Design is always about transformation to an imagined future. As a practicing architect who designs hospitals, I know that the world of green building and the world of healthcare share a common mission: to protect and promote health. And I believe we can transform healthcare by building health. How? It starts with this simple shift in perspective: If we use health as the inspiration to transform practice, we can heal our hospitals and the planet.

Every innovation begins with an inspiration, and the healthcare sector needs to own this one. We all know that wellness is more than healthcare and more than physical well-being. We also know that we won’t have healthy people if we don’t have clean water, air, and soil. Doctors take the Hippocratic Oath—“First, do no harm”—making it their basis for action. But if every system took this new and certainly timely pledge—“A health system shall cause neither human nor ecological harm”—what would healthcare look like?

Imagine a world in which the delivery of healthcare created nothing but health. Unfortunately, that’s not the world we have today.

For the last 70 years, US healthcare has been stuck in a massive industrial paradigm that has very little to do with health. It is a “sick care” system that is so focused on curing advanced stages of disease that it’s largely irrelevant to the health needs of most people. Healthcare’s ultimate delivery machine—the hospital—has evolved into an increasingly specialized tower of disease. No expense too great, no building too large. And when one hospital will no longer suffice, we build 21 side by side! The Texas Medical Center, near downtown Houston, is the largest in the world, with 7,000 beds and 106,000 employees at 68 institutions, clustered on 1.5 square miles.

Healthcare has become a 20th-century industrial system, like agriculture, chemicals, or fossil fuel energy. And like those systems, it creates waste, some dismal work environments, and a load of externalized harm. Our inconvenient truth is that the system actually contributes to the problems it is there to solve.

The system is energy intensive. According to JAMA (the Journal of the American Medical Association), US healthcare puts 217 million tons of carbon into the atmosphere every year. Hospitals alone contribute more than 3 percent of the country’s total output—80 million tons. The average US hospital operates at 2.5 times the energy intensity of European hospitals. Even as healthcare seeks to perfect its antiseptic care environments, it dumps pharmaceuticals in our water supplies, disposable plastics in landfills, and greenhouse gases in the atmosphere. All this waste contributes to environmental degradation and poorly affects health—and it’s all preventable.

And how does it feel to inhabit these environments? Hospitals have endlessly deep floor plans where caregivers literally never see the light of day. Summer, winter, day or night—it’s always the same inside. The buildings can’t function without massive inputs of electric lighting and mechanical ventilation—a permanent life support infrastructure. They are, to use a medical metaphor, comatose. It is certainly ironic that we task caregivers to keep us alive in buildings that feel dead.

So how do we transform this 20th-century industrial model from a system that delivers sick care to one that builds actual health?

Farmer and philosopher Wendell Berry reminds us that when health is the aim, “a good solution acts the way a healthy organ acts within the body.” These solutions fix problems without making new ones. They create a cascading series of benefits instead of externalized harm. There is an emerging movement in architecture called “restorative design” that seeks these “good” solutions. Its ideas can be applied to virtually every operational system in healthcare, not just to buildings. Restorative design means moving from solutions that degrade health and the environment to solutions that do no harm and heal some of the harm we’ve already done. It’s about solutions that stop making us sick.

Until today, we have focused on doing “less harm,” but with health as our inspiration, we can become restorative. As architect William McDonough wrote in the seminal book Cradle to Cradle: “There’s nothing exciting about being less bad . . . to be less bad is to believe that poorly designed, dishonorable, destructive systems are the best humans can do.”

Think about a healthcare worker who walks all day on shiny...
vinyl flooring. Healthcare workers account for more than 40 percent of adult occupational asthma, an issue linked to the cleaning chemicals used to wax and strip vinyl flooring. But it doesn’t end there. In so-called Cancer Alley, Louisiana—an 80-mile length of the Mississippi River that’s home to 150 chemical plants, including vinyl manufacturing—91 percent of residents have at least one health problem linked to chemical exposure. When we walk on a vinyl floor, we don’t see the asthma connection or the health impacts on the people of Cancer Alley—and that’s a problem. We won’t have a healthcare system that creates nothing but health until that harm is made visible, until we connect our practices with their environmental and health consequences: land development and habitat destruction, energy and climate change, chemicals and toxic body burden. Unfortunately, today, most of the environmental and health costs of our healthcare system are not transparent.

But there is some good news: When the costs do become transparent, the healthcare community acts. In 1995, a nonprofit organization called Health Care Without Harm made the community aware that medical waste incineration was the second largest contributor to dioxin emissions in the United States. Within a decade, hospitals shut down 99 percent of their 5,000 medical waste incinerators.

Healthcare organizations are adopting restorative approaches to their energy choices, dramatically reducing both energy demands and greenhouse gas emissions. In Issaquah, Washington, Swedish Medical Center operates the lowest energy-consuming hospital in the country—60 percent below the industry average—through optimizing building design and energy systems. And in Greensburg, Kansas, Kiowa Memorial Hospital is the country’s first carbon-neutral hospital, using wind instead of fossil fuel.

In October 2014, Gundersen Health System, based in La Crosse, Wisconsin, became the first energy-independent health system, generating more renewable energy than it consumes. Gundersen invested in a series of community partnerships that include wind farms and harvesting methane from brewery waste, local landfills, and cow manure to offset 100 percent of its energy needs—eliminating harm from burning fossil fuels while reducing the burden of these agricultural wastes on their communities.

Innovative healthcare organizations are adopting restorative approaches to their building design. More than a decade of restorative design means moving from solutions that degrade health and the environment to solutions that do no harm and heal some of the harm we’ve already done.
paraphrase Wendell Berry, you create a cascading series of benefits instead of externalized harm.

And how does it feel to inhabit these buildings? These are buildings designed by human beings for human beings. No one needs to be afraid to breathe in interiors built with natural and healthier materials that can be maintained with nontoxic cleaning products. They bring nature deep into clinical spaces. They are buildings that respond to the particulars of site, climate, and program, and celebrate local materials, culture, and craft. They blur the distinction between healthcare and health.

Surely, if this were affordable, all our healthcare buildings would deliver nothing but health. But it’s not money that stands in our way, it’s mindset — many of these solutions are cost neutral or actually generate savings. The reason we don’t do these things? Sometimes, as with vinyl flooring, it’s difficult to see the harm. And sometimes it’s just more comfortable to continue to build and operate the way we always have.

Some healthcare systems have committed to building health: being carbon neutral, shifting the market for healthy materials, partnering with their communities. We can say no to the hundreds of negative environmental and health impacts we create every day, such as toxic building materials and fossil fuel emissions. It’s not too expensive, it’s not too radical; it’s nothing more than common sense. We can transform healthcare by building health.

 ago, I worked with The Center for Discovery in Harris, New York, an outpatient and residential treatment facility for adults and children with severe developmental challenges, medical frailties, and autism spectrum disorders, to deliver the first LEED-certified US ambulatory healthcare clinic. The executive director, Patrick Dollard, told me: “My people already have so many challenges in their lives—and we don’t really know what causes many of their health issues. Why would I want to put them indoors and surround them with chemicals?” We agreed on three principles to guide the design:

1. Restore the land because nature can’t help heal anyone if the natural environment is degraded;
2. Examine every building system and material to achieve a building that supports environmental and human health;
3. Take responsibility, ignore the excuses, and just act.

The building, which opened in 2004, became a metaphor for what the center wanted to be. Within a year of opening, the staff parking lot was filled with hybrids instead of suvs. In the decade since the building opened, the center has planted an organic apple orchard on the site, extending the farm to embrace the building, and employed adult residents who live nearby. There’s a new tagline: “Food is medicine.”

So, is this building a healthcare facility? Or is this building health? Once you start taking responsibility to heal things, the positive effects just ripple further and further out. Or, to