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Actively targeting all applicable materials for recycling significantly reduces volumes of waste requiring disposal, resulting in lower cost and improved environmental impact. The focus on facility-wide programs to properly categorize waste, both for recycling and for proper disposal, is the foundation of an effective waste management program.

**ON-SITE MEDICAL WASTE PROCESSING** / Prior to the Clean Air Act, many health facilities processed medical waste on-site via incineration. Most incinerators have been dismantled due to legislative changes and the increased expense of complying with higher emission standards. While a small minority of acute care facilities continue to process on-site, usually by autoclave, most health facilities contract with third parties licensed to transport and process medical waste. Per volume cost of medical waste disposal is significantly greater than the cost of solid waste disposal. Developing the capacity to process medical waste on-site, utilizing nonincineration technologies, positions health facilities to better control specialty waste cost inflation and eliminates liability for improper third-party disposal by merging treated (“sterilized”) medical waste with solid waste for transport and disposal.

Health care facilities, by federal mandate, must develop plans for disaster preparedness. The impetus for disaster preparedness was stimulated by the terrorist events of Sept. 11, 2001, by the devastation created by Hurricane Katrina and in preparation for the possibility of future epidemics of infectious diseases, such as the H5N1 avian influenza virus. Published in May 2006, the National Strategy for Pandemic Influenza Implementation Plan (www.whitehouse.gov/homeland/nspi_implementation.pdf) is a very detailed action plan for health facilities and communities. However, even the national strategy fails to anticipate the surge in waste, particularly infectious waste, associated with pandemic influenza infecting 30 percent of the population (Taiwan reported a per patient increase in infectious waste generation of over 400 percent during the SARS epidemic). Processing and treating medical waste on-site positions health facilities for sustainability and emergency preparedness by diminishing dependency upon third parties for the removal of infectious waste, particularly during events precipitating anticipated service disruptions. Health facilities are increasingly developing on-site medical waste processing programs, seeking indemnification and service guarantees from industry partners.

**INTEGRATION OF WASTE REVERSE-DISTRIBUTION** / For years, health facilities have been working toward integration of distribution for products, supplies and materials consumed in day-to-day operations. The objective has been to consolidate vendors in order to maximize efficiency and cost reduction by streamlining procurement and material handling processes, while outsourcing management and labor responsibilities to vendors with specialized competencies. Such efforts led to the creation of sophisticated materials management strategies, including stockless inventory and just-in-time delivery programs.

Health facilities contract with numerous vendors to dispose of segregated waste streams. The typical health facility most likely has a different vendor for solid waste, medical waste, HIPAA waste, recycling, construction and demolition, and one for each specialty waste stream. Such a fragmented reverse-distribution system prevents achieving synergies and cost reduction in managing waste disposal. Unfortunately, there are few commercial companies with the capacity to integrate service across diverse waste streams. However, the integrated waste stream management model has evolved, enabling health facilities to develop integrated reverse-distribution for all waste materials.

**OUTSOURCING FOR INTEGRATED WASTE MANAGEMENT** / The mission of health facilities is clinical care, and historically many have outsourced institutional functionality (e.g., food service, laundry, housekeeping) ancillary to clinical care to manage quality and cost. In the area of waste stream management, core competencies required include managing employee safety, regulatory compliance, risk, cost and environmental impact, in addition to managing the waste. The ability to integrate waste streams while providing management competencies provides significant value. A secondary benefit is the availability for outsourcing the labor component, eliminating the requirement for health facility employees to handle waste. Outsourced labor reduces direct labor costs and indirect costs including exposure to medical and hazardous waste, worker injury claims, workers’ compensation claims, insurance claims, legal claims and all of the associated worker benefits costs.

**WORKPLACE SAFETY** / Thomas Jefferson University Hospital’s industry partner has developed an aggressive safety program that resulted in the reduction of work-related injuries by more than 70 percent, including an award-winning return-to-work program, managing both occupational and nonoccupational absences, helping injured employees recover and return to productivity more quickly through proper care. Over 30 percent of managed facilities maintain a perfect annual record of zero injuries, and lost workdays have been reduced by 22 percent, with workers’ compensation costs reduced commensurately.

**ENVIRONMENTAL STEWARDSHIP** / There is a growing recognition of the social responsibility that all organizations bear to be better environmental stewards. Today, most businesses incorporate “green strategies” into their mission statements and strategic plans. Waste minimization and recycling are a good start at getting “green.” Ultimately, the final disposal for waste after leaving the health facility can have significant impact upon the environment. Waste is usually deposited in landfills or incinerated. Both waste disposal methodologies can be designed to create renewable energy and managed for enhanced environmental impact. Landfills can capture methane gas, a renewable energy source. Waste-to-energy facilities can convert heat from combustion into electrical energy, another renewable energy source. Developing waste disposal strategies that facilitate renewable energy creates numerous benefits, from reducing carbon emissions and greenhouse gases to dependence on foreign oil.

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ABOUT THIS ARTICLE
This month’s “Environmental Services” article is a joint project of the American Society for Healthcare Environmental Services (www.ashes.org) and Health Facilities Management (www.hfmmagazine.com).