



Utah Department of Environmental Quality/ DEQ Homepage: www.deq.utah.gov
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Case Study

Private Clinic Replaces Mercury Sphygmomanometers After Mercury Spill

Summary:

Riverton Family Health Center, a private clinic located in Riverton, Utah, is in the process of replacing mercury sphygmomanometers with mercury-free aneroid devices, in response to a costly mercury spill that occurred in the fall of 2005. The decision to go mercury-free has been a smart one. "Removing mercury from the clinic makes not just environmental sense, but financial sense as well," said Frederick Dyson, Business Director.

Background:

The Riverton Family Health Center has been in existence since 1996. The Center employs 15 individuals and provides health care services to approximately 20,000 individuals per year. During the past 10 years, the Center had not experienced any problems with the wall-mounted mercury sphygmomanometers until the Center hosted an open house. According to Mr. Dyson, one of the sphygmomanometers, located in an examination room, was

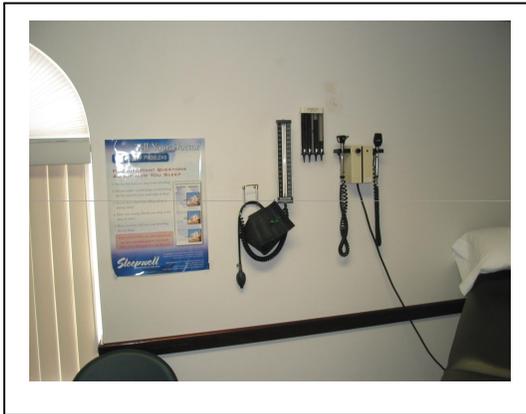


mishandled resulting in a mercury spill.

The Center responded quickly to the mercury spill by closing off the examination room, and hiring a certified hazardous materials contractor to clean-up the spill. The contamination area included a sink and associated drainpipes, counter, and carpet. Fortunately, the open house was hosted on a Saturday, so the clinic was able to make arrangements for clean-up activities without having to shut down the clinic mid-week. Due to safety, operational, and financial concerns, the private clinic decided to replace existing sphygmomanometers in twelve examination rooms with mercury-free aneroid devices.

Costs:

Clean-up (including new sink, counter, and carpet)	\$5,000.00
(12) New Mercury-free Aneroid Devices	\$1,000.00



Picture of a wall-mounted mercury sphygmomanometer.



Picture of a Mercury-free aneroid device.

Effectiveness of Aneroid Devices:

Researchers from the American Heart Association (AHA) and the American Medical Association (AMA) have concluded that the mercury-free aneroid devices are equivalent in performance to the mercury sphygmomanometers. According to the AHA, "The aneroid manometer is also widely used and can provide accurate measurements if properly calibrated". The AMA concluded, "When in proper functioning condition, both mercury and aneroid sphygmomanometers are acceptable instruments for blood pressure measurement."

Environmental/Health Information:

Mercury is a toxic chemical. It is a potent neurotoxin. Mercury is a particularly serious problem for pregnant women and children.

If released to the environment, mercury can cause serious ecological and health problems. Once mercury enters the environment, it circulates in and out of the atmosphere until it ends up in the bottoms of lakes and oceans. Mercury is among a group of pollutants called persistent bioaccumulative toxins or PBTs. PBTs do not break down or go away. Mercury also "bioaccumulates" in the environment, meaning it builds up in the food chain over time.

Replacing mercury sphygmomanometers with mercury-free aneroid devices is a relatively inexpensive step towards a safe, healthy environment.

Mercury Spill Requirements:

For information on clean-up and notification requirements, go to:

<http://www.deq.utah.gov/Issues/Mercury/Spills.htm>