



DEEPDIVE EMERGENCY NOTIFICATION SPECIAL REPORT

EXCLUSIVE RESEARCH

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THE GOLD STANDARD IN SCHOOL SAFETY



Over the past 18 months, *Campus Safety* and our Online Summits have been covering how campuses have been adjusting to the ever-evolving issues posed by the coronavirus, but how have campus emergency notification systems, policies and procedures fared? Has the pandemic had a major impact on how campuses use their systems? How significant were the challenges campuses faced, and what lessons did K-12 schools and school districts, colleges and hospitals learn about emergency alerts during the coronavirus?

Those were just some of the questions posed by the 2021 Campus Safety Emergency Notification Survey. More than 300 campus protection professionals provided their input on those issues, as well as other hot topics.

Here are the results.

74% of Respondents Had No Challenges with Their Mass Notification Solutions

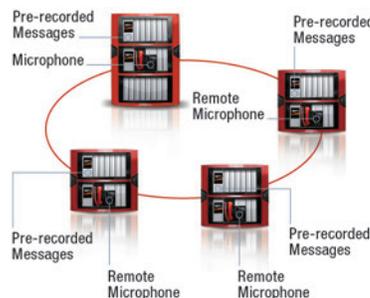
Despite the chaos, tragedy and uncertainty caused by the pandemic, campus emergency notification systems appear to have performed quite well overall. Nearly three quarters (74%) of all Campus Safety Emergency Notification Survey participants said they didn't experience any pandemic-related challenges with their solutions (71% of K-12, 77% of colleges and 79% of healthcare). Only 3% said they experienced many problems, with 18% saying they experienced some or a few issues. (See chart and sidebar on page 4.)

Broaden Emergency Coverage in Mass Notification with Advanced Fire Alarm Systems

EDWARDS Modern incident management systems should enable fire alarm, mass notification and building integration in one comprehensive emergency communication solution. When combining distributed messaging with in-building and wide-scale voice annunciation from the fire alarm system, it becomes possible to deliver system status in real time and facilitate decision-making from anywhere.

In connecting multiple buildings, up-to-date fire panels utilize modular architectures that incorporate innovations in network configuration, audio, circuit survivability and, when connecting to external networks, adequate levels of cybersecurity – all while complying with codes and standards. This advanced approach is the key to effectively responding to fires, weather emergencies, environmental crises or active shooters. Additionally, when modern fire panel systems are listed to UL 864 and UL 2572, they have been designed and will be installed in a manner that helps ensure alarms and notifications operate as expected.

In addition to comprehensive design and installation standards, these systems are also required to be tested regularly to help ensure functionality when most needed. When creating indoor and campus environments that improve occupant health and safety, having this level of preparation provides the confidence campus managers and students have come to expect. edwardsfiresafety.com



Would You 'Value Engineer' Life Safety?



When it comes to preparing

a risk assessment for your campus or facility, whose responsibility is it to utilize best practices to ensure life-safety? What if the product you think is safe does not meet proper fire, electrical or other life safety standards? What if it lacks essential elements for performance to ensure it works during an active shooter attack, severe weather event or some other emergency?

Having a product-agnostic, "governing" body like NFPA or IBC that works with the UL standards committees to set the bar for safety requirements allows stakeholders to have a higher degree of trust that their mass notification system (MNS) has been tested to perform and execute to a life safety standard.

Meeting codes and standards should be a level of entry for all MNS manufacturers. When manufacturers do this, they ensure that campuses ultimately invest in on-premises and wide area speakers and distributed recipient mass notification system (DRMNS) solutions that work and perform properly. Further, it is important that a MNS system be inspected according to a life safety standards.

Compliance should never be optional or "value engineered" out of the project. Choosing products and solutions that meet codes and standards, such as NFPA 72, International Building Code (IBC/IFC) and the UL 2572 standard, is one way to ensure best practices and better outcomes. mercurynotifications.com



The challenges that were experienced most often involved delays, communicating with off-campus stakeholders and technology issues.

“With many IT members furloughed and/or working from home, the communication is much slower to resolve tech related issues,” said one respondent. “This delays-much needed updating to emergency notifications defaults.”

Many of the issues experienced by respondents were random and specific to their particular organization. For example, one survey participant said their organization struggled with employees not wanting to put the campus notification app on their personal phone.

Emergency Notification Challenges

Here are some of the pandemic-related challenges campuses experienced with their mass notification programs this past year.

DELAYS

- » Delay in relaying information to employees when they are not at work.
- » Delays in planning and implementation of new systems and procedures.
- » Remote learning impacted updating email addresses and phone numbers.
- » Lack of ability to communicate constantly changing information on a mass (staff-wide) level efficiently.
- » Getting supplies/additional products or needed parts for repair has taken longer.

COMMUNICATING WITH OFF-CAMPUS STAKEHOLDERS

- » We have no off-campus notification system for remote students.
- » Alerts needing to go to people in the area but only have the option of whether people were designated on or off campus. Off campus included EVERYONE no matter how close they were located in the country.
- » Not knowing who is working and what areas are covered.

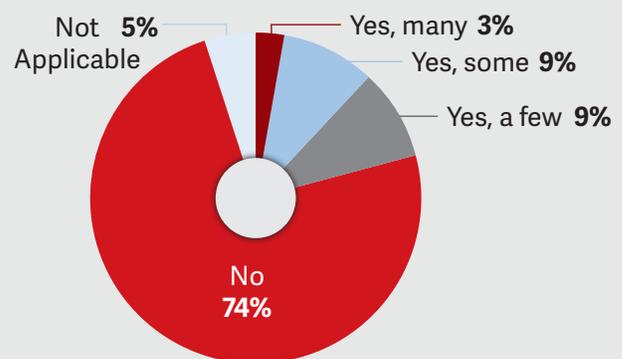
TECHNOLOGY

- » Inconsistent receipt of notifications
- » We discovered that when students are outside on mask breaks, there are certain areas of the building that the PA system is not heard.
- » Interoperability of equipment.
- » Fire alarm system is old and was not working properly.
- » Making sure all participants are monitoring their phones

and or computers on campus. We do not have an intercom system.

MISCELLANEOUS

- » Staff taking proper measures when a DRILL is called for area(s) in facilities.
- » Parents/guardians not updating contact numbers when changed; not having consistent working numbers due to parental monetary challenges (i.e., out of minutes on their phone plan).
- » Emergency preparedness has taken a back seat during the pandemic.
- » Hard for people to know a fire alarm from a security alarm.
- » Administration not letting us test properly.



Have you experienced any challenges with your emergency notification solutions that are related to the pandemic in some way?

COVID-19's Impact on Use of Emergency Alerts Was Minimal for Most

Considering so few campuses experienced any issues with their emergency notification systems, it's not at all surprising that three in four respondents (75%) also said the pandemic didn't affect how they use their mass notification systems. Only 4% said COVID-19 significantly affected how they use their systems, while 8% said their use of these systems was "somewhat" impacted. Nine percent said they were minimally impacted. (See chart and sidebar below.)

Emergency Notification System Changes

Here are some of the changes campuses implemented in response to challenges they experienced with their mass notification systems during the pandemic.

MESSAGES AND FREQUENCY OF USAGE

- » More frequent use.
- » Used it for messaging, not necessarily of emergency/timely warning nature.
- » The ENS was used to facilitate guidance and information to staff and students.
- » Notify of positive student test and what classes should quarantine.
- » We send fewer advisory alerts.
- » It is used more frequently, and more administration has access to get information out to families in our database.
- » Use PA to call students to office to leave for early dismissals while parents wait outside.
- » Increased use of the system. We began to use the phone app for COVID health screening to integrate into our campus access system.
- » Now we use it to aid in scheduling and COVID testing.
- » Using notifications on COVID status of the building.
- » Last minute closures of small portions of campus.
- » To maintain social distancing we use the PA system to call students for each bus and for car riders. So it eliminates any gathering of students and staff.
- » We currently use the mass email portion of our ENS to notify the campus community of positive COVID results on campus and also testing times.

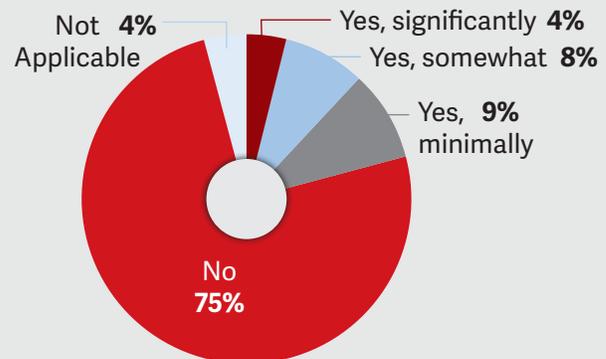
TECHNOLOGY

- » Upgraded cameras and PA systems.
- » We [did] not use some of the tools provided to us by our emergency notification system to give routine updates, regarding pandemic news.
- » Increased notification range.
- » We have added proximity alerts integrated into our signage devices for distancing reminders.

- » Equipment changes.
- » We have integrated the ems with an app for other types of issues, safe work, walk home, COVID assessments etc.
- » Built out different groups for vaccine notification. Used incident command notifications as needed.
- » We have used visitor management to also address symptom checks.
- » Trying to upgrade.

MISCELLANEOUS

- » Routine fire drills and lockdown drills cannot be held as they were pre-pandemic, due to the limitations of physical distancing.
- » Broader support from senior leadership and adoption at all locations within the enterprise
- » Take out people who are not in the line of direct communications.
- » Need to craft messages more carefully. Accuracy is important in order to make people feel comfortable.
- » Makes you more cautious when emergencies are in effect because of the pandemic.
- » We have not tested system as in the past.
- » Administration not letting us test properly.



Has the pandemic affected how you use your emergency notification systems?

However, when broken down by sector, K-12 schools and school districts were the organizations that made the fewest changes in how they use their systems (16%), while 27% of colleges and universities and 30% of healthcare facilities made minimal to significant changes.

For those respondents who made changes in response to the pandemic, those revisions most often involved message content and the frequency the system is used.

For some, the big change was the fact that systems were used too much.

“Under the Clery Act, a pandemic would often result in an emergency notification rather than a timely warning,” said one survey participant. “In our opinion, this dilutes the efficacy of the emergency notification system if we are sending out alerts every single time we have a case on campus. This has been a challenge because the university also has to be careful that HIPAA [the Health Insurance Portability and Accountability Act] isn’t violated by sending out these notifications. It has brought forth some interesting internal conversations.”

In other cases, respondents’ mass notification systems were used much less during the pandemic.



Why Campuses Need Multiple Modes of Mass Notification



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Ensuring that your mass notification system offers a wide range of notification options is essential in a crisis. Your campus community will always bias to certain mediums for receiving alerts – whether



by a mobile app, SMS text message, voice call or any other mechanisms available. Ensuring that members of your community have options for receiving alerts makes them both more likely to receive the notification and also provides redundancy in the event they don’t acknowledge or see a particular message.

That’s why the award winning AppArmor Alert Emergency Notification System aggregates more than 12 different forms of digital alerting. We make it possible for your team to give your people options in terms of how they want to be alerted. While alerts can certainly be targeted to specific groups of subscribers on certain notification mediums, AppArmor Alert provides your team with a single dashboard to send a comprehensive mass notification to all of your subscribers. Regardless of the number of individuals targeted, our messages will be sent in 5 minutes or less.

Not only that, but we can also integrate with loudspeakers, horns, desktop phones, digital signage and other traditional on-premises devices to fully notify your campus in the event of an emergency. apparmor.com

Primex OneVue Notify InfoBoard Displays Bring Visual Communication During Critical Situations



Critical events happen quickly.

It is imperative to immediately and effectively communicate emergency situations. Primex OneVue Notify InfoBoard displays provide visual notifications to signal a critical event at the press of a button.

OneVue Notify InfoBoard displays can add another layer to your emergency response plan and supplement the text messages, emails and other mass communication methods you may already use. Plus, the human eye is generally drawn to bright, visual alerts, meaning that these LED display panels could be a quicker way to deliver vital information to students and staff.

The OneVue Notify InfoBoard critical notification solution increases communication and safety throughout your campus by delivering visual notifications quickly, conveying messages to those hard of hearing, reminding students to follow COVID-19 protocols, providing access to real-time data related to incident reports and documentation, and offering three sizes of displays to fit in any environment.

These displays provide a level of visual communication that most facilities lack. Whether it’s a fire, active shooter or severe weather emergency, every second matters. Accelerate widespread communication efforts with OneVue Notify InfoBoard displays, the all-in-one solution that provides critical notifications, general messaging, and synchronized time and date. primexinc.com

“With remote learning, there were significantly less drills and overall communication taking place just due to the nature of being remote,” said another respondent. “Lack of exposure to threats on campuses that aren’t utilized left these systems stagnant for many periods of time. On the other hand, SOME districts were taking advantage and communicating between staff members at the onset of COVID-19 in order to relay important information amongst staff members and district members.”

Other campuses made equipment upgrades or tweaked the systems they currently own, while still others implemented policy or procedure changes.

54% of K-12 survey respondents said they would support a state or federal regulation requiring mobile panic alarms.

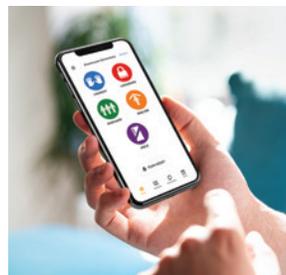
What are you using for your in-building voice communication for mass notification?

	All	K-12	Higher Ed	Healthcare
Voice evacuation fire alarm system	30%	24%	35%	38%
Public address (PA) intercom system	62%	79%	35%	78%
IP-based speaker system	28%	29%	28%	31%
Nothing	15%	7%	28%	0%
Other	15%	13%	16%	11%



Mobile Panic Alert Systems are Critical for Reopening and Beyond

Experts warn we may see an increase in violence as schools reopen after the pandemic. Some students may be defiant or aggressive, or depending on their situations, in crisis when they return to the classroom. Schools must be prepared to act quickly and keep our school communities safe in any situation.



We all know every second matters and that emergency response hinges on everyone having the information they need to act. Raptor Alert is a trusted mobile panic alert system that enables teachers and staff to discreetly initiate an alert, share critical documents and floor-plans with first responders and connect with 9-1-1 from anywhere on campus. The system is customizable to each district’s emergency protocols, works on any web-enabled device, allows staff to seamlessly switch between campuses, and has multiple group messaging channels and detailed dashboards so everyone can stay updated in real time.

Raptor Alert also includes a Team Assist feature for localized incidents like a medical emergency or a student fight. Team Assist situations are customizable to each district.

Integrated with Raptor Emergency Management, schools can better prepare for, respond to and recover from an emergency. Schools can leverage COVID-19 ESSER relief funds to purchase Raptor. For more information, visit www.raptortech.com/EM.

Survey Participants Share Lessons They Learned

Despite most campus emergency notification systems working quite well during the pandemic, our survey participants still learned important lessons from their experience during this world-wide COVID-19 catastrophe. (See Mass Notification Lessons Learned During COVID-19 on page 11.)

Some of the advice from respondents involved addressing database challenges.

“Just prior to pandemic, we changed our mobile alert system to an ‘opt-out’ instead of ‘opt-in.’ We have had very few opt-out, which has helped us reach thousands of more students,” one respondent said.

Off-site people opting out of an emergency alert system was an issue for another participant.

“Remote recipients frequently desire to opt out of these notifications although they remain affiliated with the campus. Likely, because they are bothered by the excessive notifications,” they said.

Some respondents saw the pandemic as an opportunity to assess what they have and make needed changes.

“Because the majority of staff and students were remote, it presented the opportunity to review our existing systems and make some enhancements where possible,” one survey participant said.

Another participant stressed the importance of flexibility.

“That there are unknowns, such as the pandemic, that will challenge us in the future, our systems must be flexible to meet these challenges,” they said.



The Importance of Reaching People Remotely with Mass Notifications

The pandemic forced many organizations to switch to remote operations. This caused a major issue when trying to communicate effectively. Even if people aren't on campus, they still need to receive critical safety and health information, operational updates and guidance on when normal routines will resume. Being able to share messages with an entire campus community helps ensure everyone stays on the same page, minimizing disruptions and reducing confusion.

Mass notification can help reach people remotely via a variety of methods. Mass SMS text messaging can reach people on their mobile devices. Asking for a confirmation response can help campus leaders know that their intended audience has received and read the information that has been sent to them. Desktop notifications sent to work laptops can also help capture people's attention with pop-up alerts that utilize text, images, and audio. This can interrupt whatever someone is working on and force them to focus on an important communication.

Mass notifications can even help manage ongoing incidents by inviting people into virtual collaboration spaces that can be accessed from anywhere to assess the situation and determine next steps. Regardless of where someone is, campus leaders will still be able to communicate with them directly. [Singlewire.com](https://www.singlewire.com)

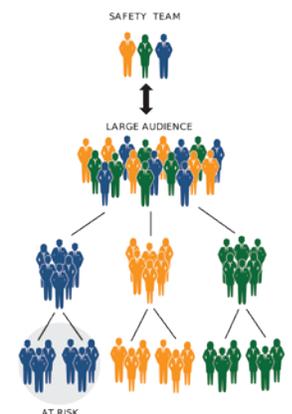


Improving Small Safety Team Response to Mass Crises

 People find themselves in varying situations during an emergency, which requires specific instructions to best guide each individual to safety. Similarly, those individuals can provide intelligence as the situation dynamically unfolds. Unfortunately, it is extremely difficult to open a dialog and manage the incoming information from a large group of people under duress.

Traditional emergency systems are limited to one-way broadcast or a two-way function that forces organizations into 1:1 communications, which clearly does not work in real-life situations with thousands of people. New product releases, such as Omniltert Engage, allow mass engagement through group triage, the ability to repeatedly subdivide people into manageable groups and dynamic messaging, whereby each group can be individually messaged with information or queries most relevant to them.

This approach allows rich interaction across a large group to be executed even with a small safety team. Engage offers location-based selection and messaging, so groups can be handled differently based on their whereabouts and the associated threats. Given the dynamic nature of emergencies, Engage provides administrators with a dashboard to visualize and map responses in real-time. [omnilert.com](https://www.omnilert.com).



Campus-Wide Notifications Rank Highest in Importance

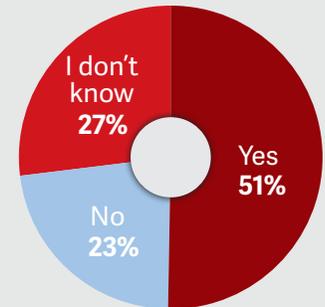
The Campus Safety 2021 Emergency Notification Survey also asked participants to rank the level of importance of various system features and functionalities. “Campus-wide notifications (in-building and exterior alerts delivered to IP phones, PA speakers, digital signs, desktops, etc.)” was rated highest at 3.6 out of 4, while “weather alert integration” only rated a 2.6.

“Off-premises mass notification (i.e. SMS text, mobile app alerts, email, phone calls, social media, etc.)” came in second with a rating of 3.5, while “physical security integration (i.e. door locks, security cameras, etc.)” got a 3.4 rating, and “end-to-end incident management” received a 3.3 rating. “IoT integration (i.e. shot detection, fire alarm, integration, gas sensor detection, etc.)” was rated 2.8 in importance. (See chart on bottom of page 10.)

Just over half of all survey participants believe mass notification systems should be able to take over a fire system during a non-emergency. However, the answers varied by sector: 49% for K-12, 50% for higher education and 59% for healthcare. (See chart on the right.)

We also asked what survey participants are using for their in-building voice communications for mass notification, and overall, public address intercoms were the most popular at 62%. However, more than three out of four K-12 schools and healthcare facilities use PAs, compared to only 35% of higher ed campuses.

Is it important for your mass notification system to be able to, by building fire code and UL/ANSI standard, take over a fire system to drive people to safety during a non-fire emergency, like an active shooter?



Enhancing Campus Safety with Unified Emergency Mass Notification Solutions



Every emergency is unique, which is why it's important for campus leaders to have the right tools to share timely information with the appropriate stakeholders. Understanding what needs to be communicated, which group(s) to notify and the appropriate notification delivery methods are all important factors to consider when building a comprehensive emergency notification strategy.

Emergency mass notification systems help schools rapidly share safety information with faculty, security personnel, students, visitors, first responders and parents. They remove the guess work during critical times where stress levels are high, mistakes are costly, and lives may be at risk. Multi-modal notifications help schools reach people located on campus and beyond the building by simultaneously delivering alerts to disparate systems, such as overhead speakers, strobes, digital signs, IP phones, desktops, email, mobile recipients, social media channels and more. In addition, integrating access control systems to automatically lock or unlock building entrances can isolate campus threats in the event of a lockdown.

Schools also need tools to effectively manage incident response and reunification, as well as a coordinated effort with local 911 dispatchers and first responders; all of which are key to saving lives. When these solutions work together, they significantly narrow the time between detection and incident resolution. Syn-apps.com





Colleges and universities are the campuses that are most likely to not use anything for in-building voice communication for mass notification (28%), which is concerning. Only 7% of K-12 respondents and no hospital respondents said they don't use in-building voice communication for emergency alerts. (See chart on page 7.)

The survey also asked if respondents would support a state or federal regulation requiring mobile silent panic alarms, with 44% saying "yes," 17% saying "no" and 39% being undecided. Support was greatest with K-12 participants – 54% compared to only 39% in higher ed and 31% in hospitals.

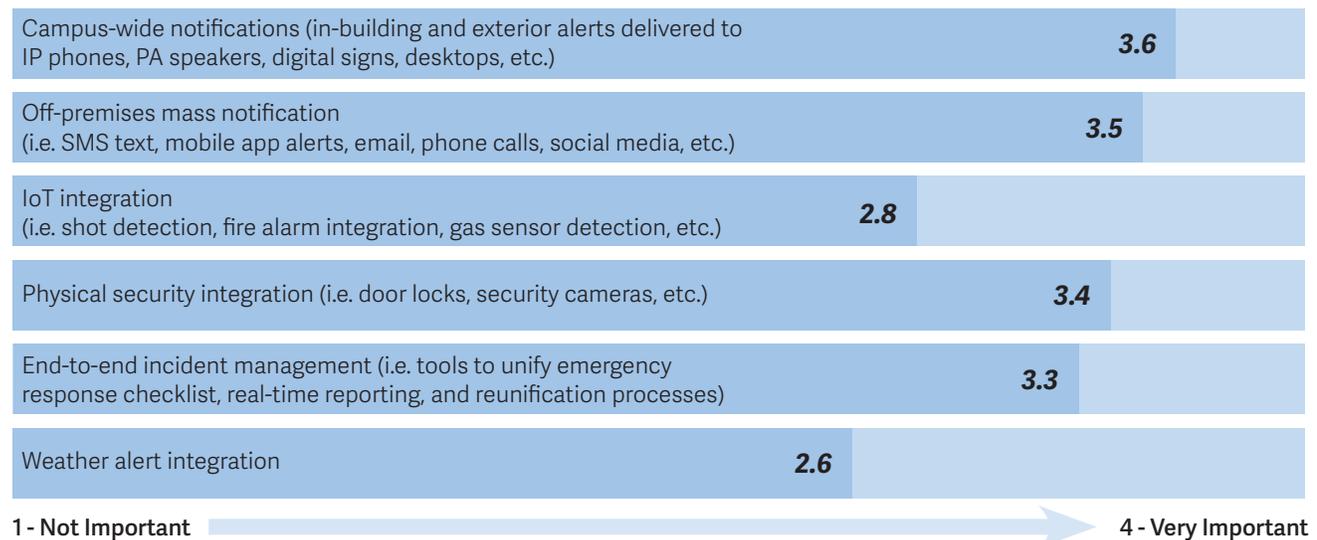
Mass Notification System Performance Gets a Passing Grade

Overall, it appears as though most campus emergency notification systems performed quite well during COVID-19, which speaks to the quality of the systems installed, as well as the policies and procedures supporting that technology.

Unlike many businesses that didn't survive over the past year, mass notification technology appears to have proven its durability during the pandemic.

Campus Safety thanks the more than 300 school, university and healthcare protection professionals who participated in this survey. We truly appreciate your input.

As you evaluate your current emergency mass notification capabilities and future needs, where do the following items rank in level of importance? (1 not important, 4 very important):



Mass Notification Lessons Learned During COVID-19

SENDING MESSAGES:

- » Send messages as early as possible.
- » Having an effective communication method beyond face to face and email systems is necessary.
- » The emergency notification system has really come in handy. We have been able to use it throughout the year to send messages to parents, students, faculty and staff.
- » For some kinds of notifications, need input from several departments.
- » We use internet / emailing and texting. Staff do not always check their mail so do not receive the information.
- » SMS is most effective.
- » The community is highly interested in getting the information as soon as possible.
- » Need to distinguish between what is an emergency and what is information.
- » Adjustments needed related to meeting places and assembly of students and staff during evacuation etc.
- » Everyone must hear the message given from the messenger, not second hand.

WHEN TO SEND MESSAGES:

- » Overuse of any system dilutes its effectiveness, and eventually people start to ignore it.
- » At the beginning when we were closing campus we found that the ENS was being over used and we needed to review are policy/procedures for when to send a full EMS alert out.
- » The public does not want pandemic info via a mass notification system because it is too invasive. That should be reserved for rapid onset incidents that pose a significant risk to health and safety when time is of the essence. A pandemic is not rapid onset.
- » People are frustrated with being at home and don't really want to be reminded of what they are missing on campus.
- » Some staff are reluctant to activate the system.

GENERAL/MISCELLANEOUS

- » We already had a physical system in place for response prior this infectious level event. We have had to re-look at every level based on staffing, supply chains, customer response and even social media events - every level of response was reviewed.
- » Simpler is better. Having a pre-scripted message works best.
- » Need a redundant system. PA system failure leaves use unprotected. Back up power for system during power failure.
- » Greater need for both broad and specific communications and tracking.

- » It's critical to have a reliable and robust system.
- » Ours doesn't work.
- » Need multiple ways to get the message out to others.
- » It is harder to access the notification system when people are working remotely.
- » Important to have the flexibility to easily build out new alert groups.
- » The importance of gathering facts in "real time" and distributing it to key stakeholders before shift / workplace decisions are made.
- » Notification system was the same but drills had to be altered.
- » The old "96" hour rule is a thing of the past.
- » You can use every means available and a few people will still not get your message.
- » Most pandemic messaging has been put on our website for ease of access.
- » Regular and prior testing is vital.
- » There is never too much redundancy.
- » It's important to have up to date contact information.

PLANNING

- » Be prepared at ALL times to meet what is necessary when/if the system is put into force above and beyond normal routine(s).
- » Have your communication plan prior.
- » During an actual emergency, pandemic guidelines take a backseat to safety. At reunification sites, social distancing and other pandemic guidelines come back into play.
- » Emergency notification should be utilized completely if districts are paying for a robust solution that allows you to communicate as much as possible. My hope is that this pandemic makes that more apparent - it should never take a school shooter or a weapon on campus for students, teachers, staff, and/or communities to feel they can report and communicate areas of concern OR update on critical global events.
- » Be ready for anything always!
- » Having a list of tasks that flow through reminders is very important during emergent situations.
- » Single sign on is best.
- » Adjustments needed related to meeting places and assembly of students and staff during evacuation etc.
- » Never assume something works.