

**Step 1. Outline**

|                            |                              |                                               |
|----------------------------|------------------------------|-----------------------------------------------|
| <b>What</b>                | Problem(s)                   | Sepsis<br>(previously called blood poisoning) |
| <b>When</b>                | Date                         | Proactive                                     |
|                            | Different, unusual, unique   | No simple diagnostic test                     |
| <b>Where</b>               | State, city                  | Proactive                                     |
|                            | Task being performed         | Body fighting an infection                    |
| <b>Impact to the Goals</b> |                              |                                               |
|                            | <b>Patient Safety</b>        | Kills ~30% of those afflicted                 |
|                            | <b>Employee Impact</b>       | ?                                             |
|                            | <b>Compliance</b>            | ?                                             |
|                            | <b>Organization</b>          | ?                                             |
|                            | <b>Patient Services</b>      | ?                                             |
|                            | <b>Environmental</b>         | ?                                             |
|                            | <b>Property, Equip, MtIs</b> | ?                                             |
|                            | <b>Labor, Time</b>           | ?                                             |
|                            |                              | This incident ?                               |
|                            | Frequency                    | Kills ~200,000 people in the U.S.             |
|                            |                              | Annualized Cost ?                             |

**Reducing Deaths from Sepsis**

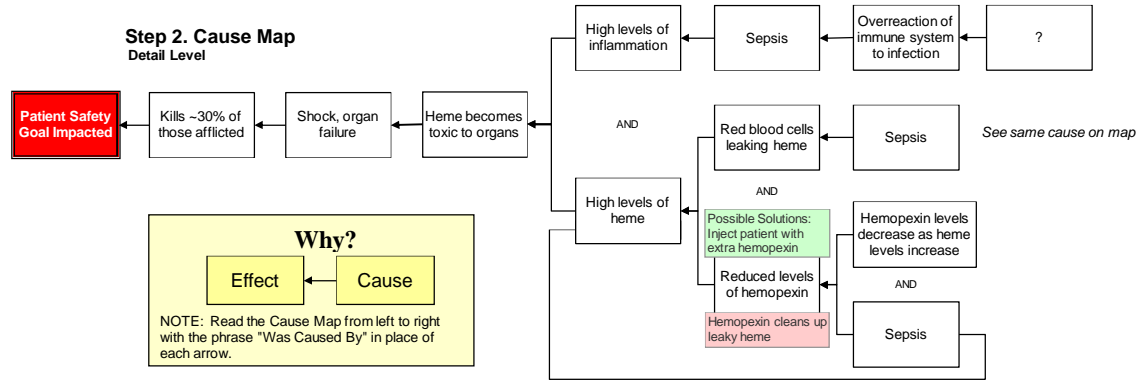
Sepsis kills about 200,000 people in the U.S. every year, about 30% of those afflicted. Millions die every year from sepsis worldwide.

Sepsis is a whole-body inflammatory state that occurs in the presence of an infection, and was previously known as a blood infection. The exact causes of sepsis are unclear. However, new research from Portugal's Instituto Gulbenkian de Cienci has shown that during sepsis, red blood cells may be injured and leak a substance called heme. In combination with inflammation that is present during an infection, the high levels of heme become toxic to the body's organs, causing organ failure.

The body produces a substance called hemopexin that cleans up the leaking heme. However, as levels of heme rise, levels of hemopexin fall, increasing the amount of heme in the body. The Instituto Gulbenkian de Cienci researchers have had success injecting mice with hemopexin to aid their body in reducing levels of heme. We can show the results of their research in Cause Mapping form here.

This potential solution to reduce the impact of sepsis still requires more research before it can be applied to humans, but may indicate a first step towards reducing the high impact of sepsis on mortality.

**Step 2. Cause Map**  
Detail Level



**Why?**

