

## Volume 12, Issue 3 / 2010 - Design

### Hospital Design: The Environmental Question

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**Steadily decreasing natural resources, pollution and global warming are some of the aspects associated by researchers to our lack of respect for the environment in the past. But even in the absence of these factors, we have no reason to not "reduce, re-use, recycle". Prudent use of resources is the name of the game and hospitals are one of the bigger waste generators in a community.**

The purpose of this article is to remind ourselves that caring about environment is worth serious thought and individual commitment and action; to urge people to think outside the box; and to illustrate a number of ways people around the world are trying to minimise waste, including through hospital design.

#### Humans Resist Change

The biggest hurdle for any organisation is to implement change. I believe it is the change of attitude towards environment and to adopt a proactive approach to reducing waste that will bring about the real benefits. Personal commitment would have to go beyond the boundaries of work and into personal lives such as drying your clothes outside when weather permits instead of a dryer, cycling to work, sharing cars for school runs and buying wooden furniture made from sustainable resources.

Designers of new hospitals have to think further than just the use of sun and daylight for optimum use of energy. Let's take a leaf out of their book. With ever tightening energy targets for hospitals, the designers have to find novel ways to reduce our carbon footprint. It would be news for many of you that around the world one kilowatt of electrical energy produced has a footprint of approximately 1 kg of CO<sub>2</sub> ! It is high time that measures are taken ensuring that WCs are installed that use water efficiently, paper dispensers are replaced with high speed hand driers, landscaping requirements are partially met by stored rain water and solar and wind power is introduced at least partially to reduce non renewable energy bought off the main grid. Suppliers are encouraged to reduce packaging to bare minimum and to re-use it, if it cannot be removed altogether.

Similar principles would need to be applied to all the goods and materials coming into a hospital and all kinds of wastes going out of the hospital would have to be monitored. To be able to make a positive difference, benchmarks and future targets would have to be set and then actively monitored. This is all the more important if it is realised that methane emerging out of the landfills is a major contributor to greenhouse gases (GHGs).

#### Hospitals Care

Hospital waste varies from packaging, food, paper, perishable/short life goods to contaminated medical waste. Each one of these waste streams needs to be analysed. What can be done to reduce all those printouts lying at the printer/photocopier no one seems to want? What can be done to reduce those surgical scissors or oximeter sensors or the balloon angioplasty catheters which once removed from packaging for an operation have to be thrown out, even if not used. This of course would have to be balanced with patient safety to the required standards.

Make no mistake, if a change has to be successfully implemented it would have to be supported by everyone in the organisation. In a hospital, it's not just the staff that will bring about a complete change. They would need the patients and the visitors to buy into that philosophy as well. And that will need a carefully managed campaign that should be highly visible and with a clear support from top down. But the change does not have to be driven from the top. It should be at grass root level, supported by every individual.

All the stated examples to reduce the human impact on our environment are prevalent in the healthcare environment in the present day. Not only do we need to keep this momentum going but in addition we need to have new and novel approaches such as sharing journals and newspapers, improving ordering practices to reduce food and short life products' waste and organising regular "environment events" such as cycle-to-work or plant-a-tree day. Run competitions to generate new ideas, reward and give recognition to those who proactively contribute.

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