Dartmouth Hitchcock Medical Center (DHMC) has been a leader in the health care environmental movement for many years. DHMC's most ambitious project to date is its dramatic reduction of ethylene oxide (EtO) use and its commitment to the eventual elimination of ethylene oxide in its practices. EtO is a probable carcinogen and hazardous air pollutant, is suspected of causing birth defects, and is irritating to the skin, eyes and lungs. At this point, DHMC does not have any on-site EtO sterilizers but still uses fourteen instruments that are required by the FDA to be sterilized with EtO, which it sterilizes at another facility. DHMC intends to eventually eliminate the use of any instrument that requires ethylene oxide sterilization. Serving a primarily rural community, with few other hospitals located conveniently for their patients, DHMC is not in a situation where they can refer to other hospitals patients who need procedures requiring EtO-sterilized instruments. The DHMC doctors are also committed to maintaining the current level of patient care. To find viable alternatives to these instruments, DHMC has found it helpful to examine practices at other health care facilities. For instance, one particular procedure, using a small scope that must be EtO-sterilized is done in another way without this type of instrument at another well-respected hospital in the US with comparable patient outcomes. The DHMC surgeons are now contemplating whether they should change their procedure to match the method used at the other hospital, thereby discontinuing the use of this EtO-sterilized instrument.

The EtO elimination program is just one part of DHMC's aggressive efforts to reduce occupational and environmental hazards at the facility. DHMC has eliminated use of all phenolic compounds, and has reduced and carefully controlled the use of glutaraldehyde. DHMC also has many efforts in place to promote EPP, including a policy that prohibits the purchase of mercury-containing products without prior approval, the successful substitution of water for mercury in Miller Abbot tubes, and the establishment of an on-line "Trading Post" where departments can find furniture, electronics, and other products that another department no longer needs. For more information about DHMC's EPP efforts, contact Vikke Jas at victoria.a.jas@hitchcock.org.

Many hospitals are looking for ways to reduce employee exposure to glutaraldehyde, a potential skin irritant and skin sensitizer, and a cause of occupational asthma and other respiratory effect at very low levels. Glutaraldehyde is a high-level disinfectant used for semi-critical medical devices that are heat-sensitive. The potential for occupational health effects is increased when open bins of glutaraldehyde are used, a common practice in many hospitals. Many facilities don't take into account the hidden costs of using glutaraldehyde. Not only must the hospital pay for exposure monitoring programs and engineering controls, but increasingly they must be aware of the occupational health costs and liabilities, environmental management costs, and the possibility of future regulation. A variety of alternatives are available for high-level disinfection of heat-sensitive instruments. Although all disinfectants and sterilants are toxic (their purpose is, of course, to kill things), not all are as hazardous for workers to handle. One alternative is ortho-phthalaldehyde, which is also toxic but is an effective disinfectant at much lower concentrations than glutaraldehyde. Other alternatives include a peroxyacetic acid/hydrogen peroxide combination, hydrogen peroxide alone, and a number of non-glutaraldehyde enclosed systems. Enclosed systems prevent worker contact with the disinfectant, further reducing the likelihood of harmful health effects. A list of vendors of alternatives, all of which have premarket approval from the FDA, is available at http://www.sustainablehospitals.org under the "Sterilants and Disinfectants" link. Contributed by Jamie Tessler, 978-934-3259, jtessler@igc.org.
**New Sustainable Hospitals Website: http://sustainablehospitals.org**

The Sustainable Hospitals Project (SHP) is pleased to announce the expansion of their website resources and a new URL, http://www.sustainablehospitals.org. The website provides information about safer alternatives to products containing latex, PVC, mercury, and disinfectants, as well as information on safe needle devices.

The website is packed with tables of alternative products, including links to vendors of mercury-free and other less toxic equipment and products. The website also offers downloadable fact sheets on how to select and implement improved products and practices, audit checklists, and other information.

SHP’s technical assistance phone line (978-934-3386) and email (sphp@uml.edu) can be contacted for specific questions, more detailed information, or referrals to additional sources of expertise.

Common questions include availability of alternatives; for instance, the SHP recently assisted a hospital in finding a mercury-free manometer device, and connected that hospital with another hospital already using the mercury-free device.

SHP staff members routinely speak at local forums and can provide handouts for distribution at conferences and meetings. Popular topics include: environmentally preferable purchasing (EPP), glutaraldehyde elimination, medical gloves, mercury reduction, and successful implementation of alternative products.

The SHP’s mission is to provide technical support to hospitals in order to reduce occupational and environmental hazards. The SHP Clearinghouse is complemented by a team of SHP researchers from the University of Massachusetts at Lowell working in hospitals on hazard reduction. Their approach simultaneously considers occupational and environmental aspects to ensure that problem solutions or workplace improvements do not inadvertently shift risk from the environment to the worker, or vice versa. For further information, contact Catherine Galligan (978-934-3386 or sphp@uml.edu) and visit the SHP website at http://www.sustainablehospitals.org.

**Health Care Environmental Purchasing Tool now Available On-Line at http://www.ahrmm.org/info/HCEPT/index.html**

Have you ever wondered how to decide which brand of a product is more environmentally preferable, or what kind of information to request from suppliers? A new tool developed for the Great Lakes Protection Fund and featured on the Association for Healthcare Resource and Materials Management website at http://www.ahrmm.org/info/HCEPT/index.html can help you with these decisions. The Health Care Environmental Purchasing Tool, developed by a team of technical assistance providers and healthcare facilities, consists of a questionnaire for suppliers or manufacturers to fill out, a spreadsheet that can be used by hospitals to compare products, and a sample letter that may be sent to suppliers requesting their support. The questionnaire emphasizes toxic chemicals that are of particular environmental concern because they are persistent and accumulate in living tissue. This tool can be used as an effective, structured way to integrate environmental considerations into purchasing practice and can provide an opportunity to start a dialogue with suppliers and Group Purchasing Organizations (GPOs) about these issues. Nine health care facilities have tested the tool, and the website includes three case studies. Four hospitals that used the tool were able to make decisions that resulted in the reduced purchase of mercury products, and two were able to obtain information that could potentially reduce the release of polyvinyl chloride (PVC). All the hospitals featured in the case studies used GPOs. Check out the Health Care Environmental Purchasing Tool at http://www.ahrmm.org/info/HCEPT/index.html and see if it works for you! For more information or to submit feedback on the tool, contact Patrick Eagan at eagan@engr.wisc.edu.

**Tips for Procuring Aneroid Sphygmomanometers**

Aneroid sphygmomanometers have proven to be a popular method for hospitals to eliminate mercury hazards, in part because the dial is easier to read than a mercury meniscus, and it is also easy to see if an aneroid needle is off zero when not in use and to verify that the dial rotates smoothly, providing timely clues to whether the gauge has been damaged or needs maintenance or calibration. When procuring aneroid sphygmomanometers, a few considerations up front can make your life easier:

- **Specify that all components are latex free.**
- **Consider negotiating for the manufacturer to take back intact mercury sphygmomanometers for safe recycling of the mercury, avoiding disposal costs.**
- **Some manufacturers offer free lifetime calibration, or this can be negotiated in the contract. Consider the costs and implications of calibration done on-site (more convenient) or at the manufacturer (requires additional units on hand).**
- **One hospital’s contract called for the manufacturer to randomly evaluate 25% of the units quarterly (on-site), so that each unit is inspected annually.**
- **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 the calibration facility.**
- **When you receive new units, consider bar coding them to track reliability and performance, calibration status, and inventory status.**
- **If you check sphygmomanometer accuracy on-site, use a mercury-free reference gauge. An example of a viable digital reference is the NETECH DigiMano 2000, which is provided with calibration traceable to a NIST standard.**

Suppliers of aneroid sphygmomanometers include Welch Allyn Tycos Instruments (800) 535-6663 (http://www.welchallyn.com), American Diagnostic Corporation (631) 273-9600 (http://www.adctoday.com), and Trimline Medical Products (800) 526-3538 (http://www.trimlinemed.com). For more information about products and eliminating mercury sphygmomanometers, contact the SHP at (phone) 978-934-3386, (email) sphp@uml.edu, or visit the website http://www.sustainablehospitals.org.