

# Infants Exposed to Unnecessary Radiation

Brooklyn, New York  
2007

A recent New York Times article, X-Rays and Unshielded Infants, used an example of poor x-ray technique issues to highlight problems with the operation of radiation equipment in the medical industry.

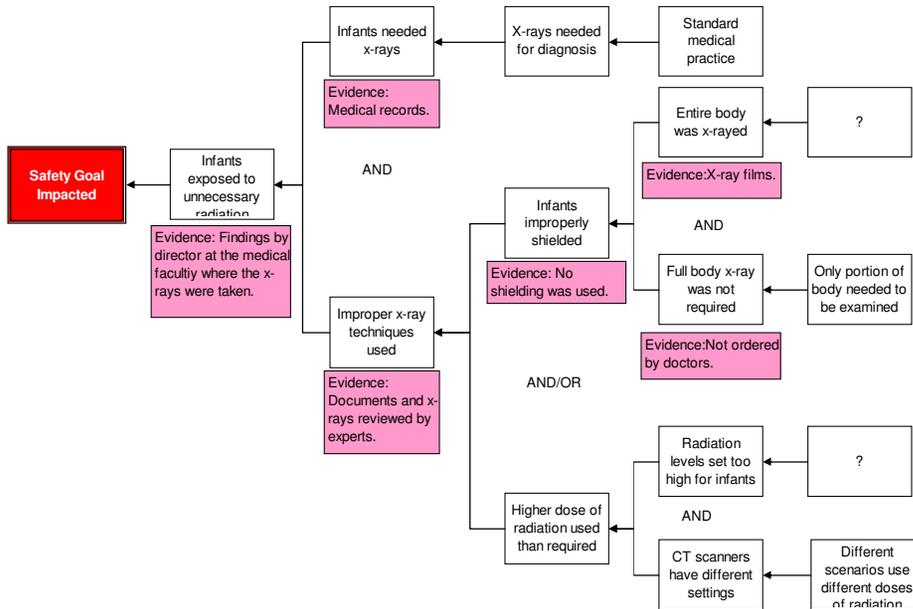
In 2007, a director at a medical center in Brooklyn, New York discovered that premature babies were routinely being over-radiated during x-rays. Full body x-rays of babies, known as "babygrams" were being done when not medically necessary. When a simple chest x-ray was ordered, as is common for premature babies with lung issues, the entire body was being x-rayed without any shielding. Additionally, the CT scanners had been set too high for infants in some cases. There were also issues of poor body positioning that made it difficult for doctors to accurately read the x-rays.

The end result was that many young babies were being habitually exposed to unnecessary radiation at this facility. This is especially troubling when you consider the fact that children are particularly vulnerable to radiation exposure because their cells divide more quickly because they are still growing.



Example of a babygram - a full body x-ray of an infant. These are rarely used these days, except for very specific medical conditions or in the case of a stillborn.

Photo by BIOMEDCenter.



The causes in this example aren't well known, but a basic Cause Map can be started and could be expanded if more information becomes available.

What is clear is that this is more than a case where one person made a single error. The culture and training in the department didn't recognize the importance of limiting radiation exposure. The radiation field as a whole is also minimally regulated. Standards and regulations are decided at the state level and many states choose not to regulate all occupations working with radiation. In 15 states radiation therapists are unregulated, 11 states don't regulate imaging technologists and medical physicist are unregulated in 18 states. For the past 12 years, the American Society of Radiologic Technologists has lobbied for a bill to set education and certification requirements for people working in medical imaging and radiation therapy, but as of yet no bill has been passed.

After the improper radiation techniques were discovered, the hospital instituted many changes to their procedures. No more full body x-rays were performed and shielding was used to minimize radiation exposure for children as well as adult patients. An investigation is also underway by the New York state health department.

## Cause Map High Level



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