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Brian F. Maguire
Children's Hospital of Philadelphia

OVERVIEW

The Children's Hospital of Philadelphia (CHOP) is the first hospital in the United States devoted exclusively to the care of children, and features one of the largest pediatric research programs in the country.



PROBLEM

CHOP required a method to efficiently target and communicate with more than 18,000 employees in critical situations. The organization also needed to be sure it had a process for reaching all employees during a variety of incidents, regardless of their role or location, as well as an ability to trigger the right workflows to mobilize key staff.

SOLUTION

CHOP turned to Everbridge to provide a unified critical communications solution that would automate and contextualize clinical and emergency communications. The solution provides CHOP with a platform to create a connected hospital during incidents, delivering critical information and enabling staff to quickly make decisions related to staffing needs, employee safety, clinical workflows and patient care.

Q&A with Brian F. Maguire Jr., Emergency Preparedness Planner for CHOP

CAN YOU TELL US HOW CHOP USES EVERBRIDGE?

Our organization has over 20,000 employees, role based and contractor profiles. We have over 300 staff trained for sending messages via Everbridge, with about five to 10 notifications being sent on a daily basis. CHOP uses Everbridge for mass communications, and also to alert specialized teams that need to be immediately notified of critical information. These communications are often sent using device escalation and receipt confirmation.

Everbridge is integrated with our HR software so we can filter data by job role, department, location and a few other things in order to show different views and data as needed to alert different groups. CHOP also integrated Everbridge with the existing in-patient hospital paging system, which is used a lot for backup medical emergency paging and peer-to-peer paging in the hospital.

TELL US ABOUT THE VALUE OF THE EVERBRIDGE PLATFORM:

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We also use Everbridge for more targeted communications. The most used example of Everbridge is around leadership notifications during clinical incidents. Additionally, CHOP has an enterprise incident management team, an information services crisis management team and a biohazard response team – all that need to receive critical information immediately.

Since CHOP is able to hit a variety of different devices through Everbridge, we rely on the tool to activate our hospital command center and our incident management team as needed.

HOW DOES EVERBRIDGE SUPPORT YOUR COMMITMENT TO RELIABILITY, BUSINESS CONTINUITY AND COMMUNICATING EFFECTIVELY ACROSS THE ORGANIZATION?

Everbridge is a hosted solution for us, so if our data centers are interrupted for any reason, Everbridge supports CHOP's mission of high reliability in emergency communications. Our organization's top security command center is staffed 24/7 by the security team. All dispatchers are trained and very efficient in the use of Everbridge. When they learn of an event, they activate Everbridge.

The key piece of this, however, is they don't just "activate Everbridge." They understand the event. They triage the event. They go in and they look into the platform. They search for the pre-made notification template that the particular event is related to. They determine whether it's an "action required" message or not.

In this case, if it's an accident required message to our incident management team, that message gets our on-call leaders to join a conference line – and they work together to determine the impact of the incident. If there's need for additional support or communication, CHOP activates the hospital command center and sends Everbridge messaging to some of these dynamic lists, targeting the roles, the skills and the specific departments. In some cases, the organization will be sending something to the entire staff. This helps create a connected hospital that can communicate and collaborate efficiently and decisively during critical events.

TELL US MORE ABOUT THE IMPORTANCE OF USING EVERBRIDGE FOR INCIDENT COMMUNICATIONS AND CODE TEAM ACTIVATIONS?

Everbridge is also the go-to tool for incident communications to key teams. We pre-identify which situations need contextual communications, and build templates based on that information. With Everbridge's

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pre-built rules, the location and even the employee seat level can be drilled down to. CHOP can send to a variety of combinations of these rules, ensuring the organization target only those that need to know the information, which helps to reduce alarm fatigue. CHOP looks at the most effective ways to communicate with staff, whether that's via text message, email or escalating to voice paths and calling them at home.

CHOP also puts out hazardous materials spill alerts; the infection, prevention and control group utilizes Everbridge for disease outbreak notifications to target audiences, along with direct patient safety notifications. The organization's specialized code team activations come through Everbridge, too.

Everbridge is also utilized to send code alerts during emergencies. In CHOP's cardiac center, there's a specialized response team that is notified this way. This is the team that actually brought in Everbridge to CHOP on a local level before we expanded it up to the entire organization. Their initial business requirements were for confirmation of message and device escalation – two things that Everbridge does very well. That goes the same for any other type of medical emergency code paging throughout the institution.

CAN YOU TELL US ABOUT SOME OTHER EXAMPLES OF USING EVERBRIDGE?

One example was wired networking issue in one of the buildings. An Everbridge notification was sent out just to the impacted building. This was a targeted communication. There's a lot of noise on the organization's phones all day; in the healthcare setting, it's imperative that emergency messages are getting through. There's a variety of different types of devices at CHOP and iPhones are given to some key staff – so CHOP needed a technology that could break through the device noise.

In addition to clinical notifications, CHOP uses Everbridge for building condition notifications, including fire alarm,

fire/smoke conditions, power failure or utility failure interruptions. There's a variety of different ways Everbridge enables the organization to send this to individuals, taking into account situational awareness. Some of the organization's environmental health and safety team and the rest of the emergency preparedness team need to know that there's a fire alarm or a smoke alarm going off in the building that activated our fire alarm system. In the healthcare setting, employees need to shelter in place during a fire alarm activation. CHOP also leverages Everbridge for severe weather. The organization likes to keep staff informed, especially if some of them will be altering schedules to utilize alternative work arrangements, or report to different sites.

TELL US ABOUT THE IMPORTANCE OF "CONTEXT" IN YOUR CRITICAL COMMUNICATIONS TO REGULAR AND ON-CALL STAFF?

CHOP is highly reliable. The organization wants to be process dependent rather than people dependent, meaning the communication should find the role, not the person. A standardized, systemized process for notifications is our approach. For instance, CHOP defines an all hazards alerting group. But why should they be alerted to every single type of emergency? Who are the decision makers? The on-call staff are most important. It's very hard to find the specific person. It's very hard to find the specific device. Everbridge makes that a lot easier, empowering CHOP to activate the right teams and automate communications to them.

For instance, the emergency preparedness team, which I am a member of, has an on-call individual. We put him or her into the scheduling program, which allows the team to be paged, so rather than paging myself or any of my peers, we are being paged as "emergency preparedness on-call." That's something that's replicated throughout the institution. Everbridge allows this to be done without changing lists, without moving people every day.

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Our goal is to take the decision out of alerting. Everbridge allows this information to be pre-populated into templates, rules and different types of structures that allow for contextual communication. By leveraging the flexibility of Everbridge's emergency communications tools, this ensures there is as little disruption as possible to our current process.

HAVE YOU USED EVERBRIDGE TO COMMUNICATE DURING ANY EHR OUTAGES?

CHOP had an EHR system outage a few years ago, and the organization needed providers to come in and reconcile paper charts back into the system. In addition, off-site clinical staff urgently needed to report to campus. The organization sent out a poll to employees asking for immediate and delayed availability. The message was sent as a role-based notification to clinical providers. It went to approximately 1,300 individuals. The organization was able to collect responses back and staff what was needed in less than 10 minutes. It was done through direct Everbridge communication with the clinical providers. We asked them if they were available within 1 hour, within 2 hours, within 3 hours – and those who were available within 1 hour were staffed appropriately and so on. It was a directional message sent to these available individuals. Once the information came back that specific individuals were available with 1 hour, the follow up tool sent out direction to those individuals saying: “please report to conference room XYZ at such and such time.” The list of the incoming staff was sent to leadership. Leadership could then populate their own schedules and start pre-assigning tasks prior to arrival.

During a recent hospital command center activation a few of the folks in the room said, “I can't imagine how long it would've taken to have to call all those folks since we staffed about 80 or 90 individuals during that time to reconcile

that paperwork.” The outage was managed successfully because of Everbridge. Another piece of closing the loop is escalation. Role-based communication is still the focus, but by also adding responsible individuals to the escalation cycle, there is some built-in redundancy.

FINAL WORDS?

CHOP's process is to move from event, to notification, response and then transition into recovery. The fewer decision points that are in that process the better. Everbridge has allowed CHOP to remove many of those decision points, letting the organization quickly move into the response phase. The quicker response is reached, the faster recovery is reached. Contextual communication is about bringing together the right information at the right time with the right group of people to collaborate and solve tasks. Everbridge enables this by improving business process and providing customized communication tools that are much easier to use than today's general purpose tools.

The Everbridge tool has afforded CHOP the ability to notify different devices, different people, different groups, different departments and different locations rather than local departments, leveraging phone trees and their own escalation top-down notifications. These are time consuming tools that Everbridge alleviated.

It is very important to be process dependent, not people dependent in emergency communications. Create a standardized process and have it yield consistent results. Close that loop. Make sure that your individuals are receiving your messages. Have them confirm. Have them answer the questions and then you can get information back to them immediately. Utilize high reliability principles when designing contextual communications. Let your process drive the notification engine.

About Everbridge

Everbridge is a leading unified critical communications platform trusted by corporations and communities of all sizes that need to reach the right people for immediate action, collaboration, and decision-making. Connecting millions of people and internet-connected devices, the company provides reassurance that secure, compliant messages are delivered, locally and globally, received and responded to, no matter the recipient's location. Everbridge is based in Boston, Los Angeles, San Francisco, Beijing and London.

For a full product description, along with best practices and product details please see the *Everbridge User Guide* and *Everbridge University*.

