

FRONTLINE

THE HOT SEAT, GREAT ESCAPE P.20 | THE ARTS P.22 | STYLE P.26 | MAIN EVENTS P.28



LIVING WELL

SYMMETRY IN ACTION

Vestibular First's Helena and Patrick Esmonde.

A DELAWARE COUNTY COUPLE PARTNERS FOR AN INNOVATIVE, INEXPENSIVE APPROACH TO TREATING INNER-EAR BALANCE PROBLEMS.

BY J.F. PIRRO

TESSA MARIE IMAGES

“It looks like voodoo—vertigo voodoo,” confides Patrick Esmonde. Maybe so. But when the infrared video goggles Esmonde designed are strapped on a patient’s head, they help healthcare professionals like

his wife, Helena, study a patient’s eyes to diagnose the underlying causes of dizziness and balance disorders. Fueled by Helena’s training and practitioner’s expertise as a physical therapist, the Broomall couple has hit on an innovative, inexpensive approach

to treating balance problems associated with the inner ear.

Vestibular First is a merger of two passions—Helena’s in PT and Patrick’s in IT. The venture couldn’t be more balanced (so to speak). Helena is Vestibular First’s

chief clinical officer and cofounder. Patrick is CEO and cofounder. “Symmetry—it’s in my blood,” Helena quips. “I’ve always told my patients, ‘You can lean on me.’”

In 2017, Helena transitioned from a vestibular clinic at a large outpatient hospital to a small, privately owned practice. Frustrated with the high prices for existing infrared video goggles already on the market, she brought her dilemma to Patrick, who’d spent his career in technical support for higher-education systems and as a consultant. He was able to build them much more cheaply. The goggles were patented in April 2020, and they received their FDA clearance seven months later.

Vestibular issues can naturally appear in our 40s, but they begin swirling at age 50 and escalating in our 60s and beyond. Baby Boomers like Patrick’s dad crave a more active lifestyle, which can place more demand on the vestibular system. VF is meeting the demands of what figures to be a growing global industry. Insurance companies concerned with minimizing falls and accidents are taking notice. A vestibular exam and diagnosis with a pair of VF goggles should mean fewer injuries.

The basic technology isn’t new. Infrared cameras date to the 1970s. It’s the application that’s new—especially when you consider that such issues were once handled in a risky surgery that severed the vestibular nerve. Then, in 1980, Portland, Oregon, ear surgeon John Epley discovered how out-of-place or clumped crystals in our inner ear can make us dizzy. Darkness is essential for the VF goggles to be effective. “When you have a vestibular disorder, the brain suppresses abnormal eye movements as a safety measure,” says Helena. “When you put a patient in the dark, the abnormalities are discovered, not suppressed.”

A diagnosis is reached by assessing whether crystals have moved into a canal of the inner ear where they don’t belong. Some patients are seen just once. Others require many visits a year. “It’s no longer just, ‘Touch your nose to see if you can keep your balance,’” Helena says. “Without goggles, it’s a guessing game. I could do an OK job, but not the job I want to do. Could a cardiologist do his best job without a stethoscope?”

Before Helena left Penn Therapy & Fitness in Radnor, she showed a pair of the goggles there to Patrick. His main



THE MAIN FOCUS WAS BUILDING A SELF-CONTAINED UNIT TO LOOK AT A PATIENT’S EYES AND PROJECT THEM ONTO A COMPUTER SCREEN FOR A CLINICIAN TO SEE AND STUDY.

focus was building a self-contained unit that could look at a patient’s eyes and project them onto a computer screen for a clinician to see and study. That same night, he went on Amazon and found the necessary ingredients—chiefly an infrared camera that could plug into any computer’s USB port. Everything was as low-tech and low-budget as possible “Within four hours, I had a mockup—a working model for a pair of infrared goggles that weren’t going to cost \$10,000,” Patrick says.

Vestibular First’s \$1,500 basic model sold out. The current Insight Pro sells for \$2,500. A third version now in development will offer greater diagnostic capabilities. It should cost significantly less than the \$27,000 typical of longer-established competitors. If all goes well, the next model will be submitted for approval to the FDA by year’s end and hit the market by next spring.

Twice a week, Helena sees patients at Advance Physical & Aquatic Therapy’s Broomall and Springfield locations. “We’re physical therapists—we treat orthopedic patients,” says the company’s founder, Ryan Mullin. “Helena’s is a population we hadn’t tapped. Now, we’re a more well-rounded practice.”

Counting the Esmondese, Vestibular First employs 12. Most are part-timers who work as needed from the couple’s home office, a finished basement in Broomall. The mission remains providing access to affordable goggles for as many clinicians as possible by keeping costs down and priorities “in balance,” says Helena (pun intended).

Before seeing Helena, a typical patient has suffered for three to six months, seen a general practitioner, had a scan and been referred to three or four specialists. Vestibular First’s five- to 10-year plan involves educational and technological components—and they’d like it to begin



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in the emergency room or general practitioner’s office. “We’d love to be part of the solution so dizzy patients don’t get bounced around,” Patrick says.

The plan for the company includes building data, expanding research and developing an online training model for clinicians. “A minor win would be one less specialist—or if the process can pinpoint the one specialist a patient needs,” says Helena, who typically appears at seven national medical conferences a year and has been a teaching assistant in her field at local universities. “I don’t need to be the answer, but I need to be able to direct patients to the answer. We want to help patients and help clinics.”

Gladwyne’s Patricia Hare swears by the goggles—and Helena’s work. “Helena’s made such an unbelievable difference,” says Hare, a corporate finance controller, active golfer and grandmother. “That device, along with the treatment

with vestibular therapy, have been life-changing for me. I can do what I want and need to do each day.”

For his part, Patrick certainly didn’t grow up wanting to be a medical device CEO. But it’s by far the best job he’s ever had. “It’s at the intersection of all we both care about,” he says. “We’re putting our energy into helping people. How many unique patients could Helena personally see in a 40-year career—40,000? Our calculations estimate that our goggles have already helped over a million patients. At the end of the day, we know our product and efforts are getting people back to their families and lives sooner.”

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