

HEALING ARCHITECTURE

Construction Specialties und Atelier Services 01

HOW TO CREATE HEALING
ARCHITECTURES AND
HEALING ENVIRONMENTS?



Maggie's Leeds Centre
Harehills, UK



HOW TO CREATE HEALING ARCHITECTURES AND HEALING ENVIRONMENTS?

HEALTHCARE ESTABLISHMENTS SUCH AS clinics, hospitals, medical institutions and other healthcare centres are traditionally designed to treat pathological conditions and manage risks. Their architecture and environment focus on the functional and rational, in essence using clinical results.

As such, the general experience of patients is of secondary concern, if not neglected altogether.

And yet, it seems that environment and architecture have a real impact on a patient's recovery. It's what we refer to as therapeutic architecture or the healing environment. Let's look at what it entails.

 Inselspital Bern





Balfour hospital Orkney

WHAT ARE THERAPEUTIC ENVIRONMENTS AND ARCHITECTURES?

Healing architectures and environments focus on the experience of patients, families and hospital staff in all healthcare establishments. The aim is to provide these people with a comfortable place and immerse patients in surroundings conducive to well-being and recovery.

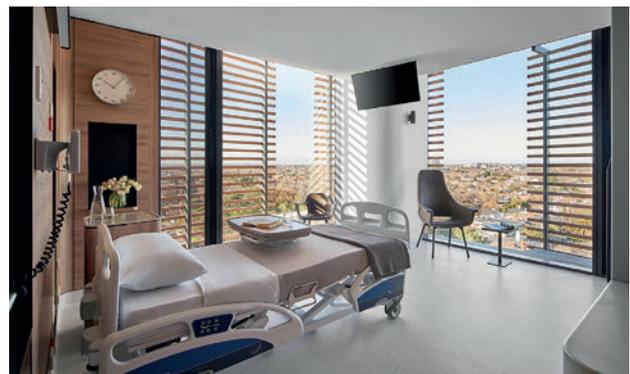
These aspects are all too often pushed to one side. Yet, they are essential when it comes to getting good results quickly and improving how a healthcare establishment works (organisation, internal communications and job satisfaction).

Indeed, in its constitution of 1946, the WHO explained that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

Therefore we need to match up the architecture of healthcare facilities and the well-being of their users. Incidentally, in 2003, Gesler spoke of healing places and explained that "Healing and place are inseparable."



Maggie's Yorkshire. Leeds



Gandel Wing, Cabrini Hospital - Melbourne, Australia

« Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity »

WHO constitution of 1946



Kantonsspital

HISTORY OF HEALING ARCHITECTURE

Sanctuary of Asklepios at Epidaurus

Back in ancient times (Ancient Greece, to be more specific), there were already reports of sanctuaries that integrated nature, music and the arts, such as the renowned sanctuary of Asklepios at Epidaurus.

As the cradle of Greek medicine, this historic landmark played host to highly renowned doctors and attracted pilgrims from all over Greece who came to be healed.

This is how healing architecture began.



Sanctuary of Asklepios at Epidaurus

Santa Maria della Scala hospital, Siena

Then came the Santa Maria della Scala hospital in Siena. Considered one of the oldest hospitals in the world (from 1090 on), it pointed out that the words 'hospital' and 'hospitality' came from the same Latin root: hospes. Hospes means welcoming a person so they may feel at home. As such, a hospital is, in essence, a place of welcome.

The Santa Maria della Scala took in and took care of babies abandoned

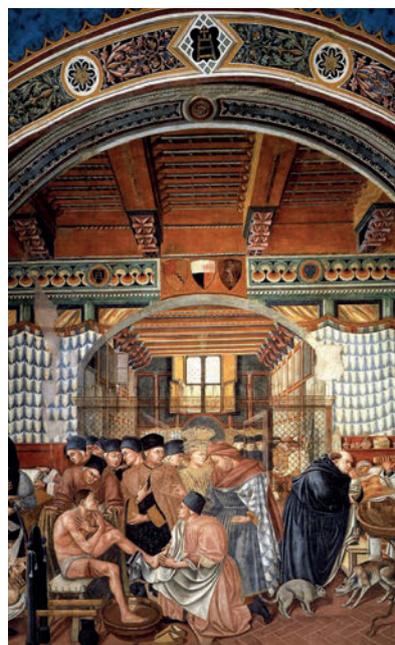
on its steps. It cared for the poor and distributed alms several times a week, taking care to give a double portion to pregnant women.

Its frescos, covering all the ceiling and walls, pulchros muros (Baron 1990, 1451), depict the act of washing a guest's feet, a timeless tradition of hospitality and hygiene.

Florence Nightingale and the Environmental Theory

In 1859, the esteemed nurse and thinker Florence Nightingale presented her Environmental Theory. In this work, she explained why it is essential to look at everything around patients holistically to improve their health. In her opinion, "*Nature alone cures.*"

There are five components to maintain a healthy environment: "pure air, pure water, efficient



Santa Maria della Scala, Siena



drainage, cleanliness, and light."

Florence Nightingale recommended paying close attention to:

- ventilation and temperature,
- light and noise,
- variety (in activities, wall colours and paints, etc.),
- the freshness of bedding, personal hygiene, diet, and how a person eats.

She also recommended telling patients the truth and bearing in mind their social background.

This theory forms the very basis of what continues to be taught today in nursing schools.

« There are five components to maintain a healthy environment: pure air, pure water, efficient drainage, cleanliness, and light »

Florence Nightingale



 Santa Maria della Scala, Siena



Roger Ulrich and his scientific studies

In 1984, following a scientific study carried out for nine years in Pennsylvania, Roger Ulrich demonstrated the positive effects of having a view in the healing process for the first time. His study looked at patients who had undergone gall bladder surgery and were either placed in a room with a view looking out onto nature during the post-operative phase or a room facing a brick wall.



Through this study, he succeeded in showing that having a view had a direct impact on the length of stay in hospital (shorter), the amount of medication taken (less) and the morale of patients (see figures lower down in this article).

While people have recognised the impact of the environment on health for thousands of years (Feng Shui is an excellent example), it continues to be a struggle for healing architecture to become the norm. However, it is increasingly being developed in the Baltic states and the US. Western Europe, meanwhile, is slower to adopt this trend, mainly because it is unfamiliar with the concept and the fact that there is a lack of means.

THE BENEFITS OF A HEALING ENVIRONMENT

The holistic concept of healing architectures helps patients to not feel stressed, anxious, scared, vulnerable and embarrassed. These feelings directly influence a patient's physical state (high blood pressure, digestive problems, fatigue, irritability), the healing process, the length of time to get better, patient well-being, and private life.

Scientific studies prove a correlation between a hospital's design and patient recovery. A healing architecture would result in:

- improved quality of life and patient satisfaction during their stay in healthcare establishments,
- reduced stress and anxiety,
- lesser need for medication,
- improved sleep cycles,
- calmer, more relaxed patients who observe instructions,
- reduced lengths of stay.

Healthcare staff also feel these positive effects with:

- better job performance and quality of care,
- fewer medical leaves of absence and abandonment of posts, as such, fewer gaps to fill,
- lower rates of burnout.

Therefore, healing architectures and healing environments bring together a set of factors with a positive effect on everyone in a healthcare facility. Conversely, cold, soulless places reminiscent of laboratories are intimidating and not conducive to a rapid healing curve.

WHAT DOES THE SCIENCE SAY ABOUT HEALING ARCHITECTURES?

The concept of healing architectures is based on many pieces of scientific literature that demonstrate the importance of certain factors.

Ulrich and the importance of a view

In 1984, the American researcher Roger Ulrich published the results of his study (carried out from 1972-1981) in the journal Science. This study looked at 46 patients (30 women, 16 men), aged 20 to 69, who had gall bladder surgery.

He asked nurses to observe the length of hospital admission, the behaviour of patients, their consumption of painkillers and anxiolytics, and minor complications.

Ulrich proved that having an unobstructed view looking out onto nature, rather than a wall, had a direct impact on healing (better and shorter recovery), hospital stay (less stress) and medication (need for

« Hospitalisation after operation: 7,96 days with a view looking out onto trees, 8,7 days with a view looking onto a brick wall »

1984 Roger Ulrich





Hospital Aosta Regional

light, weaker painkillers or moderate ones).

Patients on the side of the building with a view looking out onto trees stayed on average 7.96 days after their operation compared to 8.7 days for patients whose room looked out onto a wall.

Scientific studies looking at the impact of nature on patients

A Norwegian study proved the positive effects of nature on patients undergoing cardiac and pulmonary rehabilitation. The researchers Raanaas, Patil and Hartig used the emotions and experience of patients as the basis for their work.

US studies, such as those by Park et Mattson in 2008 measuring the effects of plants in the rooms of patients who underwent a haemorrhoidectomy, are moving in the same direction.



Scientific studies looking at the impact of light on patients

Other studies have shown the importance of light. For example, a study carried out by Beauchemin and Hays in 1998 demonstrated that light affects the length of a hospital stay and mortality rates.

The study followed 628 patients of an average age of 62 years who had suffered a heart attack.

The mortality rate for patients staying in a room on the southern side of the building, which was brighter, was much lower than for those in a room on the northern side of the building. As a matter of fact, of the 60 patients who passed away, 65% were in dark rooms compared to 35% in bright rooms. Moreover, patients in south-facing rooms stayed an average of 2.3 days compared to 3.3 days for those in north-facing rooms.

In 2005, a post-operative study (Walch et al., 2005) of 89 spinal surgery patients (43 women and 46 men of an average age of 59 years) revealed that those exposed to the sun's natural light:

- felt less stress,
- reported less pain, and
- used fewer painkillers, compared to those on the 'dim' side of the hospital.

The 44 patients with a brighter room used 22% fewer painkillers per hour on average.

THE KEY COMPONENTS OF A HEALING ARCHITECTURE

We must consider several environmental factors for an effective healing architecture.

While the number one rule for healthcare establishments needs to be hygiene and safety, that does not mean that other aspects should be side-lined.

When it comes to hygienic quality, certain materials such as metal and plastic should be preferred, as they are easy to clean and sturdy. Both indoors and outdoors, we should promote the use of suitable materials. Vinyl flooring and furniture with a plastic coating are easy to clean to avoid germs. Antibacterial paints and varnishes are also available.

As mentioned earlier, the words 'hospital' and 'hospitality' have the same linguistic root: hospes (meaning to welcome strangers). Therefore, the primary role of a hospital is to be a welcoming place. The people received (the patients and their families) need to feel at ease.

A healing architecture is based on its own particular components and can be broken down into seven main groups.



Balfour Hospital Orkney

1. Managing privacy and visits

Visits from family and loved ones are essential to patient well-being. The spaces must allow patients to have their privacy and receive and meet other people whenever they want.

2. Modulating spaces to separate patients from staff and equipment

By keeping the flow of personnel and logistics separate, patients do not have a constant reminder that they are in a healthcare facility.

3. The importance of nature

Having a view looking out onto nature means a faster recovery as nature soothes. That's why bedrooms and common rooms need to have large bay windows with a view.

Moreover, this leads nicely onto a second point: the importance of natural light. Large windows are key to guarantee the necessary natural light that stimulates the mind and body and speeds up the healing process.

Lastly, it is of the utmost importance that nature enters healthcare spaces, both inside and out. Access to nature has a healing effect. Therefore, we must promote biophilic design – in the purest sense of "love for everything that lives / love of nature" as defined by philosopher Erich Fromm. Healthcare establishments must, where possible, facilitate access to landscaped outdoor areas (courtyards, gardens). Plants and motifs depicting foliage also have their place indoors.





Cleveland clinic Abu Dhabi

4. Simplifying directions

Spaces are designed in such a way as to ensure that patients can find their way around easily within the facility. Orientation within buildings is intuitive and second nature so that it is not a source of stress. This reinforces the second component of a healing architecture: clearly separating spaces for patients from those for personnel. Entrances, exits, signs, and thoroughfares must be explicit, legible, and clearly indicated.

5. Fitting out airy interiors that are bright and comfortable

The choice of colours, materials and openings is crucial.

To create spaces that provide people with a sense of well-being, calm and comfort, you need to exploit colours (maximum of three or four colours, natural shades) and achieve a balance between natural and artificial light.

In the same way as light, colours impact the healing process and the

body's energy (heartbeat, blood pressure, temperature, etc.). The problem is that the use of colours in medical environments is often incorrect, which can be a source of undesirable effects.

Spaces should also be adequately ventilated.

6. Art in healing spaces

Adding art to healthcare establishments can also improve well-being, as it provides a means of distraction and stimulates the senses and imagination. The former hospital, Santa Maria della Scala, was an excellent representation of the importance of this aspect.

7. Comfort control by patients

If patients are to feel comfortable in their environment, they must have a certain level of control over it. Because sensations differ from one person to another, each person needs to be able to control the heat, light intensity, and noise. The ability to control their environment has an impact on patient healing curves.



Stobhill Mental Health Estate

HOW TO CREATE A HEALING ARCHITECTURE AND ENVIRONMENT IN A HOSPITAL SETTING

For many of us, hospitals have negative connotations. They are hardly what you would call welcoming places. Instead, with their smells of disinfectant, garish colours, straight corridors and direct, oppressing lights, hospitals are worrying places. We associate them more with illness than getting better.

Therefore, it's high time to rethink what a hospital is, starting with its structure. We need to put patient well-being back in its rightful place in design.

Working together for more intelligent building

For hospitals to meet the needs of both patients and professionals, it is vital to use the "design thinking" principle as a foundation and, more specifically, "Evidence-Based Design" (EBD). This concept, the fruit of Ulrich's experiments mentioned earlier, consists in building an environment that helps the healing process using scientific evidence.

For this purpose, it is essential that the different teams work together across their disciplines: architects, prime contractors, consultants, entrepreneurs in medical technology, together with clinical medical officers and users.

Combining scientific knowledge with architects' know-how

To plan for the hospitals of tomorrow, i.e. healing architectures, architects need to focus on patient needs by using reliable factual data provided by scientific studies, the healthcare facility and its professional staff.

In this manner, architects can propose a tailored overall solution using their know-how and experience in acoustics, geothermal energy, building frames, etc.

Are healing architectures worth it?

A healing architecture is not more expensive than a conventional build. It can even prove cost-effective in the long term – with greater operating efficiency and improved levels of performance.

Designing a hospital that fosters good communication between employees, improved collaboration between departments, and healthy, respectful discussions between patients and healthcare professionals is one of the promises of a healing environment. In the mid-term, it even generates sizeable savings on the side.

THE BEST EXAMPLES OF HEALING ENVIRONMENTS AND ARCHITECTURES

Cabrini Hospital in Malvern, Melbourne (AU)

Similarly, the Cabrini Malvern hospital offers patients individual rooms that could be mistaken for hotel rooms. For greater comfort and control, patients can adjust the lights and blinds from their bedside using a remote control. See the extraordinary gallery of photos on the BatesSMART design office website.



Orbis Medical Centre in Sittard (The Netherlands)

The Orbis medical centre has three separate parts: a space for patients, another for staff and the third for equipment. In this manner, the logistics cannot overwhelm and stress patients.



Maggie's Centers (UK)

Maggie's Centres are also perfect examples of a healing environment. In 1993, Maggie Keswick Jencks learned that her breast cancer had recurred. She decided to use the time she had left to live to create, together with her husband, a pleasant healing place for those who have cancer. In 1996, the first Maggie's Centre opened its doors in the Western General hospital in Edinburgh one year after her death.

There are now 18 centres in England and Scotland, designed according to the same model – the focus being on light and nature (a view). These centres provide patients with a warm, homely atmosphere to feel good.



The Emma children's hospital in Amsterdam (The Netherlands)

To avoid disrupting the sick children it takes in, the Emma children's hospital tries to offer them an environment as normal as possible. The hospital uses playful signposting with symbols and colours.

See the complete gallery of photos directly on the Defesche Van den Putte design office's website.



The Circle Hospital in Bath (England)

At the Circle Hospital, you could be forgiven for thinking it was a quaint hotel. The warm colours, contemporary art and beautiful views of the countryside contribute to patient well-being and comfort.

See also the photo gallery on the Foster & Partners architect website.



The Baden cantonal hospital (Switzerland)

The new Baden cantonal hospital built by the Nickl & Partners architects also promises to be a great success story in healing architecture. It bears the name Agnes in tribute to Queen Agnes of Hungary, who built the first hospital in the city of Baden in 1349.

Nature is all-pervading, with green outdoor spaces and leafy indoor courtyards. Coffee shops and stores help maintain a semblance of everyday life and social interactions; they are places of relaxation and allow patients and healthcare staff to meet. The signs and directions are clear. Warm materials such as (local) wood were preferred for the siding and certain indoor furnishings. And you mustn't forget about the ever-present, plentiful natural light in rooms thanks to large openings.

See the approach adopted by designer Christine Nickl-Weller, a pioneer in healing architectures for more than 30 years, and watch the following video:

https://youtu.be/VVng_6UNRA8



HEALING ARCHITECTURE WITH ACROVYN® WALL PROTECTIONS

Depending on the geographical location and allocated budgets, it can be more or less easy to come up with a healing architecture that promotes comfort and well-being. Construction Specialties proposes simple alternatives to bring nature and art into your facility thanks to Acrovyn wall protections.

Acrovyn by Design wall protection panels® are easy to clean and are a great solution to create positive, welcoming atmospheres that are a source of escapism. The joint venture with the Carlos Martinez bureau of architects for the Zihlschlacht Klinik in the Canton of Thurgau is an excellent example of these panels in use.

Shimmering blues and nature-inspired textures and ribbing are a harmonious fit in this space, creating composite formats of several tens of metres in length.

In The Netherlands (more specifically in Blaricum), the Sherpa centre for people with brain injuries integrated other sources of inspiration (great Flemish painters). They did so using Acrovyn by Design® and Acrovyn® wall protection sheets (with its range of 36 natural



colours that create a striking impression and a very calming effect).

These designs, and the benefits of working with Acrovyn and its new range of healing-inspired colours, will be the subject of the following articles.

In any event, it is not too late to change and put patient well-being once again at the heart of our hospitals. Don't hesitate to contact us about healing environments.

