Clarification on the Efficacy of Aneroid and Digital Blood Pressure Devices

The purpose of this memo is to clear up misconceptions caused by an article on blood pressure devices that appeared in the Sunday, June 16 issue of *The New York Times*. In the article, the writer raises doubts over the accuracy and reliability of aneroid and digital blood pressure devices. In fact, properly maintained mechanical blood pressure gauges or electronic monitors have been proven to be highly reliable and accurate devices with several distinct advantages over the traditional mercury manometers.

In addition to the well-documented danger and cost of mercury clean up and disposal, the opportunity for user technique errors has been shown to be much higher with a mercury manometer than with an automated digital monitor. Mercury manometers can be difficult to interpret, causing erroneous readings and rounding errors by less well-trained health care providers. Digital monitors, on the other hand, take a blood pressure reading the same way each time, no matter what the skill level of the practitioner.

And in today’s cost-conscious and resource constrained health care environment, where nurses are in short supply, a multi-parameter digital monitor allows a clinician to take a temperature, blood pressure and pulse oximetry reading in less time than it takes to obtain blood pressure alone with a mercury manometer. This allows nurses to spend more time providing care and less time gathering data.

The truth is any device—mercury, aneroid or digital—requires routine calibration checks to insure accuracy as part of a regular preventative maintenance program. To imply otherwise gives false expectations for the reliability of mercury manometers and raises unnecessary concerns over the accuracy of aneroid and digital devices. Both the American Heart Association and leading first tier manufacturers of mercury and aneroid manometers recommend at least an annual check of these devices.

Our main concern is that people will get a false sense of security that the reading taken with a mercury manometer is 100% accurate when we know that maintenance issues and user error can contribute to false readings on any manometer—no matter what its technology.

Numerous studies and clinical trials over the past 20 years have proven the value and enhanced functionality provided by aneroid and digital devices, including portability, ease of reading, and the ability to generate an electronic patient record. In addition, Welch Allyn has rigorous design and manufacturing standards in place that are monitored by the Food and Drug Administration to ensure patient safety—standards we meticulously follow and thoroughly support. All of our devices are registered with the FDA via the 510k process and comply with AAMI-SP9 and AAMI-SP10 standards for non-automated sphygmomanometers, standards which the FDA recommends.

Having manufactured mercury and aneroid blood pressure devices in the United States since 1907—and as one of the world’s leading manufacturers of digital monitors today—Welch Allyn proudly stands behind the safety and efficacy of each of its blood pressure products, no matter which technology is utilized.

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