

MedClean Propre Limpio


No. 137

Pollution Prevention Case Studies

Improvements in Waste Management

Company	Mater Dei Hospital
Industrial sector	Hospital activities. ISIC Rev. 4 no. 8610 (International Standard Industrial Classification of All Economic Activities)
Environmental considerations	<p>Hospital waste management is one of the targeted sectors that health planners in Malta aim to control, due to rather high end-disposal costs and even higher projected annual disposal tariffs.</p> <p>Three years before a hospital migration was to take place, health planners set up a multi-disciplinary team, including an infection control team and estates, procurement and waste management departments, under the leadership of hospital management and the health planners, in order to effectively control the annual recurring waste management budget.</p>
Background	The former St. Luke's Hospital, the only general hospital on the island, moved to the newly constructed Mater Dei Hospital in November 2007. The basic planning scheme of the new hospital was based on a small village complex, providing 860 in-patient beds for an estimated population of 450,000. The greatest challenge for the local health planners was to continue to provide a sustainable free medical service for all, regardless of the cost of upgraded, state-of-the-art medical services that a migration to a new hospital entailed.
Summary of actions	<p>Actions were divided into the pre-migration targeted objectives and the corresponding post-migration follow-up.</p> <p>As an integral part of the pre-migration educational campaign, it was decided to reduce the actual size of both clinical and domestic waste bins at both ward and other hospital service levels, from the standard 240 litres for both waste streams to 120-litres for domestic waste and 70 litres for clinical waste. Sample bins were introduced at St. Luke's Hospital in order to prepare for the change in procedure, so that it would already be implemented upon moving into the new Mater Dei Hospital.</p> <p>Concurrently, a domestic waste segregation programme was launched at St. Luke's Hospital, earmarked for a progressive and effective waste recycling programme. The launch targeted the procurement department and heavy consumers of medical and other disposable items, where inordinate quantities of packaging waste were regularly produced. This was later amplified to include in-patient service areas, where a great deal of flowers, newspapers, office waste paper and plastic mineral water bottles started to be segregated and collected separately.</p>

In order to increase awareness of better waste management practices, the hospital management also issued a regular circular on the subject and even published write-ups in the hospital's pre-migration monthly publications, which were distributed to the entire staff. This campaign was maintained during the post-migration phase and was complemented by on-site coordination inspections by both the infection control team and the waste management department. These were supplemented by further educational campaigns targeted at janitorial and nursing aid staff services, who were asked to manage newly introduced waste segregation trolleys and bins throughout Mater Dei Hospital.

'Green Focal Points' volunteers were additionally recruited from all levels of hospital staff and services in order to further consolidate the hospital's initiatives towards cost effectiveness and sustainability in waste management services. Moreover, a personalised recyclable waste system, fast-track collection services for packaging wastes and waste batteries (accumulators) were also introduced to further facilitate compliance.

Balances

INVESTMENT

Not available (included in Mater Dei construction costs)

SAVINGS

Savings on clinical waste production

Clinical waste is incinerated at a cost of €590/tonne

Year	Hospital	Waste	Incineration Cost	Annual Savings
2007	St. Luke's	800.00 kg/day	€172,280/year	
2008	Mater Dei	583.22 kg/day	€125,596/year	€46,683/year
2009	Mater Dei	584.32 kg/day	€125,833/year	€46,447/year

RETURN ON INVESTMENT

Not available

Conclusions

Thanks to the multi-disciplinary efforts and the present hospital management, the pre-migration objectives to provide of tangible savings in the waste management sector were reached in the short term.

In view of these savings, the hospital management has now set a new objective for even further savings in the coming five years, primarily through the extension of the educational campaigns and the further motivation of the hospital's Green Focal Points.

NOTE: This case study seeks only to illustrate a pollution prevention example and should not be taken as a general recommendation.



Regional Activity Centre
for Cleaner Production

Dr. Roux, 80
08017 Barcelona (Spain)
Tel. (+34) 93 553 87 90
Fax. (+34) 93 553 87 95
e-mail: cleanpro@cprac.org
<http://www.cprac.org>