

Healing People, Healing the Planet: How Sustainable Healthcare is Creating Hope for the Future

Written by Sophie O'Brien – HOPE supporter (NSW)

"Never, ever give up." It was one of the final thoughts Dr Forbes McGain shared during our conversation. While discussing reusable surgical gowns and lower-carbon hospitals, he laughed as he described the famous image of a frog refusing to give up, even when caught by a stork. It was an unexpected metaphor but perhaps the perfect one for the future of sustainable healthcare



Healthcare exists to protect and restore human health, yet around the world it also generates enormous amounts of waste and greenhouse gas emissions. The challenge is finding ways to reduce that environmental impact without compromising the safety of patients or healthcare workers.

Fortunately, many healthcare professionals are proving that this balance is not only possible but also already happening.

Dr Forbes McGain is Director of Intensive Care at Footscray Hospital, an anaesthetist and intensive care physician at Western Health, and Associate Dean for Sustainable Healthcare at the University of Melbourne. Alongside caring for critically ill patients, he has become one of Australia's leading voices in sustainable healthcare, researching the carbon footprint of medical equipment and helping hospitals introduce practical environmental initiatives.

His message is refreshingly hopeful.

Looking Beyond the Bin

When people think about hospital waste, they often imagine everything is infectious and must be thrown away. Dr McGain explains that this isn't the case.

Only around **10–15 per cent** of hospital waste should be classified as clinical or infectious waste. The remainder is often like ordinary household waste, packaging, plastics and other materials that have never come into contact with blood or infectious bodily fluids. Yet much of this still ends up being treated as clinical waste, creating unnecessary financial costs and environmental impacts.

"Clinical waste requires specialised treatment before disposal," he explained. "When ordinary waste is incorrectly placed in clinical waste streams, it increases both environmental and financial burdens."

Simply improving waste separation can significantly reduce unnecessary processing while maintaining strict infection control standards.

Rethinking "Single Use"

Many hospital products are designed to be used once before being discarded. This has become normal practice across healthcare, but Dr McGain believes many items can safely be reused when supported by evidence and proper sterilisation.

At Western Health, reusable surgical gowns and protective gowns have largely replaced disposable alternatives. Even the sterile wrapping used to package these gowns is reusable.

The result?

Less waste, lower costs and no compromise to patient safety.

"It's exciting to see what can happen," Dr McGain said. "Most hospitals still use disposable gowns wrapped in disposable material. We've shown there's another way."

Across a large hospital network, these initiatives prevent **tens of tonnes of waste** from entering landfill every year.

Other reusable products, including washable patient care pads and surgical drapes, are also becoming part of everyday clinical practice.

These may seem like small changes, but together they represent a major shift in thinking.

Research That Changed Practice

Perhaps one of Dr McGain's most significant contributions has been research into anaesthetic breathing circuits.

Traditionally, the tubing connecting anaesthetic machines to patients was replaced after every day of use. Through careful scientific research, Dr McGain and colleagues demonstrated that changing these circuits weekly while maintaining the essential patient filter was just as safe as daily replacement.

The research found no increase in bacterial contamination, and today this practice has been adopted across hospitals throughout Australia and internationally.

For Dr McGain, this represents the power of evidence-based sustainability.

"We've seen research lead directly to real change."

It is a reminder that innovation does not always require new technology. Sometimes it simply requires asking whether existing practices can be improved.

Sustainability Happens at Every Level

When asked what prevents healthcare from becoming more sustainable, Dr McGain was quick to acknowledge the complexity.

Protecting patients from infection will always remain the highest priority. Convenience, global manufacturing systems and decades of reliance on inexpensive disposable plastics also make change difficult.

Yet he believes meaningful progress happens across three levels.

At the **micro level**, individual clinicians can make everyday decisions such as prescribing oral medications instead of intravenous treatments when clinically appropriate, reducing waste and environmental impacts.

At the **meso level**, hospitals can change procurement policies, replace disposable equipment with reusable alternatives and redesign systems of care.

At the **macro level**, governments, regulators and healthcare accreditation bodies can embed sustainability into healthcare standards and purchasing decisions.

While all three matter, Dr McGain believes the greatest transformation occurs in the middle.

"The magic happens at the *meso level*."

It is where leadership, collaboration and practical implementation come together.

Designing Hospitals for the Future

Looking ahead, Dr McGain is excited about another milestone.

Western Health's new Melton Hospital is being built as Australia's first fully electric public hospital, eliminating the need for natural gas and dramatically reducing future emissions.

Hospitals are among the largest energy users in our communities. Transitioning them to renewable electricity represents one of the biggest opportunities for long-term environmental improvement.

Yet Dr McGain believes the conversation should extend even further.

Rather than simply building more hospitals, society should invest more heavily in preventing illness before people require hospital care.

Healthier communities, better urban design, improved nutrition, preventative healthcare and greater public awareness all reduce pressure on hospitals while improving quality of life.

True sustainability, he suggests, begins long before someone enters an emergency department.

Hope in Action

Perhaps the most inspiring part of our conversation wasn't any single environmental initiative.

It was Dr McGain's belief that positive change is possible.

Every reusable gown, every improved purchasing decision, every research project and every conversation moves healthcare one step closer to becoming both environmentally and financially sustainable.

These changes are not about lowering standards of care.

They are about delivering excellent healthcare while also caring for the planet that sustains us all.

At HOPE Inc. (Australia), we believe flourishing futures are created through imagination, collaboration and practical action.

Dr Forbes McGain's work reminds us that hope is not passive.

Hope is something we build, one decision, one innovation and one courageous conversation at a time.

About the contributor

Dr Forbes McGain is Director of Intensive Care at Footscray Hospital, an anaesthetist and intensive care physician at Western Health, and Associate Dean for Sustainable Healthcare at the University of Melbourne. His research focuses on reducing the environmental footprint of healthcare while maintaining the highest standards of patient care. He has led internationally recognised work on sustainable anaesthesia, reusable medical equipment and low-carbon healthcare systems.