

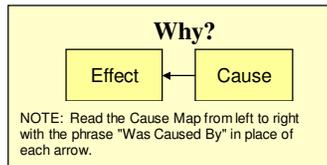
Step 1. Outline

| | | |
|--------------|------------------------------|------------------------------------|
| What | Problem(s) | Football player deaths |
| When | Date | Most deaths occur in August |
| | Time | Most deaths occur in morning |
| | Different, unusual, unique | Most players who died were linemen |
| Where | Country | U.S. |
| | Task being performed | Football practice |
| | Impact to the Goals | |
| | Safety | Risk for player death |
| | Environmental | N/A |
| | Cust. Service | N/A |
| | Production-Schedule | N/A |
| | Property, Equip, Mtls | N/A |
| | Labor, Time | N/A |
| | Frequency | 58 deaths from 1980 to 2009 |

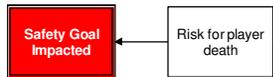
Heatstroke Deaths of Football Players

This is a root cause analysis of deaths of football players in the U.S. A study has determined that most deaths occur during football practice in August, in the morning, to linemen. The impact to the goal of concern is risk of player death.

Beginning with the impacted goal, we can ask why questions to analyze the issue. The player deaths occur from heatstroke that is not treated immediately, whether from players and/or coaches not recognizing the signs of heatstroke, or treatment being delayed while waiting for an ambulance or other medical professional. Heatstroke occurs when a person's heat generation is greater than their cooling ability. This means there are two parts to the analysis: the heat generation, and the cooling ability. In this case, increased heat generation occurs from high ambient heat and high levels of body heat being produced, caused by practicing outside in hot weather.



Step 2. Cause Map Detail Level



What can players, coaches, school districts, and parents do to limit the risk of death from heatstroke? First, ensure that everyone involved in a sporting program recognizes the signs of heat-related illness. Next, make sure that a player who has signs of heat-related illness is treated immediately - while waiting for the ambulance to arrive, take the player out of the sun and spray him with water. To try and avoid heat-related illnesses, ease into practices at the beginning of the season, limit practice time in extremely high heat and/or humidity, and provide plenty of hydration.

