



Sustainable Hospitals Program

A Project of the Lowell Center for Sustainable Production, University of Massachusetts Lowell

Tips for Procuring Aneroid Sphygmomanometers

Many hospitals are replacing mercury sphygmomanometers with cost-competitive aneroid sphygmomanometers. An aneroid sphygmomanometer is a mechanical gage with a round dial and needle that rotates to indicate pressure from 0-300 mm Hg. Inside the device, a bellows and spring mechanism or a single helix spring senses and transmits the blood pressure measurement to the dial.

Aneroid units have several features that are appealing to healthcare professionals:

- ♦ The dial of an aneroid gage is much easier to read and requires considerably less effort than the meniscus of a mercury column, which requires awkward head movement to do a good job.
- ♦ It is easy to see if the aneroid needle is off zero when not in use. This provides a good indication of whether the gage has been damaged or needs maintenance, and is an easy check each time a reading is taken.
- ♦ It is easy to check the needle for smooth rotation, another way of verifying that the aneroid device is in good working order.

When procuring new sphygmomanometers, a few considerations up front can make your life easier in the long run:

- ♦ Verify that all components are **latex free**.
- ♦ Some manufacturers routinely offer free lifetime **calibration**, or this can be negotiated in the contract. Consider the implications of calibration done at your site (more convenient) or at the manufacturer (which requires addition units on hand). One hospital's contract called for the manufacturer to randomly evaluate accuracy of 25% of the units quarterly, so that each year a unit is inspected once by the manufacturer.
- ♦ When you buy the aneroid devices, ask the manufacturer to accept intact mercury sphygmomanometers for **recycling**. If this is negotiated in the contract, it saves the expense of disposing of mercury devices.
- ♦ Consider the need for **spare units**. For offsite calibration, extra units allow a swap with instruments in current use. These spares keep the hospital running while allowing the use of more cost efficient ground shipment to and from calibration.
- ♦ When you receive new units, consider **bar coding** them. This allows you to track reliability and performance, calibration status, and inventory status.
- ♦ If you check sphygmomanometer accuracy at your site, make sure your **reference gage** is mercury free. An example of a viable digital reference is the NETECH DigiMano 2000 (<http://www.GoNetech.com>), which is provided with calibration traceable to a NIST standard.

For more information about alternatives to mercury sphygmomanometers, visit SHP's website <http://www.sustainablehospitals.org> or contact the SHP at 978-934-3386 or email our project manager at Catherine_Galligan@uml.edu.