

Why are we treating patients for cancer in hospitals full of cancer causing chemicals?

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As an Australian Citizen I am often perplexed at why our hospitals have not embraced sustainability more readily. As a sustainability consultant I often wonder why we are treating people for cancer in buildings that are contain a vast array of cancer causing chemicals.

Many people believe there is 'a direct link between healing the individual and healing our planet'. (Lloyd Dean, President and CEO of Catholic Healthcare West, USA)

Surely the very mission of healthcare institutions implies that they should be leaders in healthy construction and operational transformations.

Adapting Green Building design to the healthcare facilities market will help ensure that future healthcare buildings are healthier, more effective, cost less to operate, and are more enjoyable places in which to work and heal. This is in addition to becoming better hospitals.

Sick Building Syndrome (SBS) for example is becoming a major force in American sustainable design across all genres. It is such a large issue over there a whole section of the Environmental Protection Agency's (EPA) web site is dedicated to SBS. It even provides check lists and audit formats and other effective management tools to enable the occupant or the building owner understand how 'toxic' their internal environment is.

I know we don't like being the 'second class' mate of America but credit where credit's due. They are way ahead of us in some areas especially the whole understanding of the importance of 'healthy' hospitals. 'The Green Guide for Health Care' is a detailed document, written by a

dedicated group of sustainable hospital proponents, that provides a well thought out sustainable design framework for hospitals and other related facilities. It is just one example of what can be achieved by a common purpose.

So why can't we do that here? Surely the benefits of designing and building sustainable hospitals are obvious? Surely we have the skill set and the expertise?

Those benefits mooted by the 'Green Guide for Health Care' assist the occupants and the workers as well as the environment in general.

Hospitals are the fourth largest sector consumer of energy (Department of Energy; (DOE) USA 2005). Per square metre they are the second largest user of energy. (DOE; 2005) How many hospitals have their lights on all night and all day? How much water do they use/waste and how much waste do they waste? How dark are they inside or how 'un fresh' is the inside air? We all know the answers yet we do nothing!

The use of hospitals for improving health changed significantly in the 1800s with the advent of sanitariums etc. Even then the benefits of sunlight, fresh air and view were espoused by many in the health industry and that drove major changes to the way hospitals were designed and operated. Patients were literally bought out of the dark and encouraged to commune more with nature. The use of thermal baths and bathing was encouraged as were improved views etc. Then it appears all that was lost as we progressed towards the end of the 20th Century where now we are all locked up in our artificially lit and ventilated hospitals.

In a survey of 30 European Hospitals carried out in the 1880's, Saxon Snell makes a typical observation of the General Hospital of Berlin '*The free admission of sun, light and air to every part of the sick wards and the regulation of ventilation by natural means were the subjects of minute study and attention*'. (Nick Baker; University of Cambridge) The

Environmental Protection Agency of America (EPA) says that the internal environment in our buildings is between 10-90 times more toxic than the external environment so the argument that the current closed off hospital design is to minimise infection is unsubstantiated. The overwhelming infection rates in our hospitals of staphylococcus also refute that claim. The evidence though is overwhelming for the benefits of sustainable hospitals and patient recovery rates, improved staff productivity and retention, reduced throat and sinus illness as well as reduced use of antibiotics or reduced healing periods etc.

R S Ulrich in his research work from the 1980's indicated patients recovered more rapidly when able to view a middle distance natural scene including trees, than when viewing a blank wall. (RS Ulrich; Science 224;1984).

Now I know some professional medical staff may 'Pooh Pooh' this idea but in America it is big business.

It can't be bad thing to do, can it?

Let's have a look at one American study on healthy Hospitals.

Fable Study on high performance hospital design (Leonard L Berry et al 09.04)

The Center for Health Design's "Fable Hospital" study combined the following hospital design changes:

- Additional family/social spaces on each patient floor,
- Health information resources center for patients and visitors
- meditation rooms on each floor,
- Staff gym,
- More art for public spaces and patient rooms,
- Interior and exterior healing gardens,
- Larger private patient rooms,

- Acuity-adaptable rooms,
- Larger windows,
- Larger patient bathrooms with double-door access,
- Hand-hygiene facilities, and
- Decentralized nursing substations.

Results included:

- Reduced patient falls (reduced by 80 percent),
- Reduced patient transfers,
- Reduced nosocomial infections,
- Reduced medication costs,
- Reduced nursing turnover,
- Increased hospital market share, and
- Increased philanthropic giving.

The total payback period was estimated to be just over a year.

In an important 2004 compendium, "The Role of the Physical Environment in the Hospital of the 21st Century: A Once-in-a-Lifetime Opportunity," by primary researchers Roger Ulrich and Craig Zimring, Texas A&M University and Georgia Tech research teams reviewed thousands of scientific articles and identified over 600 studies, mainly in top peer-reviewed journals, that establish how hospital design can impact clinical outcomes. One key example from this compendium is the impact of lighting on patients and staff:

Hospital daylighting

- Sunlight influences mood, sleep-wake patterns, and length of hospital stay. For example, bipolar patients randomly assigned to

eastern rooms with bright morning light had a mean 3.67-days shorter stay than those in west-facing rooms.

- Morning light is twice as effective as evening light in reducing Seasonal Affective Disorder (photobiologically linked winter depression) and can reduce agitation from senile dementia.
- Elective spinal surgical patients exposed to stronger sunlight experienced less perceived stress and pain, took 22 percent less opioid analgesia per hour, and had 20 percent lower analgesic costs.
- There is evidence that brighter light can reduce medication errors.

I could write for hours on the available evidence regarding the benefits of high performance sustainable hospitals.

Unfortunately no one seems to listen here in Australia.

Over the last few years I have written to a range of influential people in the Health Care industry, both public and private, in a vain attempt to convince them of the benefits of adopting or even discussing, sustainability principles into our hospitals. It seems like a 'no-brainer' to me.

Look at the uptake of the Green Building Council's 'Green Star' ratings in Commercial office buildings here in Australia. Yet they don't have anything like the 24/7 load profiles found in hospitals. Because hospitals are such big users (or wasters) of energy and water they stand to gain the most. So if we promote the concept of sustainable Hospitals some of what we can achieve is as follows:

1. Maximized internal environment quality
2. Improve patient health
3. Improve occupant comfort
4. Reduce patient healing times

5. Reduced drug use
6. Less cross infection
7. Improve staff working environment
8. Reduce absenteeism from gained illness
9. Improved overall internal environment
10. Reduce capital infrastructure costs
11. Increase demand
12. Preferred by nurses
13. Reduced running costs

as well as

14. Gain carbon credits?
15. Reduce risk!
16. Maximise opportunity
17. Minimise climate change effects etc etc.

And the list goes on.

Where is the negative in this story?

No matter how hard I look I just can't find one!

So what do we do about it?

At the upcoming initial Green Hospitals conference in Brisbane in late June 2008 the perfect opportunity to commit to a sustainable hospital future for all of us is there. Right at our finger tips!

Isn't it about time we started promoting the concept and benefits of sustainable hospitals across Australia.

On the night of the conference dinner I am going to propose a motion to all attendees who have an interest in the healthy futures of our families, friends and countrymen; that we establish the first *Australian Association of Sustainable Hospitals (AASH)*.

This is our opportunity to form a group of interested and committed people to work together to create a vision for the sustainable hospitals of our future. As a group we can lobby government and private enterprise on the benefits of sustainable hospitals. We can promote the concept across our community. We can help formulate sustainable hospitals design guidelines and provide assistance to all those who see the advantages of making their hospitals and related infrastructure more sustainable. We can bring our hospitals into the future as the new imperative.

This has been a dream of mine for a long time. Come along and share my dream. Let's make the dreams come true.

Let's start healing people in healthy hospitals.