



cineration. As the EPA enacted stricter air quality regulations, many hospitals invested heavily in upgrading their incinerators with the hopes of passing new air quality requirements. Ultimately, it became cost prohibitive to burn waste on-site.

Consequently, many hospitals transitioned to a cleaner and greener alternative, such as steam sterilization. However, most hospitals were reluctant to invest any more capital resources in treatment equipment and turned to outsourcing via off-site transporters as a temporary solution to manage their medical waste.

As many of these hospitals adopted the practice of outsourcing waste services, the responsibility was often delegated to housekeeping to manage these waste contracts. Over time, this has become an area that healthcare executives are no longer

◀ **Sani-I-Pak manufactures infectious waste treatment systems with processing capabilities from 25 pounds to thousands of pounds of waste per hour.**

Stop Wasting Money on Waste

Having a successful waste management program requires regulatory compliance, legal liability, patient and employee safety, operational sustainability, reducing carbon footprint and overall cost reduction.

By Carl Solomon, Sr., MBA, CHESP



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Carl Solomon Sr. is director of hospitality services, UCSF Medical Center/UCSF Children's Hospital.

As a healthcare administrator, I have spent most of my career transforming waste management programs for more than 40 hospitals. When I first entered the healthcare industry in 1979, most hospitals in the U.S. were treating and managing their medical and solid waste on-site. Administrators at the time felt a strong sense of community and patient responsibility to treat this material at the point of generation. As a result, administration, infection control and facilities all played a direct role in how waste was being managed.

The technology of choice at the time was in-

close to. As a result, it is a prime area to examine as hospitals struggle to reduce their operating costs and increase their competitiveness.

Healthcare administrators are often unaware of the complex components required to have a successful waste management program such as regulatory compliance, legal liability, community/patient/employee safety, operational sustainability, recycling/reducing carbon footprint and overall cost reduction.

COMPLIANCE

A hospital is perhaps the only single building that generates nearly every type of waste stream found in any metropolitan region. For this reason, it is important to educate your staff routinely to ensure compliance. Educational conferences such as AHE, Clean Med, and ISSA are great investments to help your staff understand and apply regulatory changes and best practices.

As a member of Kaiser Permanente's National Resource Conservation Team, I helped to develop tools for Kaiser medical centers, clinics and support buildings that are utilized to implement successful waste minimization and recycling programs. A critical component was to educate and motivate our employees to classify the various waste streams generated by our medical facilities to help reduce costs and ensure regulatory

WASTE MANAGEMENT

compliance. It is a delicate balance, since improper segregation can result in higher disposal fees as well as regulatory penalties -- and negative media attention -- if managed incorrectly.

LEGAL LIABILITY

One of the primary reasons why many hospitals were so adamant about operating their medical waste incinerators is the cradle-to-grave responsibility for many of our waste streams, including medical waste. The generator, i.e., hospital, is fully liable for this waste material until it is destroyed and/or sterilized. To eliminate this

Loma Prieta Earthquake in 1989 when local roadways were disabled. Treating our medical waste on-site will provide us greater operational independence in the event of another emergency or pandemic.

Each year, we see examples of how a hospital's operation is compromised due to emergencies or disasters. On-site management of medical waste conforms to Joint Commission's requirements to be operationally sustainable during crisis/pandemic situations. Reliance on an off-site service transporter provides hospitals undue exposure if the transportation infrastructure is compromised. This is a

waste off-site for treatment. At UCSF Medical Center, we project that we will reduce 9,500 pounds of CO2 emission each year with our in-house program to treat on-site.


COST REDUCTION

Finally, it may come as a shock to many healthcare administrators, but hospitals can aggressively reduce costs by doing the right thing. Recycling and waste minimization programs are great strategies to reduce costs. At UCSF Medical Center, we have projected a \$420,000/year cost reduction with our technology that not only converts medical waste to solid waste, but the same equipment will also deliver a 6:1 volume reduction for all of our solid waste. This capital investment is projected to yield a 1.6 year ROI.

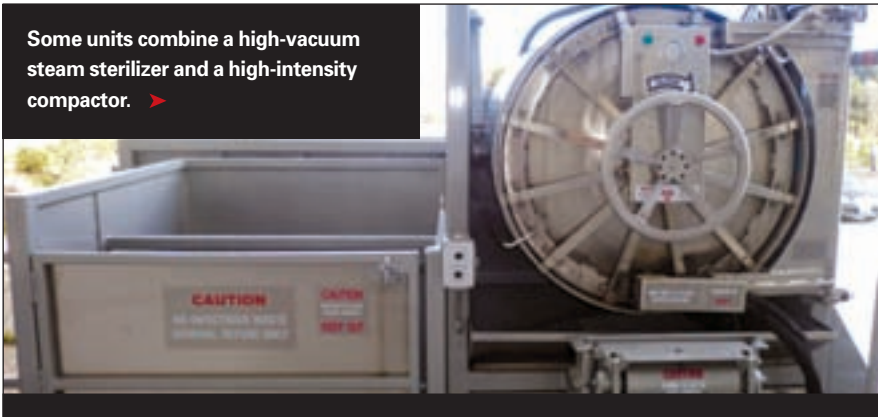
Treating infectious waste on-site not only reduces costs compared to outsourcing to an off-site transporter, but it also stabilizes costs. Off site disposal costs are often predicated by fuel and disposal costs, which have escalated by 20 percent in the past month alone. Sterilizing medical waste on-site insulates hospitals from many of these costs that a hospital cannot influence.

As a healthcare administrator, it is difficult to identify any other single program a hospital will initiate that will:

- enhance regulatory compliance,
- reduce liability exposure,
- increase community, patient, and employee safety,
- fortify a hospital's emergency readiness,
- reduce the facility's carbon footprint, and
- significantly reduce operational costs.

To determine if your hospital meets the aforementioned criteria, I recommend assembling management representatives from sustainability, health & safety, emergency preparedness, facilities, and EVS to challenge your team by determining if they have scrutinized the various aspects associated with healthcare waste management. If not, you could be paying much more for services that your current in-house management is capable of administering. 

Some units combine a high-vacuum steam sterilizer and a high-intensity compactor. ➤



legal liability, I have enacted on-site treatment programs at over 40 hospitals.

SAFETY

As stewards of our communities, hospitals are responsible for protecting their neighbors, patients and staff. As healthcare providers, it is unthinkable to release infectious patients back into our community. Likewise, responsible administrators apply the same logic to infectious waste management.

OPERATIONAL SUSTAINABILITY

As healthcare institutions, we are the only business expected to provide services during emergency situations. There are real examples involving terrorism (9/11) and natural disasters (Hurricane Katrina) that identify vulnerabilities of hospitals that rely too much on off-site service providers. University of California San Francisco (UCSF) Medical Center experienced a disruption of service resulting from the

critical point to consider since a hospital is the only business that is expected to stay operational when communities face such catastrophe. We witnessed the tragic coincidence of such misfortune in Japan resulting from the earthquake that hit that country on March 11, 2011.

GREENING WASTE

As major generators of various waste streams, hospitals have a responsibility to the environment to minimize our waste outputs. To achieve this, I use three primary strategies:

1. recycling,
2. waste reduction, and
3. treating infectious waste on-site.

Although many hospitals have adopted recycling and waste reduction programs, our carbon footprint is reduced significantly by not transporting our infectious