



White Paper



At a Glance

- What is Inbound Emergency Alerting?
- How does it work?
- Why you should consider adding it to your K-12 school safety plan

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DEFENCALL

Personal Emergency Response

www.DefenCall.com | +1 203-354-9164

Guide to Inbound Emergency Alerting for K-12 Schools & Districts

The purpose of this short guide is to introduce K-12 school administrators, concerned parents and safety personnel to “inbound emergency alerting” and discuss how it fits into an overall K-12 school security toolbox.

Technology advancements, especially the proliferation of smartphones, have dramatically increased the number of options available for improving school safety. Many schools have already implemented outbound mass notification systems for effectively contacting students, staff and parents via phone calls or text messages in an emergency, but that is only the first step in the effective use of mobile phone technology to further enhance student security.

Inbound emergency alerting allows you to use mobile and smartphone technology to give teachers and staff an enhanced “panic button” to alert local first responders and school administrators directly and immediately when an incident occurs. While a traditional wired panic button will flash a light and/or prompt a phone call to be made back to the location in distress, an enhanced smartphone-based panic button automatically dials authorities (or other configured responders) and at the same time sends alert messages by text and/or email to first responders and school administrators.

These messages provide information that can be vital in an emergency including teacher/staff member name, default school/classroom location, mobile phone number and their GPS location. This information enables faster, more informed response to serious incidents, and it is delivered directly to all interested parties immediately, without waiting for the follow-up phone call, which may be delayed.

Further, since many people already have the smartphone on which this service runs, there is great economic savings potential relative to fixed/wired systems which bear installation and maintenance costs.

What is Inbound Emergency Alerting?

Simply put, Inbound Emergency Alerting is a broad technique which allows teachers and staff members to tap a single button on their smartphone and accomplish two things: automatically dial an emergency phone number and automatically send crucial information to more than a single recipient when a serious incident occurs. The alert messages are delivered by text and/or email directly to school administrators, resource officers and local police. Alert messages include the teacher's/staff member's name, mobile phone number and, perhaps most importantly, their location using GPS technology. First responders and school administrators can use this information for immediate response in advance of external authorities' arrival on the scene.



Figure 1 - Inbound Emergency Alerting Overview

Inbound Emergency Alerting apps can also be a resource through which approved emergency protocol and procedure information is available for teachers and staff members to follow when an incident occurs. Specific examples of “what to do in an emergency” information can include how to react in situations including active shooter protection, a tornado, an earthquake, and other serious incidents.

Inbound Alerting systems can also improve safety by providing “one-button” calling to Main Office, School Nurse or Resource Officer.

How it Works

In this section we’ll look at Inbound Emergency Alerting capabilities in more depth. In the examples below, we discuss the DefenCall K-12 solution.

Application Components

Inbound Emergency Alerting systems have two application components, a smartphone app that is used on the teacher’s or staff member’s phone and a cloud-based dashboard used by administrative and police personnel.

The value of GPS location in an emergency

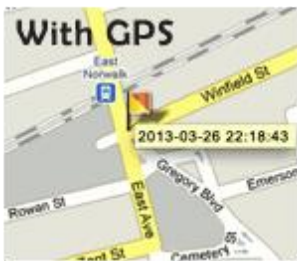


Figure 2 - The Value of GPS

The smartphone app is installed on the teacher's or staff member's smartphone and features a prominent "panic button" that the user can tap in case of emergency to call the emergency number immediately and send a text/email alert message to school administrators, resource officers and local police. The application uses the Global Positioning System functionality available in all smartphones to be aware of the user's location and send that location to first responders.

The application is installed on the phone using a simple process whereby the user sends a text message and receives a return message with a link to register. Registration is completed through a short form on the smartphone that captures the teacher's or staff member's name, default classroom location, phone number and email. Having this information allows school administrators and first responders to know not only who is requesting help, but where they are and how to contact them when an alert is sent. The application also allows access to a range of additional communication functions and information as described below.

The dashboard for school administrative and first responder personnel is a website where incoming alerts can be viewed and system preferences can be set. When an alert is initiated by a teacher or staff member, the dashboard displays a red-flashing alert screen and audible alert sound. Clicking on the screen displays the location of the alert along with the user's name and phone number. First responders can be dispatched to the scene of the alert immediately, while personnel monitoring the dashboard have the option to contact the teacher or staff member.

Alerting Functions

Inbound Emergency Alerting systems often offer escalating levels of protection:



Emergency Alert - This is the "panic button" prominently displayed on the main screen of the application. Tapping it initiates a call to the local emergency number and sends an immediate emergency distress text message and or email directly to school administrators and emergency responders. It also flashes a red screen on the monitoring dashboard. The distress message includes the teacher's or staff member's name, GPS location and mobile phone number.



Non Emergency Text Alert - This message is initiated by tapping the triangular "caution" symbol icon and is sent to a user-configured list of contacts by text message. The message includes the user's name, GPS location and phone number. These contacts can be school administrators, colleagues or other people. This is intended for use in situations where the user wants help, but does not think the authorities need to be involved, because it is not a true emergency.



“Just Check In” - This optional “piece of mind” function is initiated by tapping on the green “check” icon and sends a message indicating the user is “OK” to a pre-configured contact by text message or email. Check-in messages include the teacher’s or staff member’s name, GPS location and phone number. This function can be especially useful for allowing teachers and staff members to confirm that they are safe when an incident occurs.

Button	Action	Info	Recipient
		 "Emergency"	 Authorities School Administrators District Administrators
Message Content: EMERGENCY - “User” has an emergency here <link>. Phone: 14155551212			
		 "Help"	 School Administrators
Message Content: HELP NEEDED - “User” is here <link>and needs your help. Phone: 14155551212			
		 "Checking in"	 School Administrators District Administrators (Optional)
Message Content: CHECK-IN - “User” is safely checking in from here <link>. Phone: 14155551212			

Figure 3 - Inbound Emergency Alerting Message Types

“What to do in an Emergency” Information Access

Since Inbound Emergency Alerting systems are built around a smartphone application, they offer the ability to incorporate information that will be useful and, in some cases, potentially life-saving to students. This information can be customized to include the school or district’s approved emergency protocols and procedures. It can also be augmented with FEMA information for natural disasters. Examples of “What to do in an emergency” information include:

- Active shooter reaction procedures
- Tornado
- Earthquake
- Medical emergency

Benefits of Inbound Emergency Alerting

Inbound Emergency Alerting offers significant safety and communication benefits including:

- Increase student and community safety by providing enhanced direct access to first responders and school administrators
- Direct, immediate emergency calling to local police, not a mobile 911 call routing center - vastly decreasing time from call to response
- Improved situational information to first responders and administrators through text/email messages showing who is requesting help and where they are
- Provide approved “what to do in an emergency” information that helps teachers and staff safely react to incidents
- Much more cost effective and flexible than blue light phone systems or wired panic buttons
- Quick deployment - everything is configured over the internet
- Only days to customize and activate

Conclusion

Now more than ever, student safety is of paramount importance. But also now more than ever, technology provides K-12 administrators and public safety personnel an expanded set of tools to engage and protect students and other community members more effectively. Inbound Emergency Alerting is one such tool that not only gives teachers and staff an enhanced means of requesting emergency help, but also provides first responders and administrators with better situational awareness to act on when every second counts.

For more information or to share your perspectives on Inbound Emergency Alerting, please feel free to contact us at info@defencall.com or +1 203-354-9164.

About DefenCall

Alert the Right People with the Right Info - Right Away. DefenCall increases the safety of students, employees, and other communities. At the tap of a button, the DefenCall mobile application speeds a direct alert to first responders and provides emergency preparation info. DefenCall offers solutions designed for colleges and universities, and health facilities.

DefenCall, Inc. is a technology platform and product company focused on improving the quality of urgent situation communications between community members and emergency responders. DefenCall Healthcare is a smartphone-based personal duress system for medical facilities and health systems. DefenCall Campus, is a mobile alerting system connecting students'

smartphones directly to campus security departments. DefenCall K-12 is an alerting system which allows classroom teachers immediate emergency “panic button” access to administration and local police.

DefenCall’s DM3™ platform is a flexible system that delivers urgent multi-mode communication to community groups and public safety organizations. Originally developed for sensor-based emergency alerting for networked radiation detectors, the DM3 platform has been enhanced and expanded to include mobile device support (HTML5 and native apps), geo-location, multiple communication options, and inputs for crowdsourced data. Key benefits of the system are its low cost, robust functionality and fast deployment capabilities.

For more information or to share your perspectives on smartphone personal duress apps, please feel free to contact DefenCall at info@defencall.com or +1 203-354-9164.