The ambulance doors swing open. The gurney emerges. Its occupant speeds towards the ED, across linoleum floors and beneath fluorescent tube lights. Startled eyes stare out from between the aluminium rails. They see long, tunnel-like corridors and rooms lined with stiff chairs, a blur of thin blue curtains and the dull sheen of industrial plastics. Everything is enclosed by walls. Blueish-grey walls adorned not by windows, but by laminated posters of indecipherable referral codes. It is a foreign experience, but the setting is instantly recognisable. It is just the kind of hospital that is beamed into lounges every night in TV dramas. So in this moment, what is the environment telling the trauma patient?

“It’s telling them they’re going to die,” says Adjunct Professor Jan Golembiewski. “Or that some other bad outcome is on the horizon.”

Professor Golembiewski, of Queensland University of Technology, is one of Australia’s leading voices on “healthy” architecture, the growing movement that recognises the significant role physical environments can play in improving health outcomes. It is mostly very new science, which is only now gaining traction in light of the apparent failure to stem the global epidemic of lifestyle-related illness using traditional approaches to medicine.

And it involves much more than the idea that designing environments to encourage exercise will lead to better physical health. “That’s obvious,” he says. “But healthcare facilities are the one place you don’t want to force people to start more strenuous exercise regimes.” Instead, the professor researches and consults internationally on tailoring a patient’s surroundings to assist in their treatment.

“We all know that the mind and the body are connected but the idea that the body and the environment are connected is much more controversial. Some people have trouble accepting it.”

“But we are very, very affected by our environment, particularly on a psychological level. And, when we are sick, also on a physical level.”

When a patient is suffering from trauma, the last thing they need is to be reminded of TV shows like Grey’s Anatomy or ER, he says. “It’s the stage set that we relate to bad outcomes. Those blue curtains and those hospital beds say exactly the wrong thing to patients.”
Professor Golembiewski has an unusual background. An architect by profession, he obtained a PhD in neuroscience in 2012, researching the complex relationship between architecture and mental illness.

Asked how he would design a better emergency department, he describes a space with burgundy walls, large windows looking into gardens, wooden bedheads and bowls of flowers. Doctors might be doubtful. They understand the onslaught of bodily fluids, he says. They need during the day.

But, with the right balance, the professor says such changes can effect improvements in clinically significant patient outcomes.

The theory, at its most basic, is that environments that make patients feel on edge can prolong the so-called fight-or-flight response. The hypothalamus will continue to secrete corticotropin releasing hormone into the patient’s blood, elevating blood pressure, suppressing the immune system, and stemming the production of healthy hormones by crippling cholesterol synthesis.

An environment designed to make patients feel safe and inspired to recover, however, can help restore normal endocrine functions.

“Professor Golembiewski’s research has found,” he says, “if you go into that emergency and people are diligent and present and relaxed, and the environment says everything is going to be fine, you will effect some recovery right then and there, because the body itself quits with the stone-age first aid and starts the recovery process early.”

Even if the patient is not seriously ill, healthcare settings have a psychological effect that can either hinder or assist recovery.

For example, he says, specialists with small windowless rooms in hospitals send discouraging messages to patients.

“What do you think no windows tells people? It tells people this is not an expert. This person is a junior at a hot-desk.”

“We’re very, very sophisticated in how we read the environment. You can’t downplay that. We’ve been reading our environment far longer than we’ve been reading books.”

For many years, patients’ perceptions have been downplayed. But from early in the new millennium, exciting and boundary-pushing healthcare facilities have begun to spread across Australia.

DESIGNER HOSPITALS

When Professor Carolos Scheinkestel stands in the centre of his ICU, staring up at the cathedral ceiling and bathing in the light, he knows he works in one of the most pleasing clinical settings in Australia.

It is mid morning in Melbourne, and the internivist is speaking from The Alfred public hospital, where he directs one of the country’s busiest ICUs. More than 2400 patients are admitted each year, creating the most varied ICU in the Australasian ICU average of 730.

But as well as their light-filled rooms and busy atmosphere, the ICU’s design is striking, yet calming. And the ICU’s design is striking, yet calming.

“Professor Scheinkestel says he is sure his building is one of the reasons he hardly ever has to place jobs ads.”

“People walk through and see the place is packed and really busy, but it is incredibly quiet.”

Professor Scheinkestel says he is sure his building is one of the reasons he hardly ever has to place jobs ads.

There are currently no vacancies, and his staff seem happy to stay put.

Of his nursing staff, 87% have ICU qualifications, compared with the Australasian ICU average of 54%.

“The building won’t be the sole reason for it,” he says. “But the idea that the building’s design is in part responsible for the success of the building is one of the reasons he hardly ever has to place jobs ads.”

There are currently no vacancies, and his staff seem happy to stay put.

Of his nursing staff, 87% have ICU qualifications, compared with the Australasian ICU average of 54%.

“We all know the mind and body are connected but the idea that the body and the environment are connected is much more controversial.”

How to improve the general practice environment

1. Open the windows if it is not too cold or too hot.

2. Turn off the waiting room TV, and replace it with more active ways of passing the time, such as a couple of internet-enabled computers, or even a juke machine.

3. Have a private exit for GPs. Doctors should be able to duck out without feeling waiting room pressure.

4. Convert your garden into a waiting room. It makes for a much more peaceful setting, and allows patients to distance themselves from patients that are unwell.

5. Lay out rooms so that GPs can walk between them without passing through the waiting room. This encourages private collaboration.

Source: Architect and medical researcher Professor Jan Golembiewski.

Mitchell says the shift was dramatic.

“They can sit there and watch people playing soccer in the park and watch the trams go up and down the street.’’

It gives them the ability to get back in sync with day and night, and to look at something other than just the walls of their cubicle.”

Professor Scheinkestel says it is impossible to know the extent to which the building is improving patient outcomes. In give too much credit to the building would be to discredit the hard work of his staff.

“There are a million things that contribute to our continuous improvement. While I can’t attribute it solely to the building, I am convinced the building is improving outcomes.”

Work on the ICU began in 2005, when architects, clinicians from the unit, and Department of Health representatives began planning the refurbishment in a markedly modern way.

They consulted with past patients, toured six ICUs across the country, and reviewed international evidence on healthcare environments.

Lead architect Mark Mitchell, the healthcare director at Billard Irce Partnership, says a sea change was occurring in Australia, where preoccupations were no longer the bs all and end all of hospital design.

“Doctors might be doubtful. They understand the onslaught of bodily fluids, they need during the day.”

When it gets too bright or too hot, the windows electronically switch into an opaque mode using liquid crystal technology.

Within the unit, the patient cubicles are separated by the same glass walls. With the flick of a switch a patient can feel connected to the entire unit, or have complete privacy.

The features go on. The air conditioning operates with no recirculation - all of the air is fresh. Even the wooden panelling on the ceiling is latticed to absorb noise. Professor Scheinkestel says the absence of distracting noise is apparent.

“People walk through and see the place is packed and really busy, but it is incredibly quiet.”

Professor Scheinkestel says he is sure his building is one of the reasons he hardly ever has to place jobs ads.

There are currently no vacancies, and his staff seem happy to stay put.

Of his nursing staff, 87% have ICU qualifications, compared with the Australasian ICU average of 54%.

“The building won’t be the sole reason for it, but it has contributed to the fact that I have a great retention rate. I have no vacancies, and it’s a delight to work in.”

Apart from the staff benefits, you get the feeling listening to Professor Scheinkestel that the building’s effect on the patients is profound. Many of them stay for prolonged periods, receiving treatment for severe illness and trauma. Depression lurks, ever present.

But as well as their light-filled rooms and views, patients can also be taken to an area of the unit that has floor-to-ceiling windows looking out into everyday Melbourne life.

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Shortly after the turn of the century, the medical community began accepting a growing body of evidence that environments can assist in the healing process.

Previously, providing patients with natural light or views might have been considered
For those who feel imprisoned, Professor Golembiewski has plenty of advice on how to improve the general practice environment. It can be as simple as opening a window, to visually reassure patients that they are not simply breathing circulated air. Or it could be switching off the waiting room television, and replacing it with less passive distractions, such as a couple of computers for checking Facebook or, for the adventurous practice, even a juice machine.

"It'll cost you a carton of apples a week, but the benefits will be worth it. It is a clear message that the practice cares about you and your health."

"So they won't leave your surgery thinking 'I'm not sure if that particular medicine was the right one' or 'I don't think that doctor did the right tests on me'," he says.

"No one likes waiting. There have to be things to do, and a TV with Judge Judy in the corner isn't enough. The TV gives patients a sense they're being ignored."

To improve the environment for GPs, Professor Golembiewski's number one recommendation is to lay out rooms so that GPs can walk between their rooms without passing through the waiting room.

It encourages GPs away from the isolation of their rooms, and to collaborate with colleagues, he says.

"I can go into the corridor, call Malcolm out of his office and say, 'Can you just remind me about something'? You don't want to be having those conversations in front of the waiting room."

Another important feature, he says, is for doctors to have an escape route from the practice, again without being spotted.

"It's your wedding anniversary, and you have to slip out at 12.30 otherwise you're in strife. But one of your most difficult patients has just come in and she's got a sore toe and needs to see you."

With an escape route, the GP can just disappear.

"It's probably not doing that patient any harm," he says.

"No one is going to get good care if you as a doctor gets sick or can't concentrate because the theatre doors close in 17 minutes, so caring about yourself is also important for the patients too."