

Week 4 – Paper #2: Transplant Accountability

Several of the classes I have taken at MIT thus far have addressed the question about the accountability scientists and engineers should have for their work. In STS.011, we addressed ethical topics such as:

- If you are an architect of a large skyscraper and you realize a fatal flaw in the construction process or design of the building, who do you tell, and how?
- Rojer Boisjoly spoke up against the launch of the Challenger on the infamous day of its final launch, but did NASA make the right decisions?
- In 6.033 we read about Therac-25. The engineers who developed a machine to help cancer patients ended up, through much negligence, creating a machine that killed several people through radiation burns. Is an engineer responsible for the death caused by a bug in his or hers computer program?

Recently, Dr. James Jagers, a transplant surgeon from Duke University Hospital, and his team made a fatal error.

Jessica Santillan was born in Mexico. At age 12 she was found to have a weakened heart and malfunctioning lungs. She and her family moved to the United States, in hope of a transplant.

After three years of waiting, a donor was found. Her operation was on February 7. Doctors at Duke University Hospital administered the heart-lung transplant.

Incredibly, and sadly, however, the donor's blood type was type A; Jessica's was type O. The surgeons accidentally overlooked this.

Jessica's body rejected the new organs, forcing her into a coma. A new donor, a donor with the same blood type as Jessica's was found days later. On Thursday February 20, she received a second transplant. Kidney failure and brain swelling developed from complications, and on February 22, doctors took her off life-support after her brain stopped functioning.

Dr. Jagers, the surgeon in charge, has taken responsibility for the error. But, I ask, to what extent is Dr. Jagers responsible? Clearly, he unintentionally made the blood type mistake. No one on his team caught the error. Once the mistake was discovered, the doctors did everything they could to save Jessica, even performing a rare, second transplant.

Human error is an all too often cause of these tragedies. How much should Dr. Jagers be blamed? What happens when a procedure becomes so "ordinary" that silly mistakes can occur? And further, how many redundant checks must be made to make sure this kind of thing doesn't happen again? At what point are the redundant checks inefficient, even annoying? Finally, where do you draw the line between accident and gross negligence? If a bridge collapses because of winds greater than the engineer expected, is the engineer responsible?