

# Save Money and Environment with Green Hospitals

By: Dr. Fatih Mehmet Gul, Dr. Oguz OZYARAL, Dr. Gulsen Gul

*Recognizing that the health of the individual, the community and the earth are inextricably linked, hospitals are rising to the challenge of creating truly healthy environments. And though healthcare facilities have made great strides in adopting green practices, building and purchasing, there is always room for improvement.*

*Since 2000, when the U.S. Green Building Council (USGBC) started to promote its Leadership in Energy and Environmental Design (LEED) standards, green building standard has taken off, producing environmentally sound schools and offices. Now the trend is catching on in healthcare, as hospitals seek to reduce toxins and provide a healthier, healing environment.*

Green hospitals make good sense for the health of the entire community: patients, staff and visitors. To prevent the spread of infection in hospitals, it's important to reduce exposure to germs - especially for patients with compromised immune systems - but the use of harsh chemical cleaners can cause respiratory problems. Conventional cleaning products as well as many paints, adhesives and furnishings can emit irritating, allergenic fragrances and toxic volatile organic chemicals (VOCs) such as formaldehyde. By choosing low-VOC products, hospitals help those in their care to recover and improve conditions for staff.

Simple design changes can work wonders, too. Studies have shown that poor indoor lighting increases levels of stress in hospital workers, leading to compromised medical care. "Daylighting" (that is, bringing daylight indoors with enlarged windows, light wells, clerestory windows and reflective surfaces), not only improves work performance but has been shown to improve patient recovery rates, while saving energy.

By taking up green practices, whether incrementally or from the ground up, many hospitals are managing to lower energy bills, reduce waste and achieve healthier indoor air.

At the same time, many unique challenges are presented by the complexity of hospital operations. Infection control requires strict cleaning procedures and frequent air changes, which increase the already-high energy costs of the 24/7 operations and sophisticated medical equipment that make hospitals among the greatest energy consumers. Through healthcare business discussions, green hospitals are finding that they can reduce operating costs and keep delivering energy even in emergencies.

Green hospitals also seek to cut back on the amount of material sent to incinerators or garbage dumps. Disposables, including gloves, syringes, swabs, blood bags and intravenous tubes, swell the waste stream.

Hospitals are recycling more, and, with an eye to reducing toxic waste, many hospitals are eliminating mercury and polyvinyl chloride (PVC), which emit toxins in the air when incinerated. Mercury in landfills may also seep into ground water. They are greening their grounds with the aesthetic and therapeutic pleasures of healing gardens and providing fresher, nutritious organic and local food choices for patients.

## The Principles

To recognize hospitals that are taking the lead in environmental stewardship, we can refer to the criteria of three organizations: USGBC's LEED standards; the Green Guide for Health Care, which adapts the LEED program to the special needs of hospitals; and Hospitals for a Healthy Environment (H2E), an organization that emphasizes reduction of mercury and waste management.

Following are the common criteria of Green Hospitals;

**1. Procurement:** Does the hospital seek out recycled paper, wa-

ter-efficient laundering, energy-efficient equipment or other green products?

**2. Contaminants:** Does the hospital have a program for reduction of toxics such as mercury and PVC (which can leach toxic plasticizers into fluids in IV drip bags and tubing)?

**3. Water Efficiency:** Is the hospital water-efficient, taking advantage of landscaping, water use reduction and innovative waste water use?

**4. Materials and Resources:** Does the hospital use recycled building materials and resources (such as water), local materials or certified wood?

**5. Indoor Environmental Quality:** What has the hospital done to improve indoor air quality through increased ventilation and incorporating low-VOC paints, adhesives and materials to avoid offgassing of formaldehyde, toluene and other carcinogenic compounds? What steps have been taken to create comfortable temperatures and to enhance daylighting?

**6. Energy and Air Pollution:** What has the hospital done to reduce energy consumption and atmospheric pollution, including chlorofluorocarbon (CFC) reductions, renewable energy, reduced energy consumption, green power and reducing ozone?

**7. Siting:** Was the hospital sited with consideration for alternative transportation, storm water management, urban redevelopment and reducing any impact on the surrounding environment?

**8. Healthy Hospital Food:** Do patient and staff meals include fresh, local and organic foods?

**9. Green Education:** Does the hospital train staff in waste reduction, toxics reduction and recycling?

**10. Social Responsibility Programs:** Does the hospital plan social responsibility programs for the stakeholders (community, patients, staff, etc) in order to have a responsible healthcare business.

**11. Green Cleaning:** Does the hospital use cleaning products that do not release hazardous chemicals? Are staff members trained to their use?

**12. Waste reduction:** Does the hospital have a program to segregate medical waste and to reduce, re-use and recycle general waste and furniture and equipment that are no longer needed?

**13. Healing Gardens:** Does the hospital have healing gardens where patients, staff and visitors can reflect, relieve stress and reconnect with nature? Are there green roofs? Does the landscaping use native plants, which reduce water consumption and the use of pesticides?

As we see nowadays, many healthcare investments in the region, we are still looking for a pioneer green hospital project that will lead others in the same way. ■

Corresponding Author: Fatih Mehmet Gul, MD, MBA;

Web: [www.drufameg.com](http://www.drufameg.com) - E-mail: [drufameg@drufameg.com](mailto:drufameg@drufameg.com)

يتحدث هذا المقال عن موضوع تبيّن المبدأ "الأخضر" في المستشفيات وذلك بهدف التخفيف من استعمال الطاقة وتحسين أداء الفريق العامل بالإضافة إلى الترقّي بحال المريض عبر ردة تفشّي الجراثيم وحسن إدارة النفايات الطبية وتحسين الظروف الهندسية من ناحية الإنارة واستعمال الأظلية غير المضرة وحلق المساحات الخضراء والحدائق. يعود هذا المبدأ أيضاً بمنافع عدة على البيئة من جهة حمايتها من الملوثات الغازية والسائلة. يختم المقال بالحديث عن معايير المستشفيات الخضراء كاتخاذ الإجراءات اللازمة لإدارة النفايات وإعادة تدويرها والسيطرة على الإصدارات الغازية السامة بالإضافة إلى استعمال المعدات التي لا تستهلك الطاقة بإفراط. تتضمّن المعايير أيضاً إرشادات حول نوعية المون الطبية وغير الطبية وتثقيف الفريق العامل حول الممارسات الخضراء من ناحية المحافظة على النظافة والتخفيض من إنتاج النفايات إلخ...

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