

From Vision to Perseverance to Accessibility

Nurse Launches Game-Changing Garment for Patients with Leg Bags

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It's not often that I become emotional over a new product that I see on LinkedIn, especially when it is underwear. But when I read the post about a product called [CathWear](#), I actually felt tears coming to my eyes.

CathWear is a unisex, machine-washable undergarment that is used to contain leg bags attached to drainage tubes. It can accommodate two leg bags attached to **Foley, suprapubic, biliary, and/or nephrostomy tubes.** It not only holds the bags in pockets on the thighs, but it also secures the tubing. All the components of the drainage system are held closely and discretely next to the body.

And they look like surfer shorts!

Why did no one think of this before?

Apparently, this is a fairly typical reaction from healthcare providers upon seeing the product. It's an ingenious but beautifully simple concept and **something that is sorely needed.**

A 2015 study interviewed 29 leg-bag users and five caregivers and healthcare providers to determine the most pressing issues with leg-bags. A predominant theme to these responses revealed that **design flaws in leg-bag systems** *"influenced users' relationships, confidence, and ability to socialize."* Participants reported embarrassment secondary to leakage of urine, visibility of the bag or tubing under clothing, and slipping of leg bag down the leg.



The Vision

Air Force veteran, registered nurse, and **inventor and founder of CathWear, Brian Mohika**, in a [recent podcast](#), tells [Catie Harris](#) of [NursePreneur](#),

"The benefits of CathWear were built around the complications that I kept hearing about from patients, which is why it is so important as a nurse to really listen to the patient population... before CathWear, patients would have the bag sliding up and down the leg. They would have the plastic to skin contact points, creating skin irritation. They would overtighten the straps because a patient isn't thinking the way a nurse is thinking. They are not thinking if they over-tighten the straps they are cutting off the circulation[...]all the patient is thinking is 'I don't want this bag to slide and I don't want to be embarrassed so I'm going to go ahead and tighten the straps'[...] So, that really puts the patient at risk for all types of things."



Carl Russo/Staff Photo at The Eagle Tribune

Years before he became an RN, **Mohika** was working as a tech in interventional radiology and would see his patients struggling with their drains and leg bags. He says he had a

“...vision, from God...” and from that vision, the concept of CathWear was born.

I also remember working with patients when their drainage bags would not cooperate; I remember their frustration, embarrassment, and anxiety. I remember the isolation that would follow when a patient would skip an outing to avoid the chance that the leg bag would leak or slide out of a pant leg. Or worse; that the drain would get yanked inadvertently because the tubes were all over the place. **It was hard for a patient to stop worrying and just be.** It would have been wonderful to have been able to suggest CathWear as an option.

The straps would never stay in place, and if they did, it was probably because they were too tight.



Not So Great



Awesome

Photo from cathwear.com

CathWear design addresses complications such as:

- **Urine backflow**, which can occur **when the bag is above the bladder, over-full, or if the tubing is kinked**
- **Traction**, which can put pressure on the bladder neck, urethra and meatus, **causing tissue damage and pressure necrosis**
- **Infection** is always a risk with indwelling catheters and with any drains, but the risk is increased when there is frequent breaching of the closed system. For patients who have **difficulty managing and emptying their bags at night**, switching out to a larger bag at bedtime may expose the system to contamination. **Kinking of the tube and backflow** can also increase chance of infection due to **collection of stagnant urine**
- **Compromised circulation**, due to **over-tight straps**, especially in patients with phlebitis, diabetes, and edema
- **Skin irritation** and/or breakdown, due to **chafing straps and/or rubbing of plastic-backed leg bags on unprotected skin**



Product Features

Catheter Compatibility:

- Nephrostomy
- Biliary
- Suprapubic
- Foley



Click [here](#) to learn about the features that make this garment unique, and click [here](#) to see a patient testimonial.

Perseverance

The product did not happen overnight, [Mohika tells Catie Harris, in the NursePreneur interview](#). While it is one thing to have an idea, or even a drawing, **it takes resourcefulness and perseverance to turn an idea into a marketable product.**

Mohika says that if one can create a prototype of a design, the idea is much more likely to come to fruition. He tells Harris about how **the prototype was created “at the kitchen table,”** and that he had one **manakin** and a **sewing machine**. He used underwear from Walmart to use as a pattern.

After a prototype was created, it was sent out to various manufacturers, and **it would take months to get the sample back.** At that point he would test it by **“trying to get it to not work” and then fixing the flaw and “turning it into a feature.”** Thus, the crisscrossed **Chanel Track** was designed to contain long tubing, and is closed with Velcro, making it **easier to manipulate for someone with decreased manual dexterity.** The leg-bag pockets are reachable at the thigh, making it easier to retrieve the bag for emptying, and concealable under shorts or skirts.



Stock Photo



The inventing process did not stop with one sample. Many times, the design needed to be tweaked by a “centimeter here and a centimeter there.” Each time, the revised “tech pack” would be sent back to a manufacturer, and **the waiting game would restart.**

Mohika says that **when the team was waiting for a sample to be returned, they did not “sit around on their hands,” but continued to work on building the business.** They managed to get their business certified as a **“veteran owned company”** and had the product **patented, and FDA registered.** They obtained their own **Medicare code.** They attended trade fairs, gave free samples to veterans, and reached out to doctors, nurses, patients, and vendors.



Carl Russo/Staff Photo at The Eagle Tribune

It was six years between obtaining the patent in 2013 and launching the product in 2019.

Accessibility

The considerable effort that went into creating this humble but much-needed product seems to come from a place of generosity and love, which is why I wanted to write about it. After looking at some news clips from Mohika's hometown and alma mater, I am further convinced that the **business model and motivation behind it are inspired by something greater than practicality or money or ambition.**

Mohika wants to keep the business in his home city of [Lawrence, MA](#), and says the "ultimate goal is to create jobs in Lawrence." The business **logo** was selected through a contest, giving some props to the winning graphic design student at [Northern Essex Community College](#), where Mohika earned the radiology technology degree that would lead him to become the nurse-inventor that he is today. **"It's a creative way to give back to the school that catapulted my professional career"** he says.

In the podcast with Harris, Mohika says that he was told he could charge \$100.00 for the product but he opted to keep the price below \$50.00. Relying on empathy and imagination, he realized that **keeping the price down would make the product more accessible to more people.** There is currently the option **to buy 3 for \$99.99.**

The team's foresight means that **this product can now be obtained through Medicare.** The product has its' own Medicare code and a [Medicare Verification Letter](#) can be downloaded and printed on the website.



For patients interested in this product, there is a [brochure](#) on the website which can be printed out and given to one's doctor, who can then write a prescription for it.

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