

## 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.

### What When

Problem(s)

Incorrect blood type in organ transplant

Date

2003

Differences

Patient O, organs A

### Where

Physical Location

North Carolina

Unit/Process/Equipment

Pediatric Intensive Care Unit

Work/Task Being Done

Organ transplant - heart, lungs

### Impact to the Goals

<b>Patient Safety</b>	1 fatality	
<b>Employee Impact</b>	Surgeon devastated	
<b>Patient Services</b>	Organs not available for other patients	
<b>Compliance</b>	"Never event", "Hospital Acquired Condition"	
<b>Organization</b>	Settlement	Undisclosed
<b>Materials, Labor</b>	Cost of surgery, hospital stay	\$1 M

This incident

Frequency

Very rare

