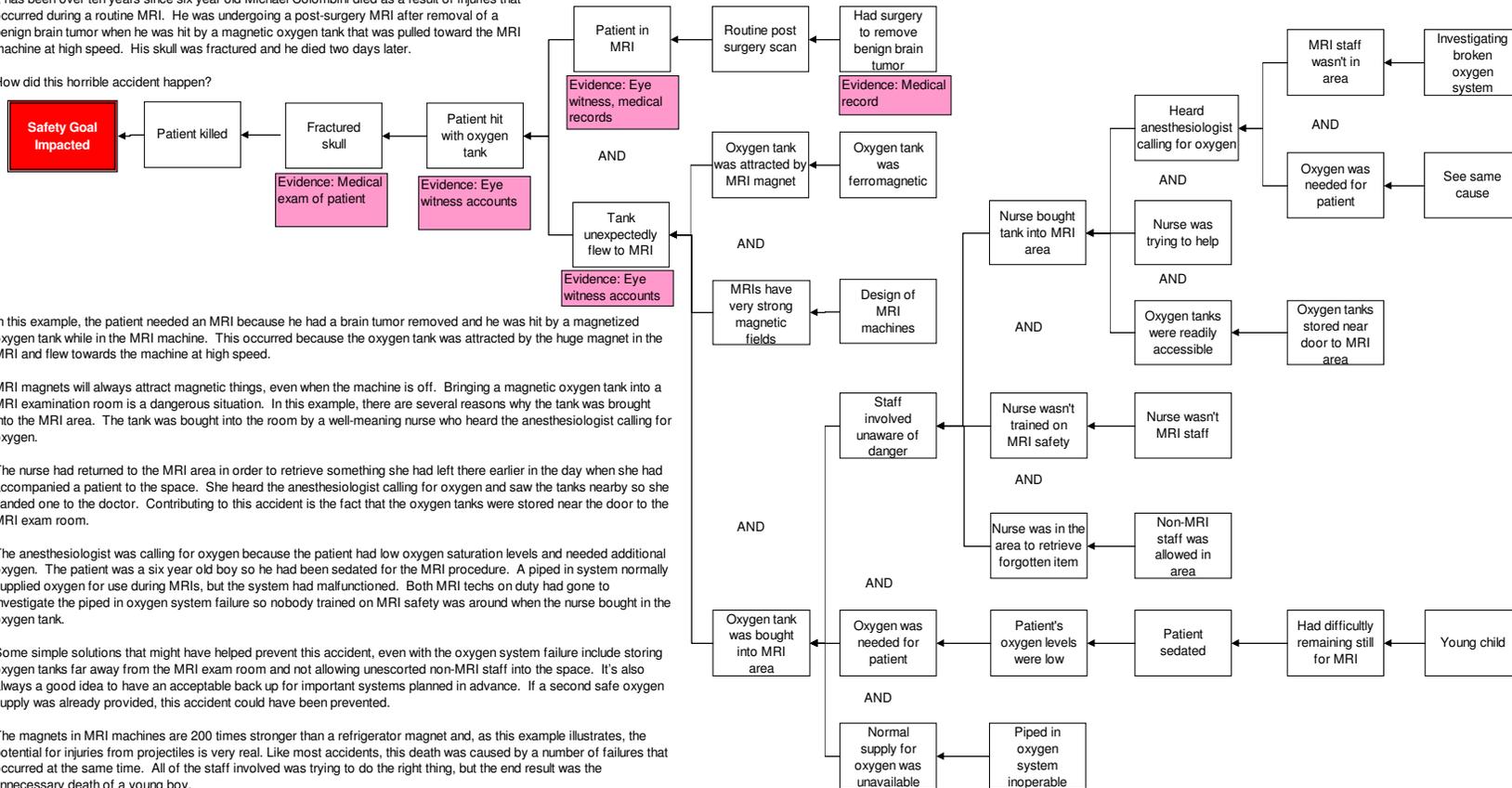


Young Boy Killed by Projectile During MRI

Valhalla, NY
July 2001

It has been over ten years since six year old Michael Colombini died as a result of injuries that occurred during a routine MRI. He was undergoing a post-surgery MRI after removal of a benign brain tumor when he was hit by a magnetic oxygen tank that was pulled toward the MRI machine at high speed. His skull was fractured and he died two days later.

How did this horrible accident happen?



In this example, the patient needed an MRI because he had a brain tumor removed and he was hit by a magnetized oxygen tank while in the MRI machine. This occurred because the oxygen tank was attracted by the huge magnet in the MRI and flew towards the machine at high speed.

MRI magnets will always attract magnetic things, even when the machine is off. Bringing a magnetic oxygen tank into a MRI examination room is a dangerous situation. In this example, there are several reasons why the tank was brought into the MRI area. The tank was bought into the room by a well-meaning nurse who heard the anesthesiologist calling for oxygen.

The nurse had returned to the MRI area in order to retrieve something she had left there earlier in the day when she had accompanied a patient to the space. She heard the anesthesiologist calling for oxygen and saw the tanks nearby so she handed one to the doctor. Contributing to this accident is the fact that the oxygen tanks were stored near the door to the MRI exam room.

The anesthesiologist was calling for oxygen because the patient had low oxygen saturation levels and needed additional oxygen. The patient was a six year old boy so he had been sedated for the MRI procedure. A piped in system normally supplied oxygen for use during MRIs, but the system had malfunctioned. Both MRI techs on duty had gone to investigate the piped in oxygen system failure so nobody trained on MRI safety was around when the nurse bought in the oxygen tank.

Some simple solutions that might have helped prevent this accident, even with the oxygen system failure include storing oxygen tanks far away from the MRI exam room and not allowing unescorted non-MRI staff into the space. It's also always a good idea to have an acceptable back up for important systems planned in advance. If a second safe oxygen supply was already provided, this accident could have been prevented.

The magnets in MRI machines are 200 times stronger than a refrigerator magnet and, as this example illustrates, the potential for injuries from projectiles is very real. Like most accidents, this death was caused by a number of failures that occurred at the same time. All of the staff involved was trying to do the right thing, but the end result was the unnecessary death of a young boy.

Cause Map

High Level



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