness. Need strong communication with family members.
- **Diane James:** Need to be flexible and creative, such as how deliver programs.
- **Bonnie Pack:** People came together no matter how tough the situation.
- **D** Laura Van Eperen: Everything Knollwood did was right but maybe use more multimedia to reach people, such as video.
- **Bob Royer:** Think outside the box and pay attention to what others are doing and if they need help.
- Marie Hilliard: Practice patience and make every day livable and enjoyable as you can. See other people as much as you can.







BIOGRAPHICAL PORTRAITS OF PEOPLE INTERVIEWED FOR THIS CASE STUDY

Col. Paul Bricker, USA, (Ret.) has served as Chief Operating Officer (COO) of the ADF and its Knollwood Military Life Plan Community since 2017, having served in the US Army for 28 years. With the pandemic, he coordinated with Chief Executive Officer (CEO) Gen. Timothy McHale in battling Covid-19 by flattening the organization and powering down to the directors to give them as much information as possible to make wise decisions. Col. Bricker and Gen. McHale then created the Covid Review Board to advise on clinical decisions. This collaborative environment informed the upper-level operational decisions Col. Bricker and Gen. McHale made.

Margo Buda is the Clinic Nurse Manager for Independent Living at Knollwood, a position she has had since 2013. She leads a small group of two nurses and a Certified Nursing Assistant (CNA) in addressing the health needs of independent living residents. With Covid-19, she has led the testing program, in particular the Abbott Rapid tests. She serves on the Covid Review Board and answers questions about best practices.

Col. Marie Hilliard, USA, (Ret.) has lived at Knollwood since 2018. She is a medical ethicist and served in the US Army Reserve as deputy brigade commander for the brigade in charge of all lifesaver training in the Northeast. She is chair of the Health Services Committee of Knollwood's resident association.

Diane James moved from being Associate Director of Development pre-Covid-19 to working on operational management, such as communications and data management, and most recently as interim Finance Officer. She has compiled and produced the Urgent Updates and Operational Updates, delivered as rail mail, since the early weeks of the pandemic. She has helped with communications, marketing, and fundraising activities. She started at Knollwood in 2017.

Arlette Kesseng-A-Mbassa is Director of Nursing and a member of the Covid Review Board. She ensures that federal and state regulations are met and are communicated to the staff. She also instructs staff to give care from the heart and to treat residents as individuals and not as machines. She works to improve best practices to give the highest level of care possible. She has been at Knollwood since 2009.

Major General, Timothy McHale, USA, (Ret.) has been the Chief Executive Officer for ADF and its Knollwood Military Life Plan Community since 2017. He has coordinated with COO Col. Bricker in fighting Covid-19 by establishing circular lines of defense around Knollwood, both physical (with external security) and metaphysical (with universal testing and mandated vaccinations). He has built connections—with staff and with residents—to gage their well-being and vitality, and he has fostered an appreciative work environment to honor the good work and sacrifices made.

James Michels is the Vice President of Development and then Deputy Operations Officer during Covid-19. His staff pivoted to new tasks during the pandemic, whether communications and marketing, federal grants for Covid relief, remote wellness with virtually connecting residents to family and friends, and inventory control of precious Personal Protective Equipment (PPE). He helped create a structure for integrating the different divisions in the daily calls through a standing agenda. He also worked with top leadership to think about how Knollwood might move forward in a post-pandemic world. Michels started at Knollwood in 2017.

Bonnie Pack has had several different roles at Knollwood since starting as an activities assistant in 2011. She moved into payroll, served as Director of Human Resources, and then, most recently, she asked to move back into payroll. During the pandemic, she has kept track of testing, with who has been tested and what the results have been.

RADM Julia Plotnick, USN, (Ret.) is the country's former Assistant Surgeon General, having served in the US Public Health Service. She has been a resident at Knollwood since 2013.

Sarah Prowitt has been Director of Wellness at Knollwood since 2018. With the pandemic, she has worked with her team to find creative ways to help older adults achieve their goals while also staying safe. Her work centers around occupational wellness and sense of purpose. Her efforts during the pandemic stretched from running errands for residents, incorporating virtual technology for programming and communications, and opening a MakerSpace as a creative outlet.

Nancy Roderer has lived at Knollwood since 2013. She is president of the resident association and helped open the MakerSpace. Both her husband and her sister, who lived at Knollwood, died during the pandemic but not of Covid-19. She has worked in medical informatics and in running libraries.

Robert Royer is ADF's General Counsel, working pro bono since 2015. During the pandemic, he dedicated considerable time to tracking down PPE, which required creativity and persistence in looking in unlikely places. He also communicated with the union to explain ADF's decisions for universal testing and mandated vaccination.

Laura Van Eperen founded Van Eperen Communications, now Foundry, and has worked as a consultant with Knollwood since 2018. She originally helped market Knollwood to attract new residents and provided crisis and media preparedness support. With the pandemic, Van Eperen and her company have facilitated communications between family members and residents and staff. Van Eperen's company early on also tracked the area media for elevated cases of Covid-19 so that they might know if Knollwood personnel had been exposed in other facilities.

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Date	Event	Source
3/3/2020	Hall coffee—respond to questions about virus with resident doctor	Urgent Update 1 (UU1)
3/6/2020	Memorial service that ended up with a guest with C19 (Covid-19)	UU6
3/7/2020	Restrict entry into Knollwood from travelers from China, etc. Tighten access to skilled nursing area to family Review employee travel through these countries, restrict entry	UU1
3/9/2020	Restrict entry to all except healthcare and immediate family—must agree to C19 screening (answer travel questions, take temp)—lays out entrance hours, access All widely attended events off-campus are canceled	UU2
3/11/2020	Q&A sessions set up Began screening everyone except residents today Limited outside people allowed, including immediate family, potential residents, management needs	UU3

Date	Event	Source
3/12/2020	Completely close to all except mission essential personnel. No immediate family:	UU4
	Protect Detect Respond	
	Stay in your own living area	
	Everyone screened for entry, including residents	
	All contractors out for 30 days unless essential	
	Will have free skype/facetime virtual studio starting 3/18	
	Establish C19 Review Board (CRB) to review requests for exceptions	
	Improvise, Adapt, Overcome—Marine Corps statement applied to this situation Letter now from Tim McHale—before had been from Paul	
2/12/2020	•••••••••••••••••••••••••••••••••••••••	
3/13/2020	Town Hall meetings	UU4
3/13/2020	President declares national emergency, \$50B support in public-private partnerships	UU5
	This announcement authorized government to restrict access to long-term care places except family to see hospice patients	
	Accelerate development of testing kits	
	Commissary and grocery store shuttle service will continue but will require	
	rescreening to reenter Knollwood	
	Will continue to remain proactive—signed by Paul	
3/14/2020	Lockdown for 30 days—CRB is approval authority for exceptions	UU5
3/15/2020	Late 3/14, Knollwood received notice from DC Dept of Health that a female guest	UU6
, ,	to a 3/6 memorial service and reception has since tested positive for covid	
	Asks for certain actions including self-quarantining	
	Asks employees to not come to work and self-quarantine if experiencing any symptoms	
	Room service without cost will continue indefinitely—signed by Gen. McHale	
2/17/2020	DC Health recommends halting all elective medical procedures	 UU7
3/17/2020	•••••••••••••••••••••••••••••••••••••••	• • • • • • • • • • • • • • • • • • • •
3/19/2020	Knollwood has no known cases of anyone testing positive as of 3/19	UU7
	Staff is now available to do grocery shopping or pickup mail Alcohol available at Bistro for carryout only	
	Knollwood is closed to visitors until 4/15	
	Residents are restricted to the community where they live	
	Employees with symptoms are had contact with covid person should not come	
	to work	
3/20/2020	DC Mayor directive for people to stay home	 UU8
3/23/2020	Need to remain ahead of C19, need your disciplined cooperation and your	UU8
3/23/2020	personal and proper execution of the guidance and directives. Our staff	
	continue to be innovative and flexible to serve and you and overcome	
	All 30 residents who attended the memorial service are cleared, 5 additional residents are self-isolating	
	As of 3/27—no guests to Knollwood, including in parking area or outside areas	
	Staff will now do grocery store runs	
	Pool is closed	

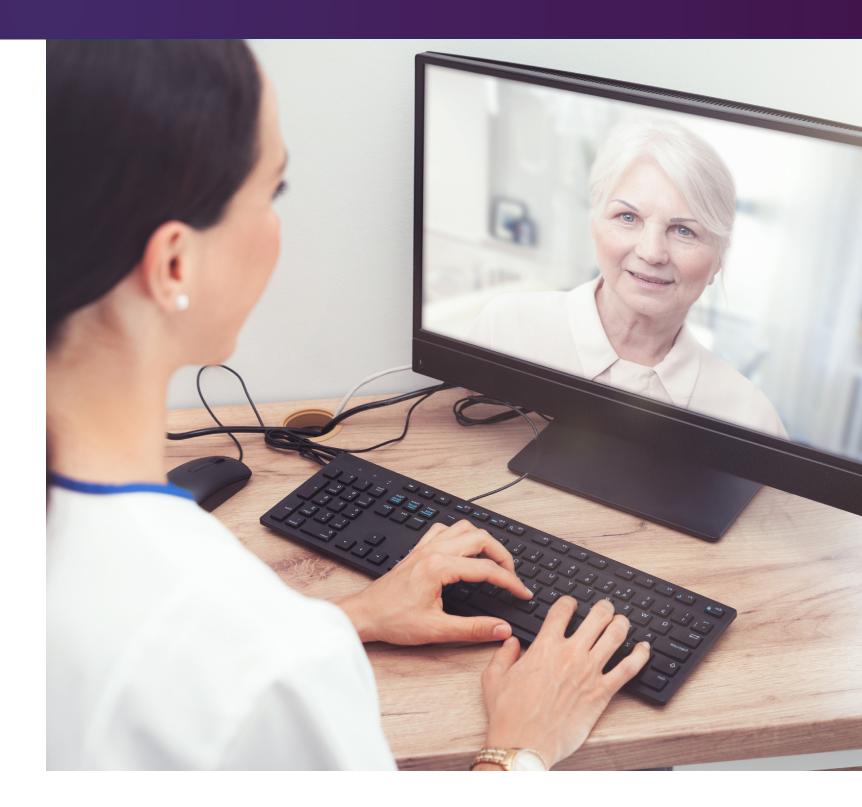
Date	Event	Source
3/27/2020	All Knollwood residents who leave will be tested upon reentry and will have to self-isolate for 14 days—except for urgent or emergency health appts	UU8
	Can stay on Knollwood grounds and not self-isolate	
3/27/2020	No known cases of infection	UU9
	Mayor Bowser closed all nonessential businesses and prohibited gatherings of 10 or more people	
	Require screening and self-isolation for 14 days if leave Knollwood and/or display cold/flu symptoms—encourage people to stay put	
	Are allowed to visit with other Independent Living (IL) residents in their apartments if stay 6 feet apart, etc.	
	Wash dishes in dishwasher, not by hand	
Early April	Reached out to LabCorps for testing kits, sent them to Knollwood overnight.	Article life plan community 6/16/2020
4/2/2020	Are seeing commitment, dedication, and teamwork as never before here at Knollwood	UU10
	Want not just to endure this pandemic but come out stronger	
	You are the real heroes with your personal notes and words of encouragement	
	Knollwood does not have C19, despite the fact that dozens of long-term care facilities in the DC area do	
	Looking at air-purification systems, tele-health, social connectivity technologies as areas we will explore	
	No cases of C19 among residents or staff	
	7 residents, 8 employees are self-isolation as precaution	
	Families may drop off non-perishable groceries Tu Th	····
4/9/2020	Wear a mask if leave your apartment, following CDC guidance	UU11
	Working on a plan to get self-isolation resident to courtyard for outdoor time	
	Lists surface contamination length of time C19 shown on	
	Absentee ballot for DC residents now available	
4/14/2020	Start doing C19 testing	Operational Update 1 (OU1), 6/16/ article
5/1/2020	Since May 1, no new cases of C19	OU3

Date	Event	Source
5/7/2020	Have 100% tested all staff, caretakers and everyone living in the Hall—more	OU1
	than 700 C19 tests so far:	
	Tested positive: 23 staff members (including 5 who also work in other facilities), 19 in Skilled Nursing Area	
	Tested positive: 15 Skilled Nursing residents and 1 Assisted Living (AL) resident	
	Deaths: 2 staff members (1 of those had not worked at Knollwood since March 29) and 6 Skilled Nursing residents	
	Recovered: 3 staff members, 5 Skilled Nursing residents	
	Will now allow on-campus activities	
5/7/2020	Karis Jones first day as interim Nursing Home Administrator	OU1
5/8/2020	Tina Sandri's last day	OU1
5/8/2020	19 deaths in DC, most for a single day so far	OU2
5/12/2020	No new confirmed cases since May 1	OU2
, ,	Have conducted 751 tests so far:	
	38 active cases	
	10 recovered cases	
	8 deaths	
5/13/2020	Replace two rooftop air handlers	OU1
5/15/2020	Fitness center open	OU2
	Can drive own car to medical appts so long as no side trips	
5/18/2020	Can ride to health appts with family members so long as no side trips	OU2
5/29/2020	DC begin Phase I reopening	OU3
5/29/2020	No IL have contracted C19	OU3
	Only 1 AL resident has contracted C19	
	Have lost 9 residents and 2 staff members to C19—all had underlying health problems	
	Residents may move freely on campus	
	Does not want Family Visits	
6/10/2020	Two residents in skilled nursing tested positive in April, are recovering	OU4
	Two cases in staff	
	Beginning to relax precautions in IL—outdoor family visits, hair salon open, outdoor dining by reservation, podiatry visits	
	Exploring technology—virus testing, UV lighting, programs to overcome social isolation through AARP Innovation Labs	
	11 deaths total—including a staff member who had not worked at Knollwood since March 29	
	40 recovered cases	
	Rehab center now now open	
	Sit and Fit with Chris started, along with other Wellness programs	
	Back to normal schedules for housecleaning	
	May use fitness center	

Date	Event	Source
6/16/2020	Article on testing program: when reported that a resident died of C19—hit the	Life plan
	ground running	community article
	DC government would only help in testing symptomatic people—Knollwood wanted to test everyone	article
	Reached out to LabCorp in early April	
	Haven't had a positive case in 6 weeks, have tested 1,000 residents and staff	
	Estimates 70 percent of those testing positive were asymptomatic	
6/17/2020	IL residents may have outdoor family visits, 2 people at a time	OU4
6/25/2020	DC in Phase II of its reopening plan	OU5
	No active C19 cases at Knollwood, two staff members recovering at home	
	DC Dept of Health will begin onsite testing at Knollwood and other communities within the next week. Will augment Knollwood's inhouse testing.	
	Sanitation robot—cleans and disinfects surfaces	
	11 deaths overall	
6/29/2020	Conference call with family members	OU5
7/15/2020	No active cases among residents	OU6
	One private duty nurse tested positive will recover	
	New programs: automated screening opportunity-automated entry, advanced sanitation, onsite testing	
	Start Catholic communion on Saturdays	
	Grocery trips via bus now available	
	IL can request family health support visits—must complete training	
	Need to start paying own masks, had been free until now	
7/22/2020	DC Mayor order on masks—wear one outside unless exercising, eating, in an enclosed area	OU7
8/3/2020	Start family visits outdoors	OU6
8/6/2020	No new resident C19 cases	OU7
	1 new staff C19 case—was asymptomatic, found through testing	
	Floor Leader Volunteers in IL—working with Fred Marentic, new Director of Security, Emergency Preparedness and Concierge Services	
	Stronger, Smarter, Safer technology programs: Solaris UV robot, in-house lab for testing, preparing to launch automated entry kiosk to improve screening people as they enter Knollwood. Tele-health is coming soon.	
 8/17/2020	Donna Knepps starts—new Skilled Nursing Administrator	OU7
8/20/2020	No active cases for staff or residents	OU8
J, 20, 2020	Tele-health is coming soon	
	Life Matters in-home support is available	
August 2020	All IL residents received written survey, 40 (30 %) returned survey. Generally, 90% or higher are satisfied in various categories	OU10

Date	Event	Source
9/4/2020	Still no new C19 cases	OU9
	Have hired a new IT Support Associate, Ms. Shaneya Geohaghans	
	Psychiatry tele-health coming soon through Tembo Health	
	Info on protecting yourself from financial scams	
	Pool will open soon	
	Flu vaccine is available	
9/24/2020	Having surveys done in various forms to see how well Knollwood is accomplishing its mission of Stronger Smarter Safe, including individual meetings with CEO—doing surveys over next two months DC averaged 46 cases/day last week but Knollwood is still no active cases in residents. There are 3 active cases in staff—one in IL, two in Skilled Nursing,	OU10
	and one private duty nurse in AL.	
	October 5—projected indoor Bistro dining, depends on cases	
	Wellness survey: 97% feel safe living at Knollwood during C19 crisis	
	Recommend residents have an Emergency To-Go bag—just a precaution	
	Continue to welcome new Knollwood residents	
	Working on increasing air ventilation in Art Café	
	Working to reopen pool, following DC regulations	
	Amazon Smile program for Army Distaff Foundation—please sign up	
	Continuing to have no charge for room service	
	Have paused family visits for AL and Skilled Nursing	
	Exploring options reopen Little Store	
9/28/2020	Zoom session on financial security from scams	OU10
10/1/2020	Knollwood washable antimicrobial high performance face masks available	OU10
10/5/2020	Bistro reopening planned—many new health and safety measures being put into place—was postponed to 10/13	OU10
10/9/2020	DC averaging 58 cases/day last seven days	OU11
	One active C19 case in AL—probably came from an asymptomatic private duty aide	
	Four active cases among staff	
	Urge residents to wear masks and leave residences when they are being cleaned Telehealth available	
	Have color-coded masks for staff, available for IL, too	
	Policies explained for new residents moving in—lots of testing!	
	Bistro reopening procedures listed	
	Checked dining room HVAC system 9/29—good to go	
	Have paused family visits for AL—by order of DC Health Dept	
10/12/2020	Reopen Bistro	OU11

Date	Event	Source
10/21/2020	Conducted C19 testing of all IL residents, 2 tested positive, asymptomatic, are self-isolating	UU12
	Will conduct contact tracing	
	Suspending many ongoing activities until know more—but can still do outside visits with family and shopping trips	
10/21-22	C19 testing of all Il to establish new baseline	OU11
10/30/2020	DC averaged 68 cases over the past week	OU12
	2 cases is IL—asymptomatic	
	6 cases in staff	
	Lists safety precautions	
	Working on guidance for family visits for AL and Skilled Nursing (SN)—compassion visits at end-of-life only	
	Bistro dining remains closed	
11/1/2020	Transport to Sibley starts	OU12
11/2/2020	IL can resume outdoor dining, group activities, family visits, hair salon	OU12
11/3/2020	Start new bus service to various locations	OU12
11/12/2020	Spoke to two Knollwood centenarians—advice on surviving	OU13
	DC averaged 111 cases/day over past week	
	No new C19 cases among residents	
	3 Full-Time (FT) and 3 Part-Time (PT) staff tested positive	
	Launched new telehealth program for IL, including psychiatry	
	Make and Take lab open—from 3-D printing to digital sewing	
	Telehealth psychiatry for AL and SN to start	
	Annual Fund appeal—cannot hold fall gala, raising \$200,000	
	Looking at bi-polar ionization of air system in Bistro	
11/13/2020	Bistro will reopen	OU13
	Learn more about telehealth	OU13
11/25/2020	5 Life Matters employees tested positive	OU14
	Make and Tech Lab now open	
	Starting to work on vax distribution	
	Will hold Town Meetings on rate increase	
	Peter Loew start	
12/18/2020	Knollwood will get Moderna Vax	OU15
	Working with Walgreens and Dr. Laura Gilbert of Uniformed Services	
	Announce Santos award	
	Says they are getting Pfizer vax	OU16
	Getting Moderna vax, Jan 6	OU17
	Plan to vax all residents and high priority staff on Jan 6	OU18
	Second vax clinic will be 1/15	OU19
1/29/2021	Feb 4 next vax clinic	OU20



Date	Event	Source
2/19/2021	March 8—can have meetings with family fully vaxed	OU21
3/5/2021	Margo is 2020 national CECA winner	OU22
	Angela Armenakis is retiring, Casey Murphy starting	
3/19/2021	Hope to have indoor AL visits soon	OU23
4/2/2021	Private duties must have vax or can no longer work at Knollwood	OU24
4/15/2021	AL and SN indoor visits started 4/14	OU25
	Changing bus to Walter Reed—fewer trips	

