

# INFANT LEFT IN VEHICLE

## Cause Map

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

### CAUSE MAPPING

Problem Solving • Incident Investigation • Root Cause Analysis

- Step 1** **Problem** What's the Problem?
- Step 2** **Analysis** Why did it happen?
- Step 3** **Solutions** What will be done?

## Potential for serious injuries avoided by 911 call

On the morning of May 13, 2015, a parent dropped off his older daughter at school and then proceeded to the North Quincy MBTA (Massachusetts Bay Transportation Authority) station where he boarded a commuter train headed to work. When he arrived, approximately 35 minutes later, he realized that he had forgotten to drop off his one-year-old daughter at her day care and had left her in his SUV in the North Quincy station parking lot. The frantic father called 911 as he boarded a train returning to North Quincy. Thankfully, the police and emergency responders were able to find and remove the infant from the vehicle. The child showed no signs of medical distress.

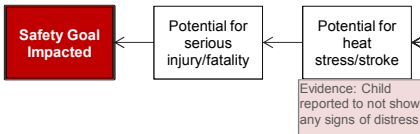
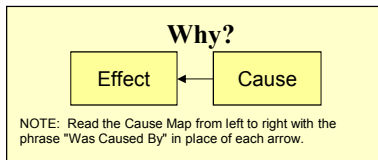
We don't follow safeguards when we know something is going to happen, we follow safeguards *in case* something happens.

### 1 Problem

<b>What</b>	Problem(s)	Potential for serious injury/fatality, infant left in vehicle, forgot to drop off child
<b>When</b>	Date	May 13, 2015
	Time	~7:45 AM
	Different, unusual, unique	Parent did not follow normal "safeguard" procedure
<b>Where</b>	Facility, site	Quincy, MA
	Unit, area, equipment	North Quincy MBTA (Massachusetts Bay Transportation Authority) Station
	Task being performed	Commuting to work via MBTA train
<b>Impact to the Goals</b>		
	<b>Safety</b>	No injuries, potential for serious injury/fatality
	Frequency	~38 children die annually due to heat related illness due to being left in vehicles by accident; unknown how many times occurs without injury (likely not reported)

### 2 Analysis

**Cause Map** - Add detail as information becomes available.



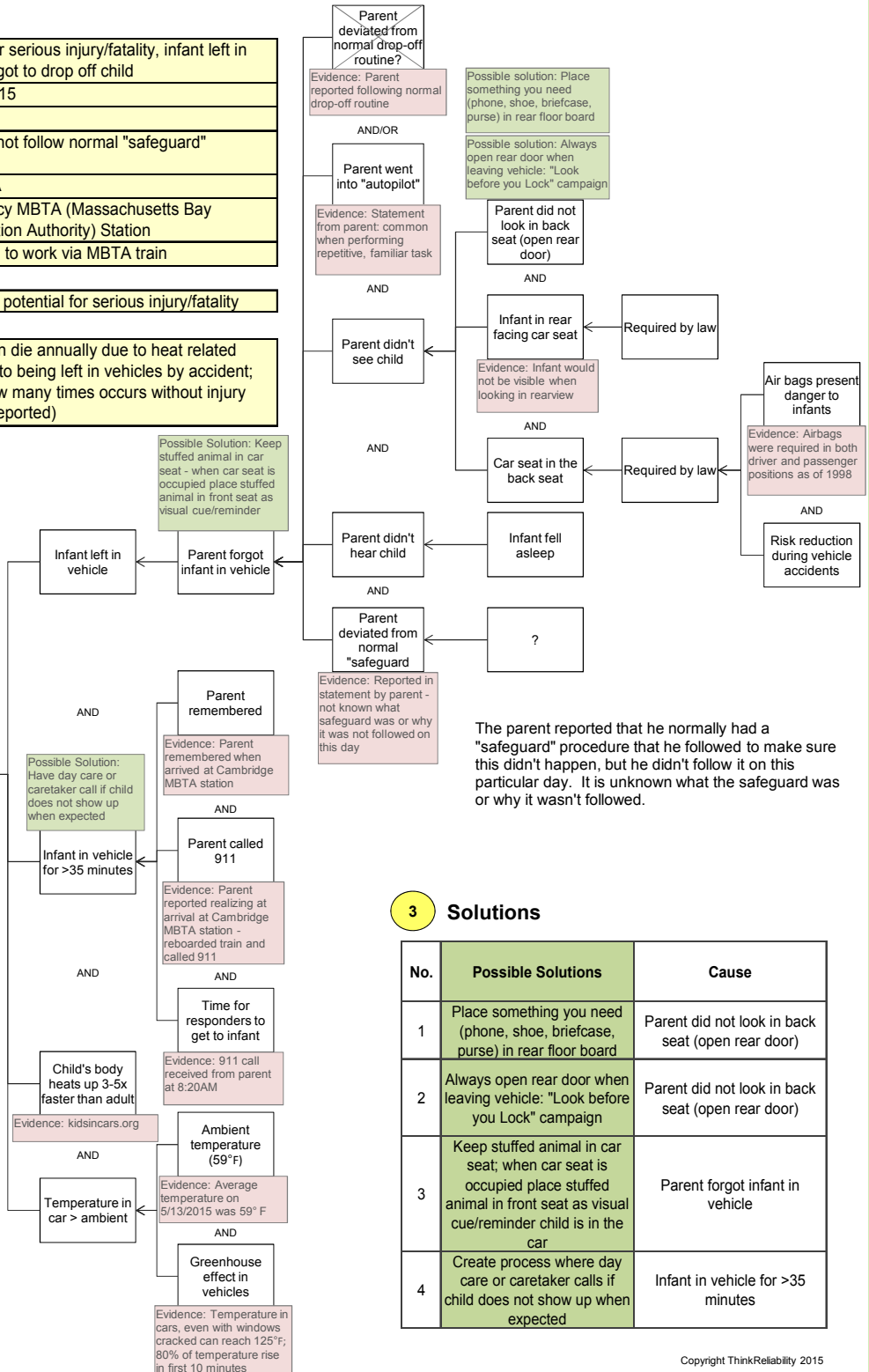
The one-year-old was not visible to the parent because she was in the back seat of the vehicle in a rear facing car seat, as required by law. Airbags were originally introduced in the 1970s but became more commercially available in the early 1990s. In 1998, all vehicles were required to have airbags in both the driver and passenger positions. This safety improvement, which has surely reduced deaths related to vehicle accidents, had the unintended consequence of putting children in car seats in a less visible position to the parents. The number of hot car deaths has significantly increased since the early 1990s.

On the morning of the incident the ambient conditions were relatively mild, about 59 degrees Fahrenheit. However, the temperature in a vehicle can quickly exceed the ambient conditions due to what is called the greenhouse effect. Even with the windows down, the temperature in a vehicle can rise quickly. 80% of that temperature rise occurs within the first 10 minutes.

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The parent reported that he normally had a "safeguard" procedure that he followed to make sure this didn't happen, but he didn't follow it on this particular day. It is unknown what the safeguard was or why it wasn't followed.

### 3 Solutions

No.	Possible Solutions	Cause
1	Place something you need (phone, shoe, briefcase, purse) in rear floor board	Parent did not look in back seat (open rear door)
2	Always open rear door when leaving vehicle: "Look before you Lock" campaign	Parent did not look in back seat (open rear door)
3	Keep stuffed animal in car seat; when car seat is occupied place stuffed animal in front seat as visual cue/reminder child is in the car	Parent forgot infant in vehicle
4	Create process where day care or caretaker calls if child does not show up when expected	Infant in vehicle for >35 minutes