

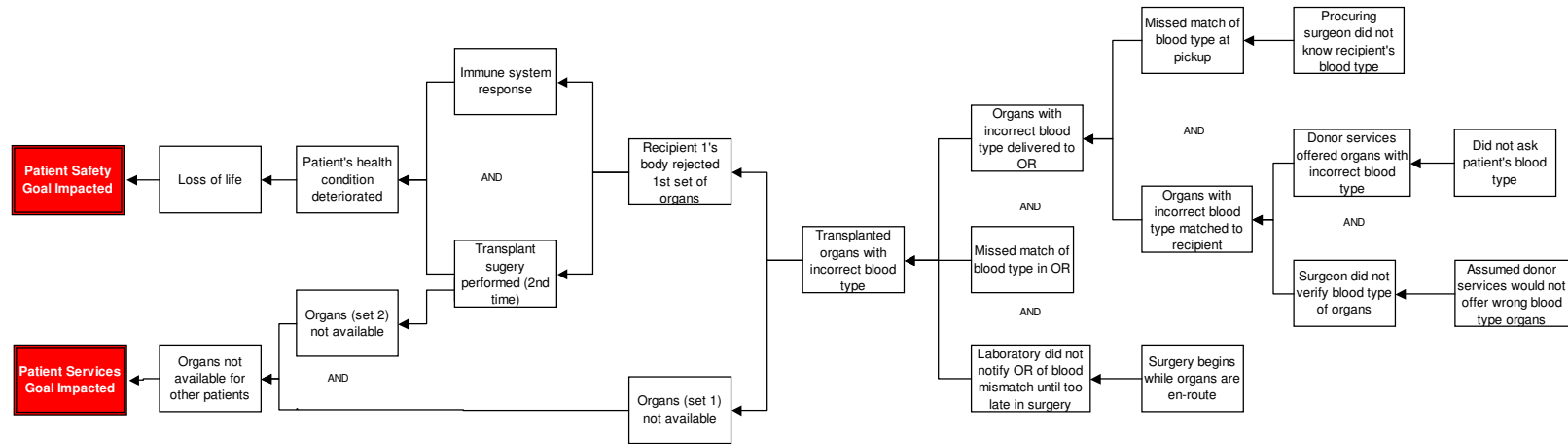
Heart-Lung Transplant Blood Type Mismatch Duke University Medical Center, 2003

On February 22nd, 2003, a patient at Duke University Medical Center died after receiving her second heart-lung transplant. The first transplant she received was rejected by her body due to a blood type incompatibility (she was Type O, the organs were Type A). The loss of her life was tragic enough, but it was compounded by the fact that the two rare heart-lung block donations she received could have saved the lives of others as well.

We can perform a thorough root cause analysis built as a Cause Map that can capture all of the causes in a simple, intuitive format that fits on one page. The death of a patient was an impact to the hospital's patient safety goal. The loss of the organs was an impact to the patient services goal.

The mismatched blood type organs were transplanted because the procuring surgeon (sent to pick up the organs) was not told of the blood type, so he could not perform an effective blood matching. Donor services offered organs with the incorrect blood type because they didn't ask what that was, possibly because the surgeon had specifically asked for the organs for this patient, and they assumed that a surgeon wouldn't ask unless the blood type was correct. The surgeon didn't verify the blood type of the organs because he assumed that donor services wouldn't offer an organ of the wrong blood type (which is normally the case, per their regulations). The mismatch was discovered in the laboratory, but not until too late in the procedure, because the surgery must begin while the organs are en-route, due to limited viability of the organs.

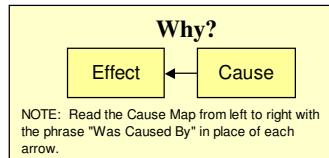
This tragic incident demonstrates the problem in making assumptions, and it shows us some areas where transplant safety can be improved. Although this was a very rare case, both hospitals and the donor services are making improvements to their systems to ensure this never happens again.



Cause Map
Detail Level



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Even more detail can be added to this Cause Map as the analysis continues. As with any investigation the level of detail in the analysis is based on the impact of the incident on the organization's overall goals.