



# RESEARCH FOUNDATION

## RESEARCH FOR THE NFPA MISSION

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### Fire Alarms and At Risk Populations

#### Executive Summary

10 March 2017

Current fire alarm and notification devices in facilities that house and educate students with special needs are designed in the same way as systems for all other occupancies. Oftentimes, current systems can cause panic and fear for students in special education classrooms upon activation. Throughout the United States, more and more individuals are attending this type of classroom environment, where a varying assortment and degree of different diagnoses are present. Greater difficulty in emergency evacuation has been recorded regarding these instances.

This survey focuses on administering an opinion survey to approximately 40 parents and educators of children with varying disabilities, with the primary focus on children with autism, epilepsy, and emotional / behavioral disorders. The opinion survey aimed to discover problem areas where current fire alarms might hinder the evacuation of special education classrooms. The survey results point to three specific areas of concerns for special needs evacuations; strobe color and frequency, audible notification, and unpredictability (for the students) when the alarm would sound along with lack of evacuation practice. Each of these specific areas were noted to provoke detrimental responses from the children, and specifics of such responses are noted in in the results section of this report.

This report concludes that fire alarm notifications will need to change in order to aid in more efficient evacuations for these at risk populations, and additional evaluation and field trials need to be conducted in order to obtain more data to recommend code changes.