

From Red Bags to Big Impact: Meet Mark McShane, MD

Mark McShane, MD, MHQS is a pediatric hospitalist at Children's Hospital of Philadelphia and a graduate of the CU Anschutz Diploma in Climate Medicine Certificate in Sustainable Healthcare.

Pediatrician, sustainability champion, and proud Flugtag podium finisher



If you want proof that one person really can change a system, meet Mark McShane, MD, MHQS, a pediatric hospitalist whose career sits at the intersection of climate, health, and common sense.

Mark's journey into climate and health did not start with a grand master plan. It started with curiosity, great teachers, and a long-standing discomfort with waste that just did not make sense. Fast-forward a bit, and that same curiosity has helped him reduce regulated medical waste (RMW) by 75 percent in high-impact hospital units, build cross-disciplinary sustainability teams, and step into a brand-new leadership role as Medical Director of Sustainability at Children's Hospital of Philadelphia (CHOP).

Oh, and along the way, he also helped build a human-powered flying contraption that landed him on the podium at the Red Bull Flugtag. More on that later.

An origin story rooted in curiosity and plants

Mark traces his interest in climate and environmental issues all the way back to middle school, where an inspiring teacher first sparked his curiosity. That interest stuck. In college, he studied environmental biology and worked in a lab examining how climate change affects flowering plants, specifically how rising CO₂ levels alter the timing of flowering cycles.

“I really loved working in that space,” he shared, crediting strong mentorship and hands-on research for shaping his thinking. But alongside that work, something else was happening. Mark realized he wanted to work directly with people.

Volunteering at a health clinic helped seal the deal. Medicine offered a way to care for those most affected by climate change and environmental degradation, especially children, while keeping sustainability close to his heart.

Finding a healthcare sustainability community

During pediatric residency at Texas Children’s Hospital, the pandemic unexpectedly expanded Mark’s professional world. Virtual conferences opened doors to a growing national community of clinicians focused on healthcare sustainability. One pivotal moment came when he attended CleanMed during its fully virtual year.

“Even though it wasn’t quite the same as being in person, it was truly a launching pad,” he said. Those early connections led him into curriculum development in climate and health and, eventually, into healthcare sustainability work grounded in quality improvement. That throughline, using systems thinking to make care better, safer, and more sustainable, has defined his work ever since.

The Red Bag Dilemma: Big results from a simple idea

One of Mark’s most impactful projects to date began not with him, but with Environmental Services staff at CHOP. They were the ones seeing it every day: red biohazard bags filled with food wrappers, gloves, and trash that did not belong there.

Rather than framing it as an education problem, the team took a human-centered design approach. With help from human factors engineering, they asked a simple question: How do we make the right choice the easiest choice?

After testing a few different interventions, the team landed on a new system for RMW disposal. Massive red RMW bins were removed from high-traffic clinical areas and replaced with wall-mounted red bag dispensers. With this new system, RMW disposal became an intentional process, and accidental overuse of red bins became a thing of the past.



*Children’s Hospital of Philadelphia
Sustainability Council’s Earth Day 2026 Table*

The results:

- 75 percent reduction in unnecessary RMW in the Emergency Department and a 66% percent reduction in the PICU
- Projected annual savings of \$10,000 per unit
- No increase in hazardous waste ending up in regular trash

“It’s not about telling people what to do,” Mark explained. “It’s about designing systems that work with how people actually move and think.”

What’s next? Saying goodbye to disposable stethoscopes

Tackling unnecessary red bag waste is only the tip of the iceberg, though, Mark’s next project tackles something clinicians genuinely dislike: flimsy disposable stethoscopes. Some clinical units use and trash thousands of plastic disposable stethoscopes each year, despite their poor clinical efficacy and a lack of evidence that they aid with infection control. By working with infection prevention, nursing, respiratory therapy, and hospital quality specialists, Mark is helping units pilot solutions to plastic stethoscope waste by improving processes for reusable stethoscope systems.

The upside is clear:

- Less plastic waste
- Better bedside care
- Cost savings without ongoing investment

In other words, sustainability that also improves patient safety and clinician satisfaction.



a.



b.

Photo (a) on the left shows a small-size red RMW bin (the team’s first pilot intervention), a white bin for standard trash, and an empty wall mount (red arrow) that was installed but not yet stocked with red RMW bags. Photo (b) on the right shows a patient room in which the wall mount is stocked with RMW bags and the traditional red bin has been removed.

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Why the Sustainable Healthcare Certificate mattered

Mark enrolled in the Sustainable Healthcare Certificate after hearing glowing reviews from colleagues and realizing he wanted more formal training to complement his hands-on work.

The hybrid format, the in-person connection, and the practical focus on applying sustainability principles to quality improvement made signing up for the certificate program an easy “yes!”

What surprised him most was the people.

“I didn’t think it would be such a strong networking experience,” he admitted. “But suddenly I had a national network of colleagues doing incredible work. I learned so much from everyone else in the program, and I feel like I could reach out to any of them for advice or support.”

That network, along with the credential itself, helped strengthen his ability to advocate for sustainable healthcare leadership within his institution.

From passion project to leadership role

That advocacy paid off. This July, Mark officially steps into his role as Medical Director of Sustainability at CHOP, an institutional signal that sustainability is not a side project, but a core part of the hospital’s mission.

His pitch was simple and powerful: you cannot protect children’s health without protecting the environments they grow up in.

By combining credentials, real-world results, and deep collaboration across departments, Mark helped demonstrate that sustainable healthcare is high-value healthcare: good for patients, staff, and bottom lines.

What gives him hope?

Ask Mark what keeps him going, and the answer comes easily: kids.

Kids who already understand the reality of climate change. Kids who speak up. Kids who organize. Kids who remind adults that action matters.

“If they’re using their voices at only 10 or 15 years old,” he said, “then I definitely need to be doing my part to protect our beautiful planet.”

One last fun fact

When he is not reducing hospital waste or building sustainability programs, Mark loves modern fiction, houseplants (lots of them), and perhaps most unexpectedly, competitive aircraft building.

In college, he and friends built a 15-foot-wide hawk for the annual Red Bull Flugtag. They flew it straight into the Delaware River, but not before earning third place and the People’s Choice Award out of more than 30 teams.

No engineering backgrounds. Plenty of teamwork and duct tape. And a story that still makes him smile.

The takeaways

You do not need to be a sustainability expert to get started.

“All it really takes,” Mark says, “is seeing something wasteful and asking, ‘How could this be better?’”

That mindset, combined with curiosity, collaboration, and courage, is at the heart of sustainable healthcare. And it is exactly what Mark McShane brings to his work every day.

Learn More About the Diploma in Climate Medicine



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