New Orleans 9-1-1 turns to video to flatten the COVID-19 curve
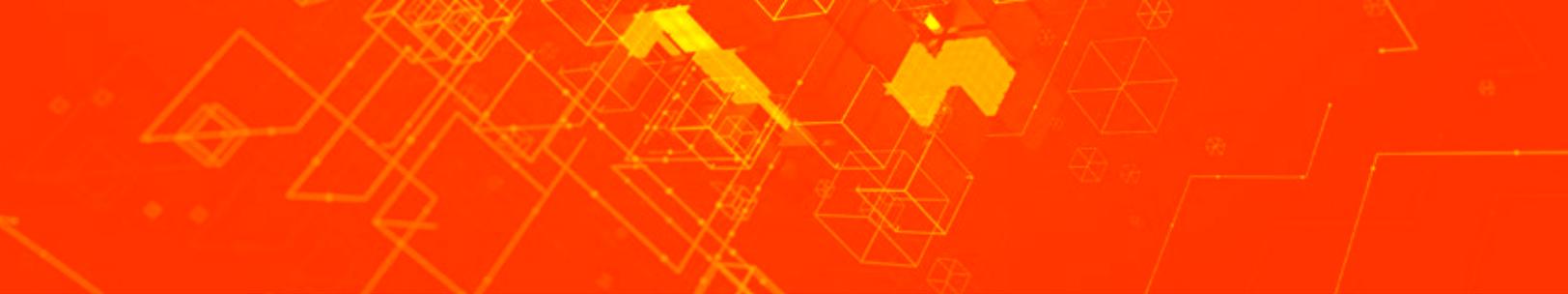
The city of New Orleans learned many lessons in its initial response to COVID-19 that can help other jurisdictions fight the pandemic while keeping citizens and first responders as safe as possible.

Starting last March, call volumes increased significantly at the Orleans Parish Communication District (OPCD), a communications hub that directs all emergency medical, fire, and police services for New Orleans. The catalyst was a surge in COVID-19 infections, which spiked from only three positive cases as of March 10[1] to 3,000[2] confirmed cases by April 2. The upward trajectory continued so that by May 7, the number of cases reached 7,000, which is around the time the rate of new infections flattened.[3]

OPCD staff members, who Executive Director Tyrell T. Morris calls "the unsung heroes in the headsets" were veterans at responding to life-and-death emergencies long before COVID-19 emerged. OPCD is a state agency that acts as the sole emergency communications center for the 450,000 residents of New Orleans and the 18 million tourists that visit the city each year. Prior to the pandemic, OPCD was responding to about a million service calls a year, for everything from police and fire dispatches to emergency medical cases. But with call volumes hitting 1,000+ a day in March, OPCD officials suddenly had to fight a three-pronged battle: address a surge in infection rates, optimize limited and shrinking emergency medical services (EMS) resources, and protect the health of residents and first responders.

"Our job is not to just answer the 9-1-1 call, type some information into the system and hang up," Morris says. "The days of us being just a simple call center are over. We operate more as an intelligence organization, where we are connecting the dots to give the units in the field a comprehensive view of each incident."

For help, OPCD turned to the cloud and Carbyne c-Live Universe+ (Carbyne), a cloud-based emergency communications platform, which, for the first time, allowed a paramedic with OPCD to establish video calls with concerned citizens using their mobile devices to evaluate how ill they looked and gather details about their condition and medical history.

The Carbyne platform, built on Amazon Web Services (AWS), allows video screening between dispatchers and callers with COVID-19 symptoms. Although OPCD runs an array of sophisticated technologies, including computer-
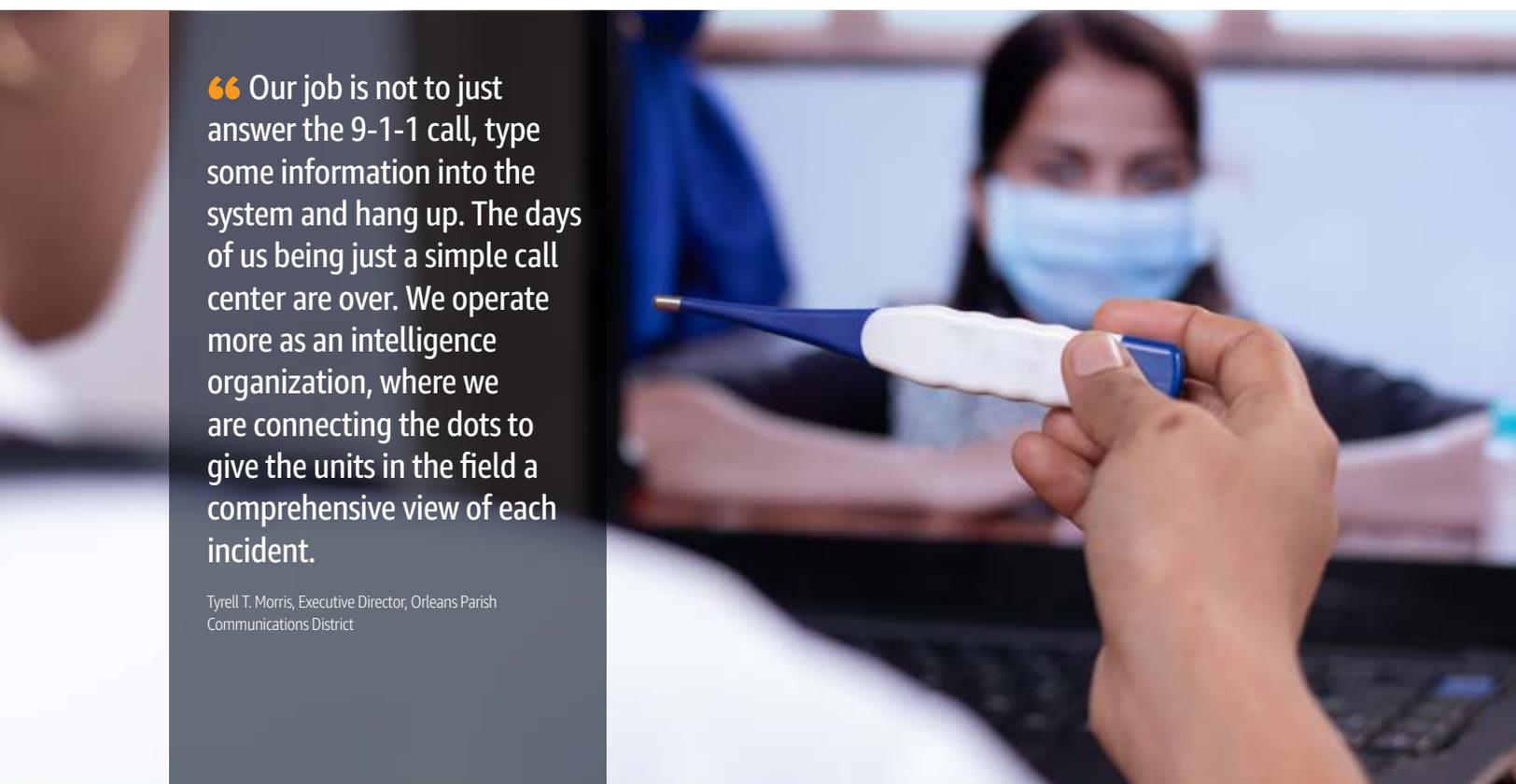
❝ Our job is not to just answer the 9-1-1 call, type some information into the system and hang up. The days of us being just a simple call center are over. We operate more as an intelligence organization, where we are connecting the dots to give the units in the field a comprehensive view of each incident.

Tyrell T. Morris, Executive Director, Orleans Parish Communications District

aided dispatch services, professionals in the office did not have access to video calls for health assessments until the communications center installed the Carbyne platform.

A commitment to cloud came before the city recorded its first COVID-19 case. In late 2019, New Orleans declared a state of emergency after officials recognized suspicious network activity stemming from an apparent ransomware attack. Employees shut down all network-connected devices and Wi-Fi equipment, which stopped the attack before intruders could demand a ransom. Nevertheless, the disruption caused about $7 million in damages as the city rebuilds its network.[4] It is also spurring officials to modernize its IT infrastructure.

"We've made the decision to transition any of our critical infrastructure to the cloud, and we consider OPCD to be critical infrastructure," Morris says.

The cloud initiative created a solid foundation when OPCD officials decided to add videoconferencing capabilities.

"Now, a paramedic can remotely see patients, which has been a big value-add for us," Morris says.

The chance to see callers while speaking with them lets OPCD staff better determine which cases are critical enough to send ambulances and paramedics to the patient or decide which cases are mild enough for people to recover at home to reduce the strain on city health services.

"We are applying data and science to the situation rather than relying entirely on patients' interpretation of their condition," Morris says. "I can't count the amount of times that callers to 9-1-1 think their condition is low acuity, but after triaging them, we determine they're experiencing a life-threatening emergency."

In the past, when New Orleans citizens called 9-1-1 because they felt ill, they might be advised to see a doctor. If the symptoms appeared severe, emergency personnel would send an ambulance to transport them to a hospital emergency room. But by March 2020, the U.S. Centers for Disease Control and Prevention was recommending that people with mild flu-like symptoms that were not in a high-risk category stay home rather than travel to a doctor's office. However, as Morris notes, callers cannot always accurately report the severity of their condition.

Video calls offer additional benefits for Orleans Parish. More effective triaging helps OPCD better manage critical-

care resources by reserving them for people who are truly having life-threatening emergencies, Morris says. Videoconferencing also reduces risks for first responders by keeping them away from ill citizens unless responding to a call is necessary. This became especially important when 60 percent of emergency medical personnel in the city was unavailable because they were quarantined after exposure or had tested positive for the virus.

OPCD's embrace of cloud technology now provides a model for other agencies that are grappling with a surge in COVID-19 cases or bracing for a possible second wave of infections.

New rules for an unprecedented crisis
Because their responsibilities are broad, the OPCD workforce receives extensive emergency response training, ranging from health triaging to hostage negotiations and de-escalation techniques for potentially violent situations.

Dispatchers gather as much information as possible to help first responders before they arrive on scene. For example, OPCD professionals may advise emergency medical technicians (EMTs) which access point at a home or building offers the most direct and safest path to a patient and family members. OPCD professionals also manage resource levels to ensure each incident receives the right numbers of first responder staff and equipment.

Cloud computing resources like the Carbyne platform play an increasingly important role in maintaining resiliency for public safety organizations. OPCD launched the application in the morning of March 13, and by that afternoon, staff members were using it to connect with citizens. In addition to video, Carbyne also provides instant chat capabilities, data-sharing tools to help EMS staff and peers exchange information, and analytics to track call center volume and performance rates.

At OPCD, Carbyne's value extends well beyond a citizen's initial 9-1-1 call. The city asked citizens who were self-quarantining at home to send their names to its registry for tracking active cases. OPCD staff then made daily video calls to registered people for updates on symptoms to determine if they required additional treatment.

"Even while people were in quarantine, we continued to perform thorough assessments to reduce the risk of missing someone whose current situation was indeed life threatening," Morris says. In New Orleans, we firmly believe in meeting

people where they are, so we wanted to extend care to them in their homes, where they are most comfortable. That gave us a solid understanding of what was happening with the virus."

Cloud-powered services like Carbyne support other efforts required by the new normal of a global pandemic. Morris knows that if he ever needs to close the physical offices of OPCD because of the pandemic or other emergency, the cloud offers the flexibility for people to securely access resources from alternative locations via an internet connection and their authorization credentials.

Beyond COVID-19

Like municipalities throughout the country that successfully fought back a surge in COVID-19 cases, New Orleans is bracing for a possible new spike in infections. If that happens, cloud-based technology could again play a key role in triaging citizens and helping the city optimize limited public safety resources.

"We have the flexibility to use the application in the event we do see a second wave," Morris says.

As cloud computing continues to support COVID-19 responses, state and local officials may accelerate their plans to replace on-premises data centers. Agencies may not have sufficient budgets for upgrading hundreds or thousands of legacy servers in onsite data centers. Those old servers may not be running the latest operating systems or security software to meet current standards. To overcome that challenge, agency leaders can look more closely at cloud options.

One economic advantage of cloud is that agencies pay only for the computing services they consume. This ability to quickly scale up cloud resources during periods of high demand and reduce services when demand softens means agencies avoid unnecessary expenses associated with overprovisioning IT environments.

Embracing Innovation

At OPCD, next steps will mean embracing change and cloud computing.

"One of the beautiful things about our city is that we welcome innovation," Morris says. "I think the public expects us to be innovative to meet their needs. We are willing to try new ideas. The moment we stop feeling that way, we fall behind."

He acknowledges that big changes sometimes lead to bold conversations about whether the city needs to try new approaches to serving citizens, such as adopting a cloud-based communications platform like Carbyne.

"We're always pushing and challenging ourselves," Morris says. "The mission of this organization is to get the right people to the right place at the right time better than anybody else in the world. It's the latter goal that really pushes the innovation envelope for us."

The payoff can be better lives for citizens. They benefit from face-to-face health assessments by OPCD professionals, who can then ensure people receive the proper care for their illnesses. The cloud and applications built for it also gives the "heroes in the headsets" a boost.

"Honestly, innovation creates a constant state of excitement for those of us who work here," Morris says.

This piece was developed and written by the Government Technology Content Studio, with information and input from AWS.

Endnotes

[1] https://www.opcdla.gov/covid-19-ecc-resources/
[2] https://experience.arcgis.com/experience/746f03e88d204a2b82a7b958ea744bba/
[3] ibid
[4] https://www.fox8live.com/2020/01/15/city-new-orleans-says-it-will-take-months-recover-recent-cyber-attack/

PRODUCED BY: government technology

FOR: aws

Government Technology is about solving problems in state and local government through the smart use of technology. Government Technology is a division of e.Republic, the nation's only media and research company focused exclusively on state and local government and education. **www.govtech.com**

Amazon Web Services (AWS) Worldwide Public Sector helps government, education, and nonprofit customers deploy cloud services to reduce costs, drive efficiencies, and increase innovation. Health and Human Services (HHS) agencies across all levels of government are leveraging AWS for initiatives ranging from the optimization of everyday administrative tasks to delivering a more personalized digital experience for citizens. Whether your focus is on agency modernization, helping to build healthier communities, or transforming payment and care delivery models, AWS has dedicated teams to help you pave the way for innovation and, ultimately, make the world a better place through technology. Contact us to learn how AWS can help you with your biggest IT challenges. **https://aws.amazon.com/stateandlocal/health-and-human-services/**