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AMBER Alert System: An Analysis on how Access to Technology has Affected Effectiveness

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**AMBER Alert System: An Analysis on how Access to Technology has Affected
Effectiveness**

By

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A Thesis Quality Research Paper

Submitted in Partial Fulfillment

of the

Requirements for the

Master's Degree

in

PUBLIC ADMINISTRATION

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Introduction

Research Question

This research was conducted to examine whether the introduction of Wireless Electronic Alerts (WEAs) to the AMBER Alert system in 2012 has impacted the effectiveness of the system from 2009 to 2019.

Background

The AMBER Alert System was created in 1996 after the abduction and murder of 9-year-old Amber Hagerman, who was kidnaped while riding her bicycle in Arlington, Texas (Department of Justice, 2019a, n.p.). The term AMBER stands for America's Missing: Broadcast Emergency Response. The first system saw “Dallas-Fort Worth broadcasters team (up) with local police to develop an early warning system to help find abducted children” (Department of Justice, 2019a, n.p.). Many other states soon followed by creating their own versions of this system (Department of Justice, 2019a, n.p.).

AMBER Alert plans have been developed “in all 50 states, the District of Columbia, the Commonwealth of Puerto Rico and the U.S. Virgin Islands” (Department of Justice, 2019b, n.p.). Recently programs have expanded to include Indian territories as well as both the northern and southern borders (Department of Justice, 2019b). This ensures that no matter where a child has gone missing, information can be sent quickly and efficiently.

AMBER Alerts are only issued for children that meet the AMBER Alert criteria. “The PROTECT Act, passed in 2003, which established the role of AMBER Alert Coordinator within the United States’ Department of Justice (USDOJ), calls for the USDOJ to issue minimum standards or guidelines for AMBER Alerts that states can adopt voluntarily” (Department of Justice, 2019b, n.p.). Each state has slightly different criteria, however many follow the overall

guidelines provided by the USDOJ (Department of Justice, 2019b). The recommended criteria are as follows:

- “There is reasonable belief by law enforcement that an abduction has occurred” (Department of Justice, n.d., n.p.).
- “The law enforcement agency believes that the child is in imminent danger of serious bodily injury or death” (Department of Justice, n.d., n.p.).
- “There is enough descriptive information about the victim and the abduction for law enforcement to issue an AMBER Alert to assist in the recovery of the child” (Department of Justice, n.d., n.p.).
- “The abduction is of a child aged 17 years or younger” (Department of Justice, n.d., n.p.).
- “The child’s name and other critical data elements, including the Child Abduction flag, have been entered into the National Crime Information Center (NCIC) system” (Department of Justice, n.d., n.p.).

These criteria are included as a way to ensure that the chances to abuse the system are low (Department of Justice, n.d.). However, this is a time sensitive process, and a judgment call based on evidence must be made quickly to ensure time to find the child safely (Department of Justice, n.d.). It is also important to ensure that enough information is available to issue an AMBER Alert. “This element requires as much descriptive information as possible about the abducted child and the abduction, as well as descriptive information about the suspect and the suspect’s vehicle” (Department of Justice, n.d., n.p.). Issuing an alert without descriptive details would make it difficult for the public to assist in the spotting of the child or abductor, which would lead to a drop in effectiveness for the program (Department of Justice, n.d.).

Once a local law enforcement agency determines that a missing child's case meets the above criteria, it notifies "broadcasters and state transportation officials" (Department of Justice, 2019b, n.p.). AMBER Alerts are broadcast over the radio and television. They take priority over the scheduled program since they relate to the safety and wellbeing of the public. They are also broadcast over the Department of Transportation's highway signs, "through lottery, digital billboards, Internet Ad exchanges, Internet Service Providers, Internet search engines, as well as wireless devices such as mobile phones" (Department of Justice, 2019b, n.p.).

California's "statewide child abduction notification system was implemented on July 30, 2002" (Center for Innovation and Resources, 2020, n.p.). The system, officially called the California Child Safety AMBER Network, was modeled after the one created in Texas in 1996. Their goal is "to rapidly disseminate information about a suspect and victim to law enforcement agencies and the public when a child has been abducted" (Center for Innovation and Resources, 2020, n.p.).

In California, if a case has been proven to meet the criteria for an AMBER Alert, officials will "contact the California Highway Patrol's (CHP) Emergency Notification and Tactical Alert Center (who will then) activate the alert" (Center for Innovation and Resources, 2020, n.p.). CHP will distribute Amber Alert information to a variety of places including, "law enforcement, broadcasters, National Center for Missing and Exploited Children (NCMEC), California Lottery, Ports of Entry, and the public" (Center for Innovation and Resources, 2020, n.p.). Be on the lookout (BOLO) alerts will be sent by CHP Communication Centers to any CHP officers in the affected areas. These include a description of the suspect and victim, and vehicle information. The Emergency Alert System (EAS) will be used to inform local broadcasters of the alert. Information will be posted on Twitter (@CHPAAlerts) as well as other media outlets. In addition,

several private businesses across California have agreements to post alerts on their electronic signs (Center for Innovation and Resources, 2020).

The Wireless Emergency Alerts (WEA) system has been used nearly 56,000 times to warn the public about a variety of critical situations (Federal Communications Commission, 2021). “WEA is a public safety system that allows customers who own compatible mobile devices to receive geographically targeted, text-like messages alerting them of imminent threats to safety in their area” (Federal Communications Commission, 2021, n.p.). WEA was established in 2008 after the passage of The Warning Alert and Response Network (WARN) Act. It became operational in 2012 (Federal Communications Commission, 2021). The distribution of WEA comes as “the result of a unique public/private partnership between the Federal Emergency Management Agency, the FCC, and the United States wireless industry in order to enhance public safety” (Federal Communications Commission, 2021, n.p.). “Authorized public safety officials send the alerts through FEMA's Integrated Public Alert and Warning System (IPAWS) to wireless providers, which then push the alerts from cell towers to mobile devices in the affected area” (Federal Communications Commission, 2020, n.p.). Alerts are then broadcast to a specific geographical location where an emergency is occurring. For example, if an Amber Alert occurs in Los Angeles, any WEA-capable mobile device in that zone will receive an alert. This includes devices that are roaming or anyone traveling to that area (Federal Communications Commission, 2021).

WEA alerts only cover critical emergency situations. Consumers may only receive four types of alerts:

- “Presidential Alerts: a special class of alerts only sent during a national emergency” (FEMA, 2020, n.p.).

- “Imminent Threat Alerts: include natural or human-made disasters, extreme weather, active shooters, and other threatening emergencies that are current or emerging” (FEMA, 2020, n.p.).
- “Public Safety Alerts: contain information about a threat that may not be imminent or after an imminent threat has occurred. Public safety alerts are less severe than imminent threat alerts” (FEMA, 2020, n.p.).
- “America's Missing: Broadcast Emergency Response (AMBER) Alerts: urgent bulletins issued in child-abduction cases. Rapid and effective public alerts often play a crucial role in returning a missing child safely. An AMBER Alert instantly enables the entire community to assist in the search for and safe recovery of the child” (FEMA, 2020, n.p.).

After the passage of the WARN Act, Congress allowed subscribers the ability to block all WEAs with the exception to those issued by the President (Federal Communications Commission, 2021). When a WEA is issued it will appear on the recipient's telephone much like a text message. Each alert has a unique signal and vibration to help distinguish it. This is beneficial for individuals with hearing or vision related disabilities (Federal Communications Commission, 2021). It is difficult to truly estimate the effectiveness of the AMBER Alert system as a whole, because most people would argue that even if they only find one child per year, that is one less child on the missing and endangered list.

LITERATURE REVIEW

Pros and Cons of the Amber Alert System

A 2013 report from the National Center for Missing and Exploited Children states that in a typical year there are about 200 AMBER Alerts issued in the United States (National Center for Missing & Exploited Children, 2014). “The goal of an AMBER Alert is to instantly galvanize the community to assist in the search for and safe recovery of an abducted child” (Harp, 2019, n.p.). Time plays a crucial part in any kidnapping investigation. “Seventy-four percent of kidnappers who kill abducted children do so within three hours of taking them” (Sternstein, 2004, pg. 1). “U.S. Assistant Attorney General Deborah Daniels, the national coordinator for the alert system, said there is evidence that abductors have released children after learning that the children were the focus of aggressive searches” (Johnson, 2004, n.p.).

A review of the (AMBER Alert) system by the USDOJ found that from early 2002 through late 2004, 143 children were recovered through the alert system (Johnson, 2004). From 2002 until 2004 “Arizona had 18 AMBER Alert activations, all of which were successfully recovered using electronic road signs” (Sternstein, 2004, pg 1). Experts estimate that “ninety percent of AMBER Alerts issued across the nation have resulted in authorities finding a child alive” (Johnson, 2004, n.p.).

The search for a missing person often relies on the public to use a type of memory called prospective person memory (Lampinen & Erickson, 2016). “In prospective person memory, the prospective memory target is a particular person’s face, and the prospective memory response is to contact authorities” (Lampinen & Moore, 2016, pg. 588). As Lampinen and Moore’s (2016) research shows, “performance on prospective person memory tasks is often quite poor” (588).

Over the past decade there have been concerns from criminal justice researchers who question the AMBER Alert system's effectiveness. There have been claims that the system is a form of "crime control theater" (Griffin et al. 2007, pg. 378). They believe that the alerts are overused, which has led to the general public becoming numb to the urgency (Lampinen & Moore, 2016). While Lampinen & Moore (2016) have stated that there is no clear line regarding how many alerts are too many, they believe the system needs to reevaluate itself to be able to work more effectively.

Technology Over the Years

When the first AMBER Alert systems were being implemented, they were thought of as partnerships between local law enforcement and a variety of public and private agencies. Many states used the Emergency Alert System to send alerts to "primary radio and TV stations, which in turn send the information to other radio, television and cable stations" (Kinsella, 2003, n.p.). "The information is then sent out through a break in radio broadcasting that announces the alert, a "crawl" or "ticker" on television and cable television accompanied by a picture of the child" (Kinsella, 2003, n.p.). Alerts were also shown on electric highway signs (Kinsella, 2003)

In 2005, the first "opt in" AMBER Alert text messaging system debuted (Sarkar, 2005). The partnership between a variety of wireless companies and the National Center for Missing and Exploited Children required participants to register their phone number online, and participants were limited to only five regions for which they could receive alerts (Sarkar, 2005).

In recent years there has been a campaign to involve social media as a way to "engage the public and prevent crime" (Mendoza, 2015). Currently there is an AMBER Alert app that the public can download on their phones (Heighington, 2011). "This application includes all current,

active AMBER Alerts with a small photo of the victim. Each alert contains detailed information about the abduction, including physical description, last known whereabouts, and any details or photos of suspects” (Heighington, 2011, pg. 3). There is also, a "Report Sighting" button (Heighington, 2011). This button allows any app user to report a potential sighting of a victim or suspect (Heighington, 2011). It allows investigators to have precise GPS coordinates which could be used to “better assess the credibility of multiple reports” (Heighington, 2011, pg. 3). However, these types of apps rely on both the public knowing about them and desiring to participate to be successful.

METHODOLOGY

Type of Analysis

For this research, a program analysis was chosen due to its ability to “compare program results to planned objectives” (Sylvia & Sylvia, 2012, pg. 28). A program analysis identifies an organization’s goal and the steps used to achieve that goal, then evaluates the organization’s ability to effectively achieve that goal.

Following this model, the research began by compiling a list of how many cases each year fall under the four different types of AMBER Alerts. The data led to the analysis of two lists, one of how many cases each year between 2009 and 2019 were labeled “success stories”, and one of the cases’ recovery rates. Both lists were then analyzed to see whether the introduction of WEAs in 2012 had a significant impact on the success rate.

Data Collection and Selection

This research is based on national data for 2009 to 2019 from the USDOJ, Office of Justice Programs (Department of Justice, 2019c). It breaks down information on all of the AMBER Alerts that have been issued throughout the country. Some main sections include: AMBER Alerts by range, state, and month, as well as characteristics of minors who have been abducted and the abductors.

Using the dataset, a breakdown of the different types of AMBER Alerts was developed, including the number of cases that ended in a recover and the number of cases that were not recovered. Next, “success stories” are presented. For the purpose of this research, a success story was defined as, “a case in which a child is safely recovered as a direct result of the AMBER Alert being issued” (National Center for Missing & Exploited Children, 2010, pg. 7). The overall number of success stories over the years was recorded. Once compiled, an analysis of

effectiveness over eleven years was completed, noting any significant changes in the data. Next, an analysis on the correlation between WEAs and recovery time was completed, noting any significant changes in the data.

IRB Exclusion

Data used for this analysis did not involve interaction with living individuals. Any identifying traits are public information. As a result, this research met the requirement for Institutional Review Board exclusion

FINDINGS

Statistical Data

The goal of this research was to determine whether the addition of WEAs to the AMBER Alert system in 2012 increased effectiveness of the system. The research reviewed 11 reports dating from 2009 to 2019 from the USDOJ, Office of Justice Programs. Information presented in the reports covers all AMBER Alerts that were issued in the United States, Puerto Rico, and the U.S. Virgin Islands from January 1st through December 31st of each year. When the AMBER Alert is first called, law enforcement will classify it as one of four different types of cases:

- “A Family Abduction (FA) occurs when an individual between birth and 17 years of age is abducted from his or her custodial parent or legal guardian by a noncustodial family member who is related to the child by blood or marriage” (National Center for Missing & Exploited Children, 2010, pg. 6).
- “A Nonfamily Abduction (NFA) occurs when a child, age 17 or younger, is abducted by someone who is unknown to the child or his or her family, an acquaintance, or someone who is unidentifiable as either” (National Center for Missing & Exploited Children, 2010, pg. 6).
- “Lost, Injured, or Otherwise Missing (LIM) refers to any missing child where there are insufficient facts to determine the cause of a child’s disappearance as well as any child age 10 or younger who is missing on his or her own accord. Absent facts to the contrary, the law-enforcement agency should assume the child is endangered, act accordingly, and follow all the investigative steps of an NFA case. These children are also referred to as Endangered Missing” (National Center for Missing & Exploited Children, 2010, pg. 6).

- “An Endangered Runaway (ERU) is any missing child between 11 and 17 years of age, who is missing on his or her own accord without permission from his or her parent or legal guardian” (National Center for Missing & Exploited Children, 2010, pg. 6).

On occasion, Law Enforcement may run into a case where an AMBER Alert should not have been called. These cases are further broken down into two groups:

- “A hoax is a case where an individual intentionally falsely reports a child missing or when a child reports him- or herself missing with the intent of misleading law enforcement” (National Center for Missing & Exploited Children, 2010, pg. 7).
- “An unfounded case occurs when a child is reported missing based on available information at the time, but the investigation determines a child was never missing” (National Center for Missing & Exploited Children, 2010, pg.7).

Cases are categorized as resolved when any of the criteria listed below are met:

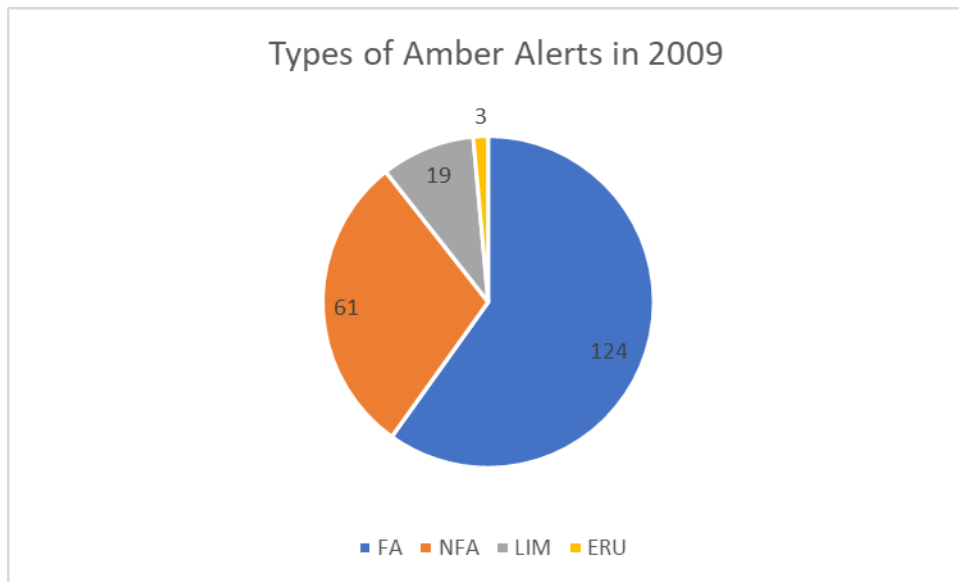
- “The child returns home to his or her parent or legal guardian, the child will remain in the custody of law enforcement, or the child is in contact with his or her parent or legal guardian but will not be returning home and the parents or legal guardian and law enforcement are satisfied with the situation. A child’s case can only be labeled deceased if a body has been found and positively identified” (National Center for Missing & Exploited Children, 2010, pg. 7).
- “If law enforcement closes the case and the child has not been recovered or if the parents/guardians state in writing, they no longer want NCMEC (the National Center for Missing and Exploited Children) to assist with their child’s case” (National Center for Missing & Exploited Children, 2010, pg. 7).

“A child’s recovery is considered a success story when his or her safe recovery occurred as a direct result of the AMBER Alert being issued” (National Center for Missing & Exploited Children, 2010, pg. 7).

2009: In 2009, 207 AMBER Alerts were issued involving 263 children (National Center for Missing & Exploited Children, 2010). In the 2009 calendar year there were “124 FAs, 61 NFAs, 19 LIMs, and 3 ERUs” (National Center for Missing & Exploited Children, 2010, pg. 8).

“Sixteen cases were later determined to be hoaxes, and fifteen cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2010, pg8).

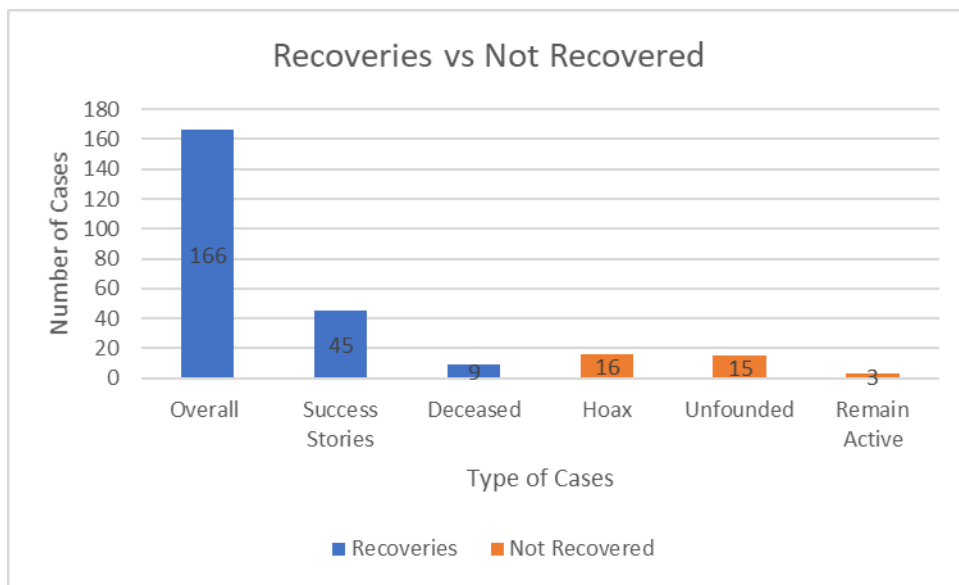
Figure 1: Types of AMBER Alerts in 2009



Of the 207 AMBER Alerts in 2009, 166 were classified as recoveries with 45 of those being success stories (National Center for Missing & Exploited Children, 2010). At the time the report was made (2010) three AMBER Alerts fell under the “remain active” category and nine children were classified as deceased (National Center for Missing & Exploited Children, 2010).

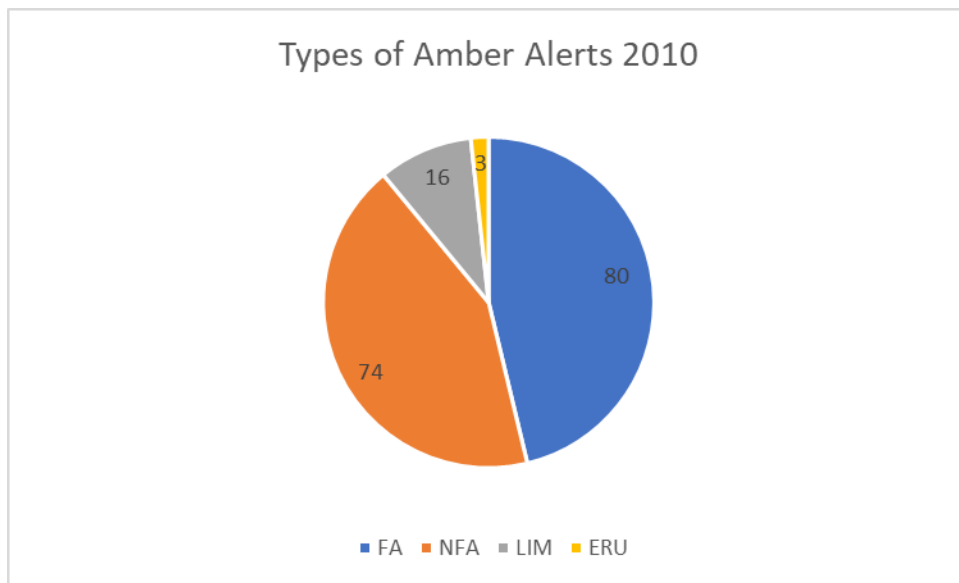
There is a slight difference between the number of cases not recovered and the sum of the hoaxes, unfounded, remain active and deceased groups. This is because, although rare, one case can be filed under multiple groups. For example, in 2009, a woman reported her 2-year-old as missing. An AMBER Alert was released; however, the case was determined to be a hoax after it was discovered the woman and her boyfriend had murdered the child (National Center for Missing & Exploited Children, 2010). This case is represented under both the hoax and deceased groups.

Figure 2: Recoveries vs Not Recovered in 2009



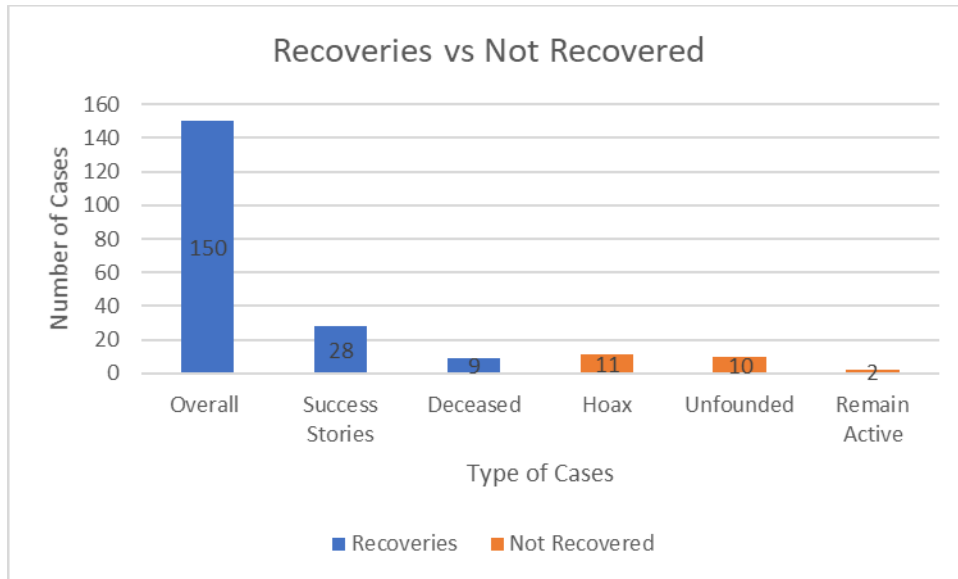
2010: In 2010, 173 AMBER Alerts were issued involving 211 children (National Center for Missing & Exploited Children, 2011). In the 2010 calendar year there were “80 FAs, 74 NFAs, 16 LIMs, and 3 ERUs” (National Center for Missing & Exploited Children, 2011, pg. 8). “Eleven cases were later determined to be hoaxes, and ten cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2011, pg. 8).

Figure 3: Types of AMBER Alerts in 2010



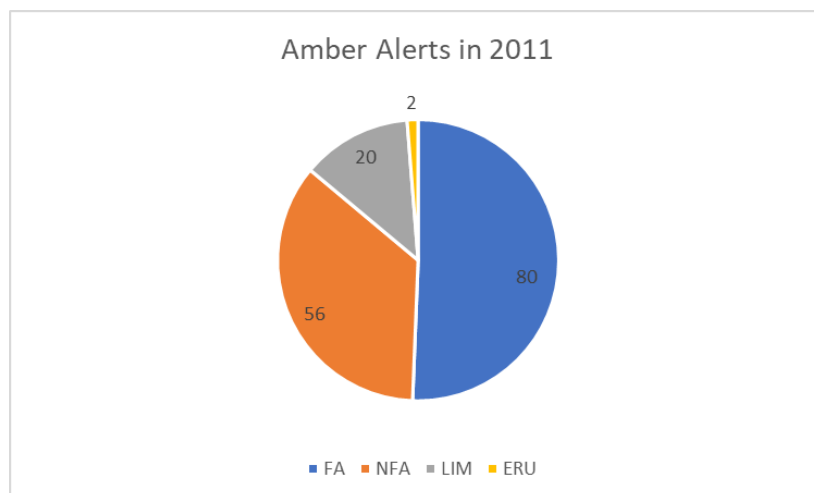
Of the 173 AMBER Alerts in 2010, 150 cases were classified as recoveries, with 28 of those being success stories (National Center for Missing & Exploited Children, 2011). At the time the report was made (2011) two AMBER Alerts fell under the “remain active” category and nine children were classified as deceased (National Center for Missing & Exploited Children, 2011).

Figure 4: Recoveries vs Not Recovered in 2010



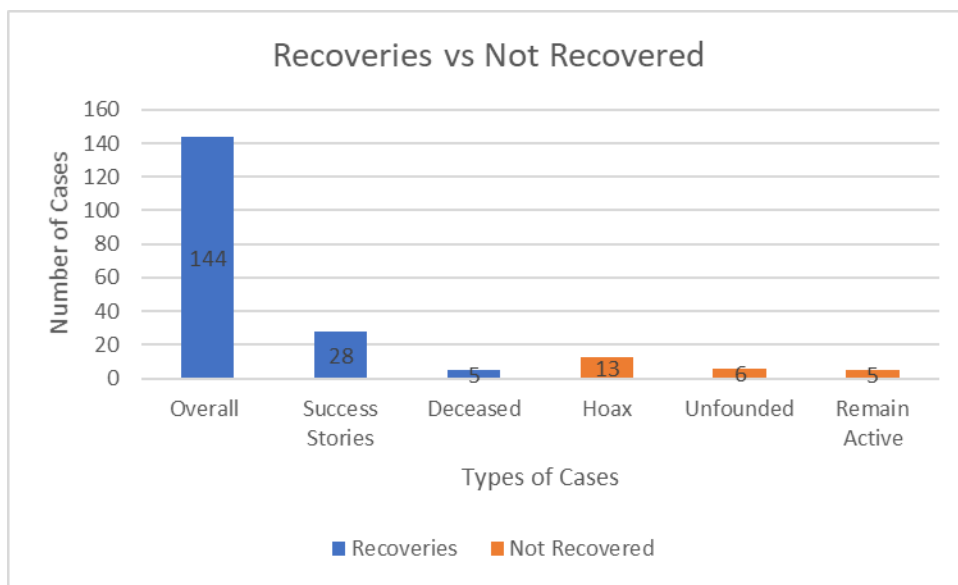
2011: In 2011, 158 AMBER Alerts were issued involving 197 children (National Center for Missing & Exploited Children, 2012). In the 2011 calendar year there were “80 FAs, 56 NFAs, 20 LIMs, and 2 ERUs” (National Center for Missing & Exploited Children, 2012, pg.8). “Thirteen cases were later determined to be hoaxes, and six cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2012, pg.8).

Figure 5: Types of AMBER Alerts in 2011



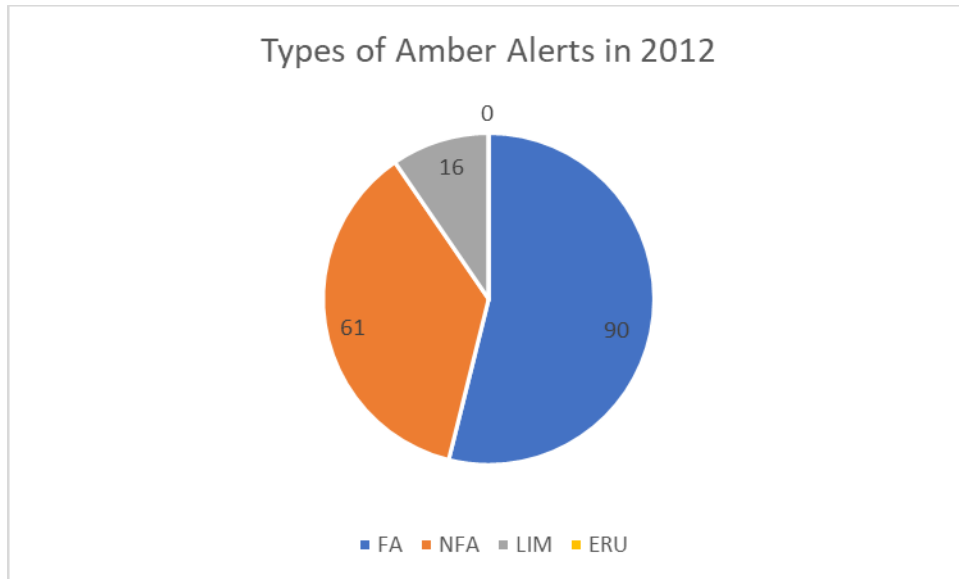
Of the 158 AMBER Alerts in 2011, 144 cases were classified as recoveries, with 28 of those being success stories (National Center for Missing & Exploited Children, 2012). At the time the report was made (2012) five AMBER Alerts fell under the “remain active” category and five children were classified as deceased (National Center for Missing & Exploited Children, 2012).

Figure 6: Recoveries vs Not Recovered in 2011



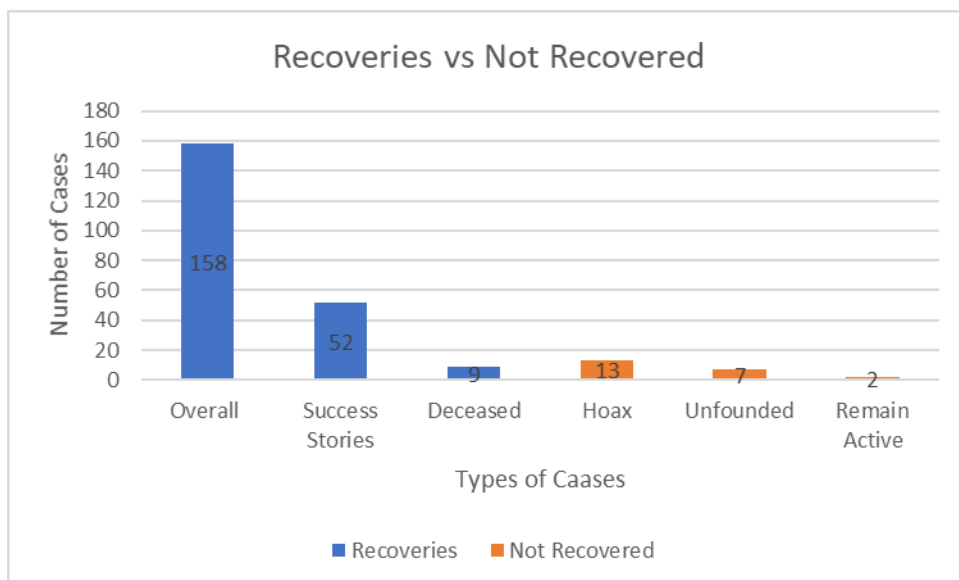
2012: In 2012, 167 AMBER Alerts were issued involving 204 children (National Center for Missing & Exploited Children, 2013). In the 2012 calendar year there were “90 FAs, 61 NFAs, 16 LIMs, and 0 ERUs” (National Center for Missing & Exploited Children, 2013, pg.8). “Thirteen cases were later determined to be hoaxes, and seven cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2013, pg.8).

Figure 7: Types of AMBER Alerts in 2012



Of the 167 AMBER Alerts in 2012, 158 cases resulted in a recovery, with 52 of those being success stories (National Center for Missing & Exploited Children, 2013). At the time the report was made (2013) two AMBER Alerts fell under the “remain active” category and nine children were classified as deceased (National Center for Missing & Exploited Children, 2013).

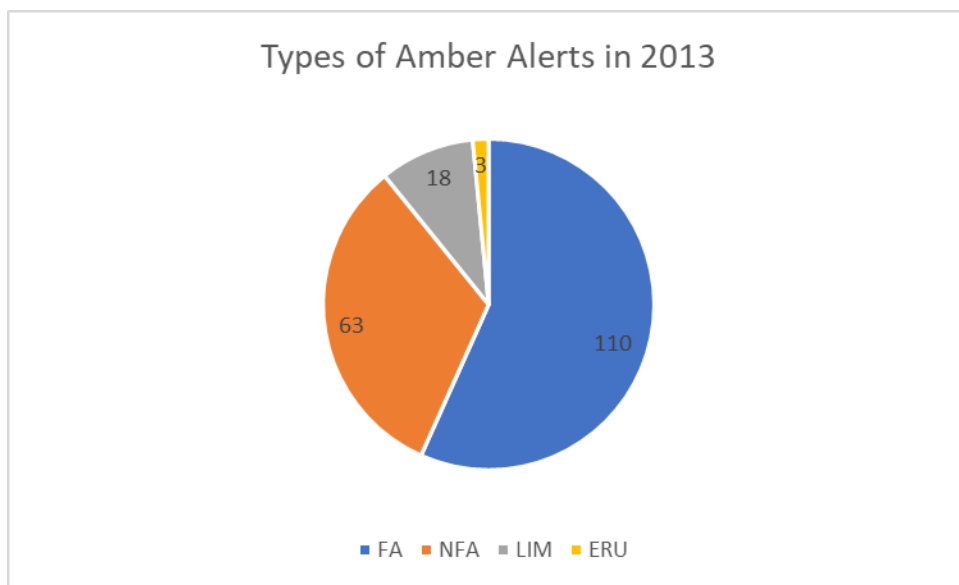
Figure 8: Recoveries vs Not Recovered in 2012



2013: In 2013, 194 AMBER Alerts were issued involving 243 children (National Center for Missing & Exploited Children, 2014). In the 2013 calendar year there were “110 FAs, 63 NFAs, 18 LIMs, and 3 ERUs” (National Center for Missing & Exploited Children, 2014, pg.8).

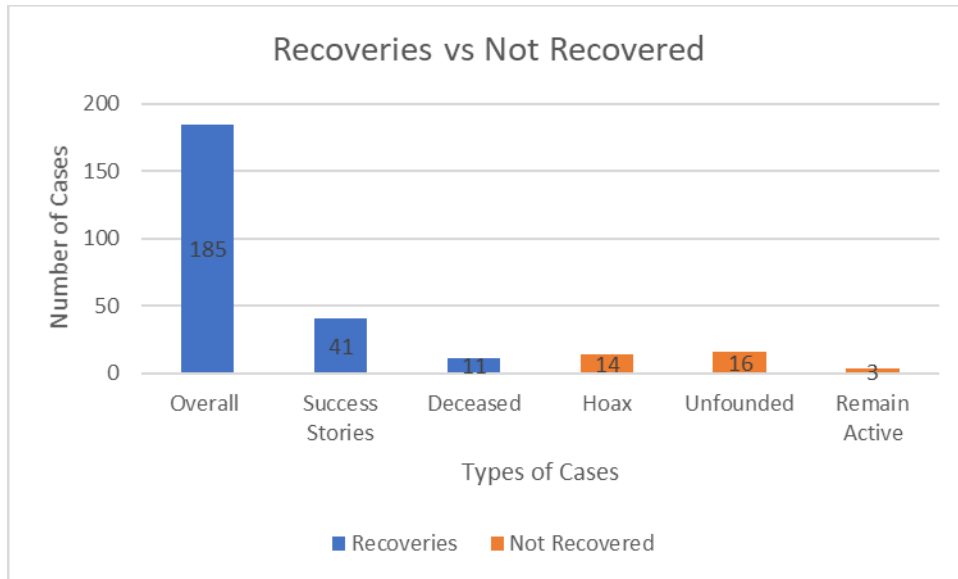
“Fourteen cases were later determined to be hoaxes, and sixteen cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2014, pg.8).

Figure 9: Types of AMBER Alerts in 2013



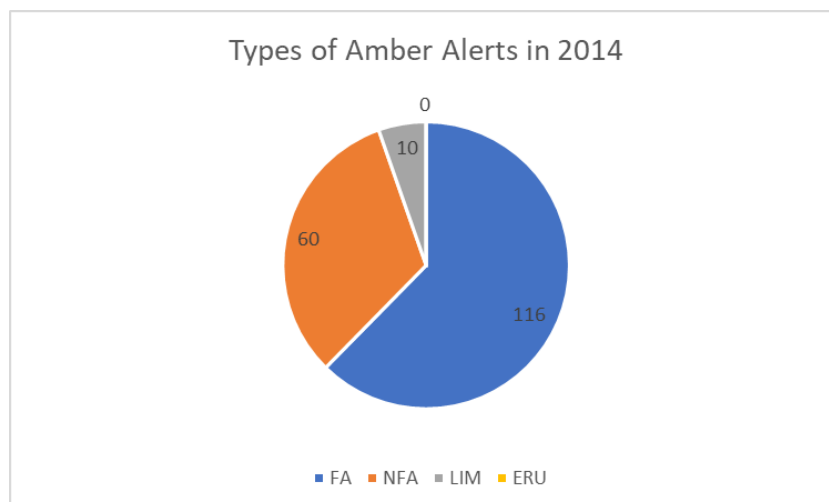
Of the 194 AMBER Alerts in 2013, 185 cases were classified as recoveries, with 41 of those being success stories (National Center for Missing & Exploited Children, 2014). At the time the report was made (2014) three AMBER Alerts fell under the “remain active” category and eleven children were classified as deceased (National Center for Missing & Exploited Children, 2014).

Figure 10: Recoveries vs Not Recovered in 2013



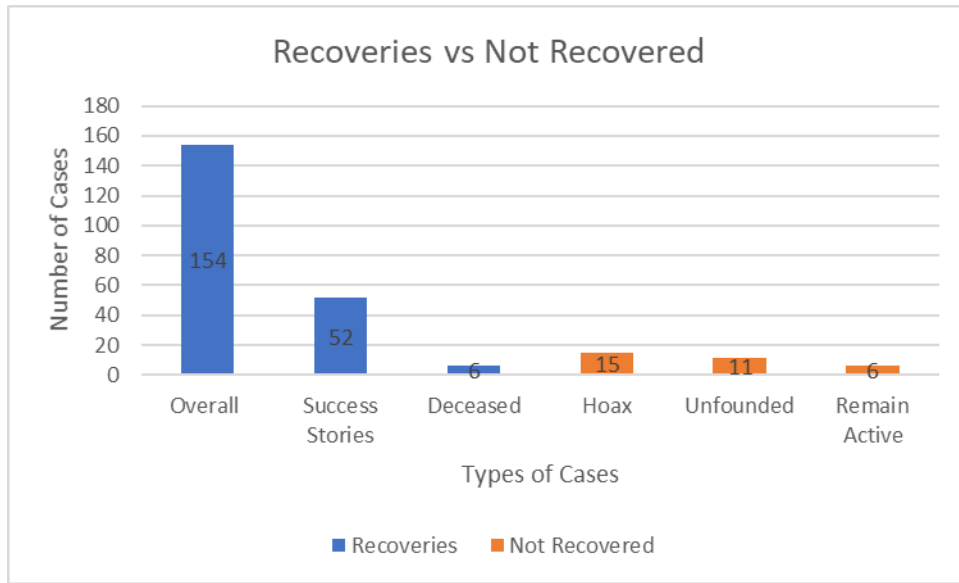
2014: In 2014, 186 AMBER Alerts were issued involving 239 children (National Center for Missing & Exploited Children, 2015). In the 2014 calendar year there were “116 FAs, 60 NFAs, 10 LIMs, and 0 ERUs” (National Center for Missing & Exploited Children, 2015, pg.8). “Fifteen cases were later determined to be hoaxes, and eleven cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2015, pg.8).

Figure 11: Types of AMBER Alerts in 2014



Of the 186 AMBER Alerts in 2014, 154 cases resulted in a recovery, with 52 of those being success stories (National Center for Missing & Exploited Children, 2015). At the time the report was made (2015) six AMBER Alerts fell under the “remain active” category and six children were classified as deceased (National Center for Missing & Exploited Children, 2015).

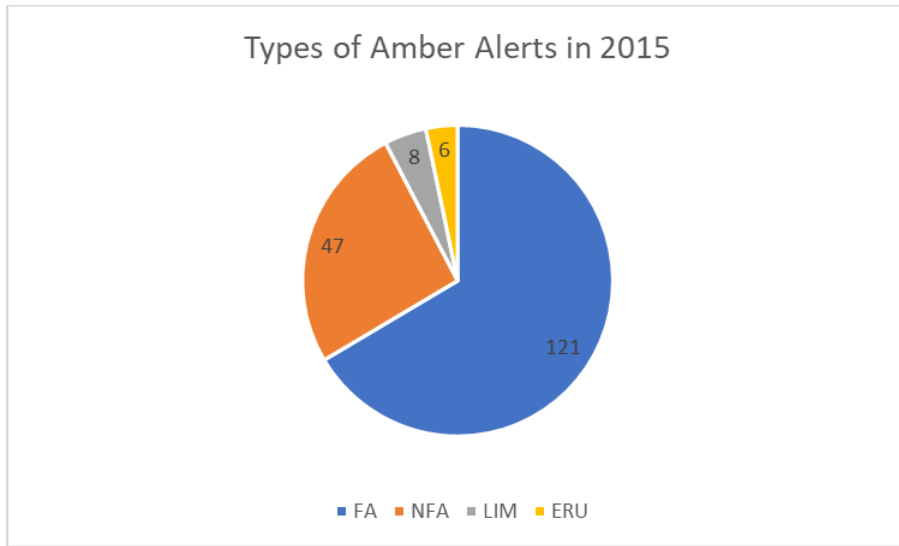
Figure 12: Recoveries vs Not Recovered in 2014



2015: In 2015, 182 AMBER Alerts were issued involving 224 children (National Center for Missing & Exploited Children, 2016). In the 2015 calendar year there were “121 FAs, 47 NFAs, 8 LIMs, and 6 ERUs” (National Center for Missing & Exploited Children, 2016, pg.8).

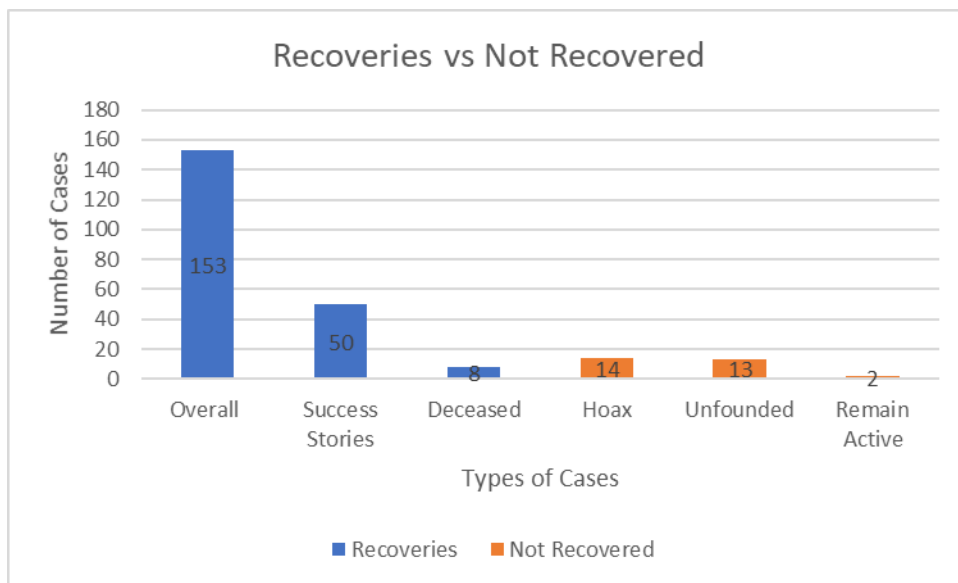
“Fourteen cases were later determined to be hoaxes, and thirteen cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2016, pg.8).

Figure 13: Types of AMBER Alerts in 2015



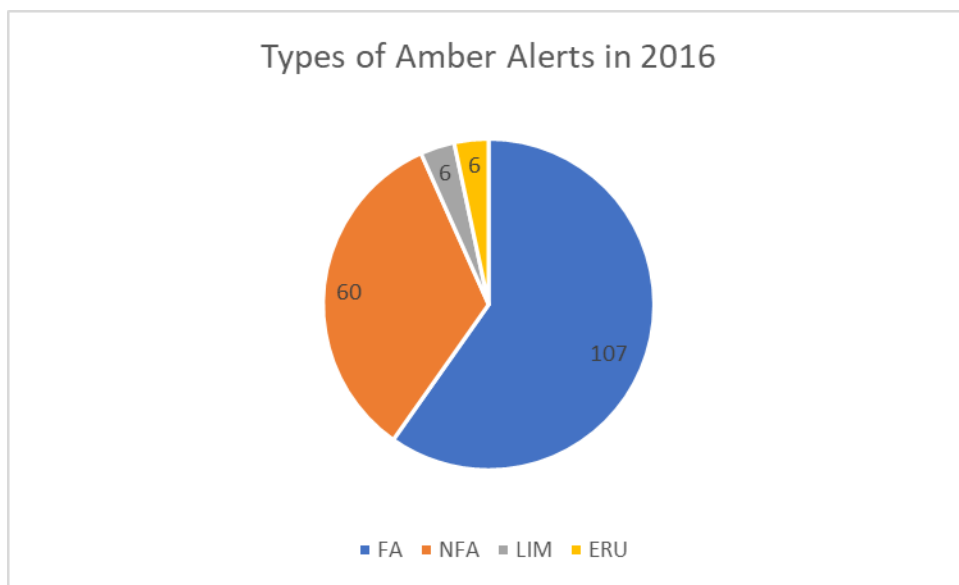
Of the 182 AMBER Alerts in 2015, 153 cases resulted in a recovery with 50 of those being success stories (National Center for Missing & Exploited Children, 2016). At the time the report was made (2016) two AMBER Alerts fell under the “remain active” category and eight children were classified as deceased (National Center for Missing & Exploited Children, 2016).

Figure 14: Recoveries vs Not Recovered in 2015



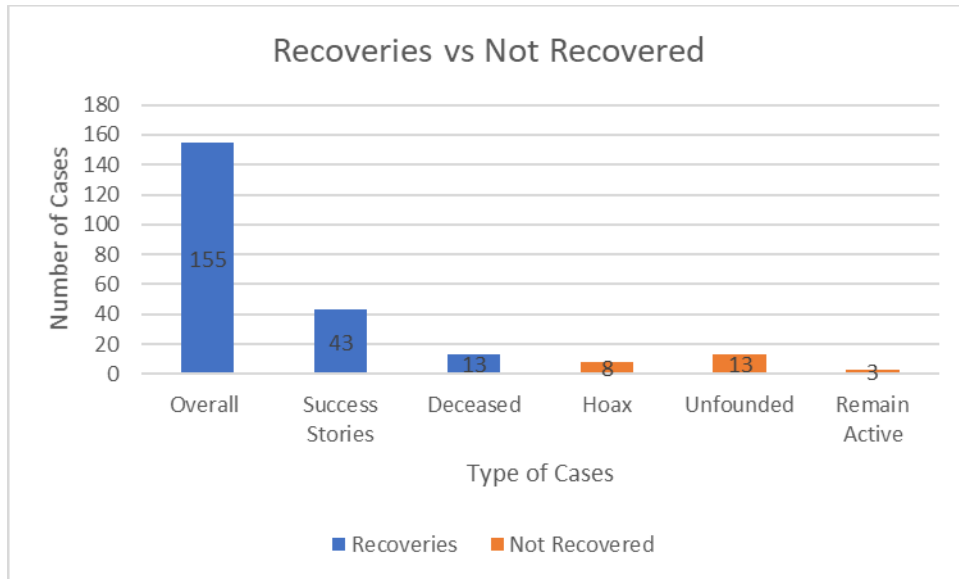
2016: In 2016, 179 AMBER Alerts were issued involving 213 children (National Center for Missing & Exploited Children, 2017). In the 2016 calendar year there were “107 FAs, 60 NFAs, 6 LIMs, and 6 ERUs” (National Center for Missing & Exploited Children, 2017, pg.8). “Eight cases were later determined to be hoaxes, and thirteen cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2017, pg.8).

Figure 15: Types of AMBER Alerts in 2016



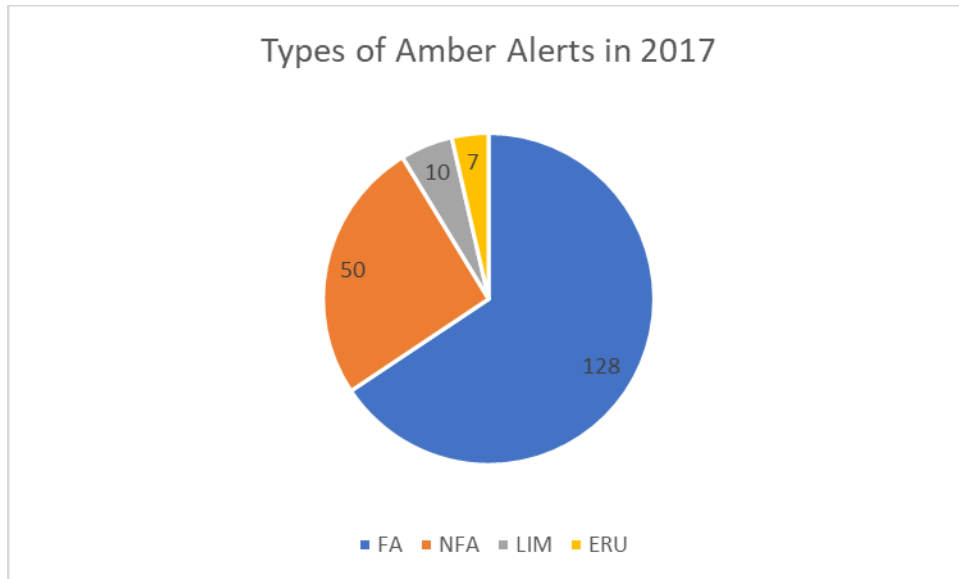
Of the 179 AMBER Alerts in 2016, 155 cases resulted in a recovery, with 43 of those being success stories (National Center for Missing & Exploited Children, 2017). At the time the report was made (2017) three AMBER Alerts fell under the “remain active” category and thirteen children were classified as deceased (National Center for Missing & Exploited Children, 2017).

Figure 16: Recoveries vs Not Recovered in 2016



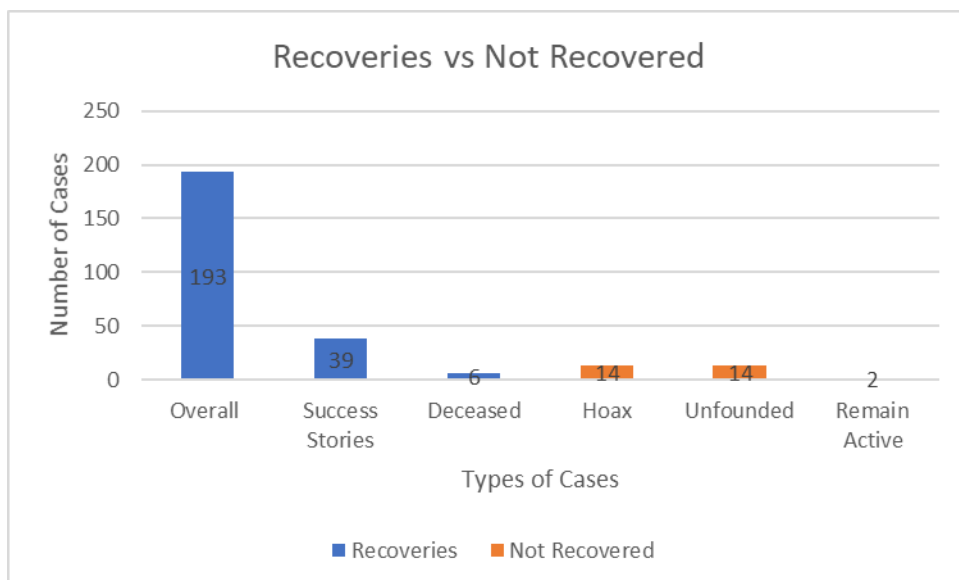
2017: In 2017, 195 AMBER Alerts were issued involving 263 children (National Center for Missing & Exploited Children, 2018). In the 2017 calendar year there were “128 FAs, 50 NFAs, 10 LIMs, and 7 ERUs” (National Center for Missing & Exploited Children, 2018, pg.8). “Fourteen cases were later determined to be hoaxes, and fourteen cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2018, pg.8).

Figure 17: Types of AMBER Alerts in 2017



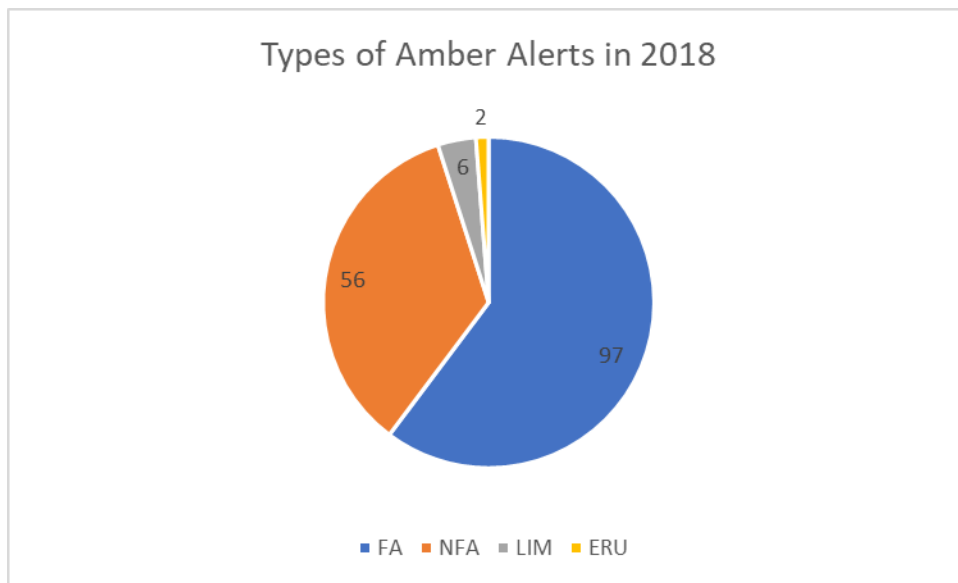
Of the 195 AMBER Alerts in 2017, 193 cases resulted in a recovery with 39 of those being success stories (National Center for Missing & Exploited Children, 2018). At the time the report was made (2018) two AMBER Alerts fell under the “remain active” category and six children were classified as deceased (National Center for Missing & Exploited Children, 2018).

Figure 18: Recoveries vs Not Recovered in 2017



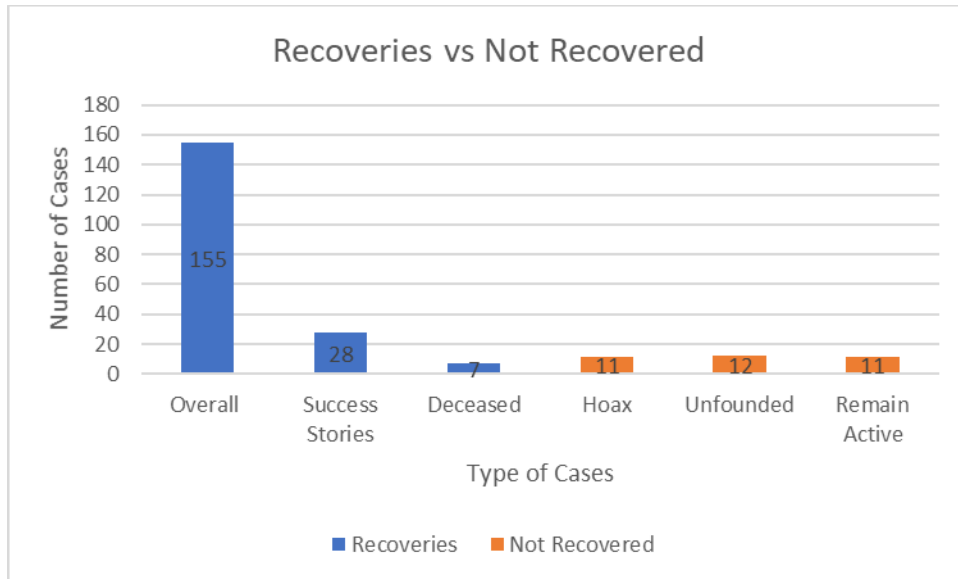
2018: In 2018, 161 AMBER Alerts were issued involving 203 children (National Center for Missing & Exploited Children, 2019). In the 2018 calendar year there were “97 FAs, 56 NFAs, 6 LIMs, and 2 ERUs” (National Center for Missing & Exploited Children, 2019, pg.8). “Eleven cases were later determined to be hoaxes, and twelve cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2019, pg. 8).

Figure 19: Types of AMBER Alerts in 2018



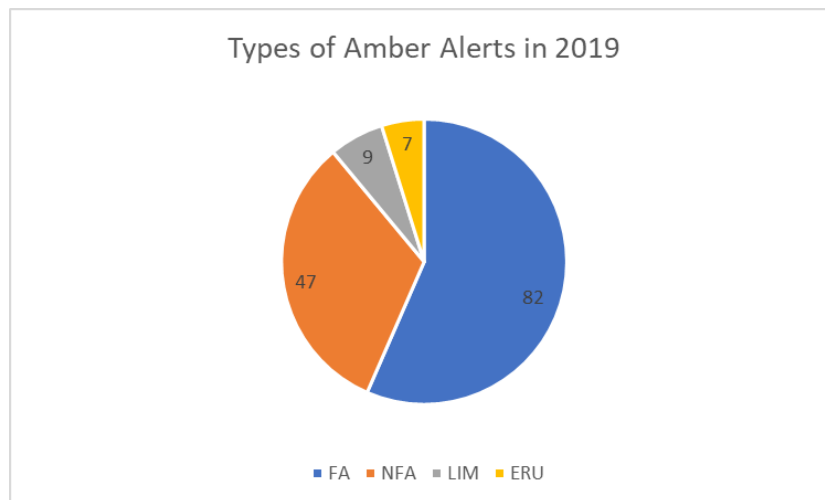
Of the 161 AMBER Alerts in 2018, 155 cases resulted in a recovery, with 28 of those being success stories (National Center for Missing & Exploited Children, 2019). At the time the report was made (2019) eleven AMBER Alerts fell under the “remain active” category and seven children were classified as deceased (National Center for Missing & Exploited Children, 2019).

Figure 20: Recoveries vs Not Recovered in 2018



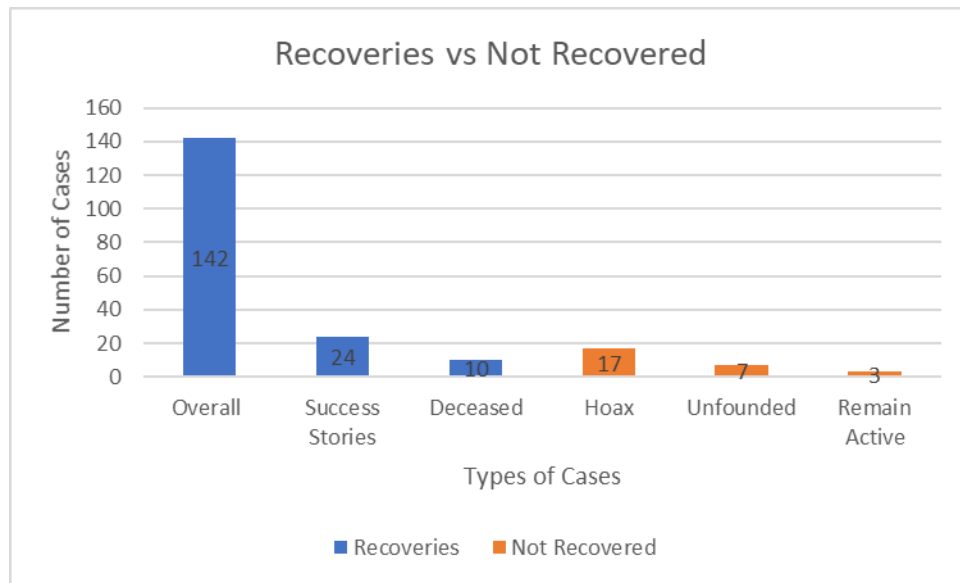
2019: In 2019, 145 AMBER Alerts were issued involving 180 children (National Center for Missing & Exploited Children, 2020). In the 2019 calendar year there were “82 FAs, 47 NFAs, 9 LIMs, and 7 ERUs” (National Center for Missing & Exploited Children, 2020, pg.9). “Seventeen cases were later determined to be hoaxes, and seven cases were later determined to be unfounded” (National Center for Missing & Exploited Children, 2020, pg. 9).

Figure 21: Types of AMBER Alerts in 2019



Of the 145 AMBER Alerts in 2019, 142 cases resulted in a recovery with 24 of those being success stories (National Center for Missing & Exploited Children, 2020). At the time the report was made (2020) three AMBER Alerts fell under the “remain active” category and ten children were classified as deceased (National Center for Missing & Exploited Children, 2020).

Figure 22: Recoveries vs Not Recovered in 2019



Case Studies: Examples of AMBER Alert Outcomes

Family Abduction- On December 15th, 2019, 24-year-old Victor Magana kidnapped his 2-year-old daughter Bethanie Carraza after attempting to murder the child’s mother (Houck, 2019). An AMBER Alert was issued at 2:17am the next day stating that Magana was “armed and dangerous (Houck, 2019). He was found a few hours later after a group of good Samaritans spotted his car in a Shell gas station parking lot (Houck, 2019). Tammy Hall recognized Magana and recorded the interaction on her phone (Medina, 2019). He was spotted in a parking lot attempting to break his car window after locking his keys and daughter inside (Medina, 2019). The video shows 3 men questioning Magana, who is repeatedly denying that he is the suspect of the AMBER Alert

(Medina, 2019). After confirming that the Green Hyundai Santa Fe had the same license plate as the one that was issued, the men cornered Magana, even going so far as to block his car with their own until authorities arrived (Medina, 2019). The daughter was returned to authorities with no injuries, and the mother made a full recovery (Medina, 2019).

Nonfamily Abduction- In February 2021, two children, one year old Sean and his 4-year-old sister Winnifred, were kidnapped during a carjack (Barnard, 2021). Their father, Jeffrey Fang, had left them in the car while going to deliver a doordash order. “Erlin Obani Romero was booked into county jail and is being charged with two counts of kidnapping, auto theft, robbery, conspiracy, probation violation and battery” (Barnard, 2021, n.p.). The children were found in San Francisco’s Bayview district at 1 a.m., 4 hours after their AMBER Alert had been activated (Barnard, 2021). “They were spotted by police officers inside their dad's silver Honda Odyssey minivan, which was carjacked on Jackson Street in Pacific Heights” (Barnard, 2021, n.p.). They were taken to the hospital for a medical evaluation, but had suffered no injuries (Barnard, 2021). The father stated that he spotted the suspect during his attempt to steal the van, however, after a brief struggle. the suspect got away.

Deceased- On September 21st, 2019, 32-year-old Steven Weir picked up his 2-year-old son John from his parents’ house (Sandrik, 2019). The family stated that it was a normal interaction and that there were no signs of distress (Sandrik, 2019). However, 2 hours later his mother received a “farewell” email, which caused her to reach out to authorities (Sandrik, 2019). An AMBER Alert was activated shortly after, which stated that Steven was “armed and dangerous” (Sandrik, 2019). However, 2 days later the AMBER Alert was deactivated after their bodies were found at the family’s favorite campground near the vehicle mentioned in the alert (Sandrik, 2019). Steven was going through a “difficult divorce” from the child’s mother (Sandrik, 2019).

Unfounded- In January 2021, an AMBER Alert for 11-year-old Breasia Terrell was canceled (Sahouri, 2021). She “was reported missing July 10 (2020) after spending the night with her half-brother at the house of his father, Henry Dinkins, in the 2700 block of East 53rd Street in Davenport (Iowa)” (Sahouri, 2021, n.p.). Henry Dinkins is currently in custody on sex offender registration violations, and although he has been named as a person of interest in Breasia’s disappearance, he has not been named a suspect (Sahouri, 2021). “On July 15th, 2020, an AMBER Alert was issued (Sahouri, 2021, n.p.)”.

Mitch Mortvedt of the Iowa Division of Criminal Investigation told local media that the alert was cancelled due to there no longer being an "immediacy" factor (Sahouri, 2021). At the time of the AMBER Alert cancellation, no new information had been discovered (Sahouri, 2021). “Although the AMBER Alert is cancelled, the missing persons investigation is still ongoing (Sahouri, 2021, n.p.)”.

ANALYSIS

Success Stories

After reviewing the number of success stories in relation to the number of overall recoveries each year, the numbers appear to be quite low. The year with the highest number of success stories per recovery was 2014. In 2014 there were 154 recoveries and 52 were considered success stories (National Center for Missing & Exploited Children, 2015). There was a spike in the number of success stories in 2012 after WEAs were introduced into the general population. However, in recent years there has been a steady decline in the impact of WEAs. Since the addition of WEAs, 2017, 2018, and 2019 were the 3 lowest years on record for the total number of success stories in relation to the total number of recoveries.

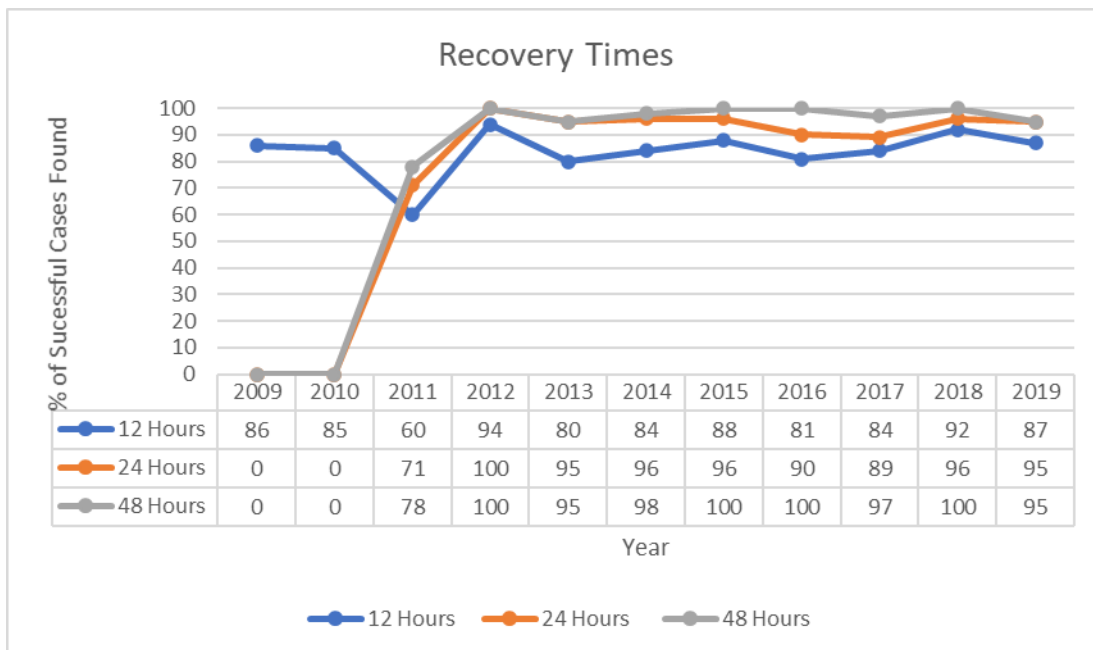
Figure 23: Percent of Overall Success Stories by Year



Recovery Time

There appears to be a correlation between the introduction of WEAs and the overall recovery time for cases. The first 48 hours after a kidnapping is the most crucial period. If a child is not found during the first 48 hours, the chances of him or her being located and found alive drops significantly. Prior to 2012, only 78% to 86% of the overall cases were being found during the first 48 hours. However, after WEAs were introduced in 2012 there was a steady increase in the effectiveness of the recovery times, with ninety-five to one hundred percent of cases being found within 48 hours each year.

Figure 24: Recovery Times by Year



Potential Limitations/ Areas for Future Research

There is no uniform AMBER Alert System between the states. While many states have similar systems and agreements to activate AMBER Alerts in case a suspect were to cross state

lines, one state's system could potentially be more effective than the others, and this would have an effect on a given case's overall success rate. Future research could be undertaken to determine whether rural areas are capable of achieving the same success rates as those in larger cities, when adjusted for their decreased population. With fewer vehicles on the road, it may be easier to spot a particular vehicle in rural areas.

Additionally, advances in technology and access to other resources may have improved the effectiveness of law enforcement investigations and may be a factor in explaining why recovery times have steadily improved over the years. Research could be undertaken to examine correlations between AMBER Alerts and new investigative techniques.

Lastly, future research could be undertaken to analyze the decrease in AMBER Alert success stories. This may be due to the public's over saturation with media, including AMBER Alerts. Over exposure to AMBER Alerts may have led to the public's indifference in participating to help find a missing child.

CONCLUSION

The AMBER Alert system was created in 1996 in an attempt to alert the public to a missing child and recruit their efforts to help assist in finding that child. In the past 25 years, the system has grown and evolved to now include broadcasting capabilities across several outlets. In 2012, Wireless Emergency Alerts (WEA) were added to further warn the public of an AMBER alert. Since then, the number of overall success stories seems to be declining, while the overall recovery times seem to be decreasing. Future research may be done to examine these trends further.

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