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EnFuse device redefines drug delivery process

Cincinnati Future

5-6 minutes



Mike Hooven, CEO, Enable Injections

Many people with chronic health conditions use infusion therapy when getting treatment. Infusion therapy can deliver medication for conditions such as cancer, Lupus, or Crohn's disease through a needle or catheter. This is done either because the medication can't be taken orally or needs to be dispensed at a controlled pace. For some folks, this could require hours in a hospital or outpatient infusion therapy center.

Cincy-based [Enable Injections](#) has redefined the drug delivery process with [a device called enFuse](#). enFuse is a on-body drug delivery solution that is designed to improve a patient's experience by allowing them to self-administer therapies at home.

We spoke to Mike Hooven, who is the CEO at Enable Injections about the company and its tech.

How did the company come about?

Hooven: In 2010, I was working with CincyTech and Children's Hospital of Cincinnati when I was introduced to a technology that Children's had been working on for over 10 years to minimize injection pain for Children's vaccinations. I felt there was tremendous promise in the drug delivery field and I jumped on the opportunity to work with Children's and CincyTech in this new venture. In 2012, I recognized there was a massive market for replacing IV therapy with on-body delivery and we pivoted to develop what is now the enFuse.

What need does enFuse fill?

Hooven: Intravenous drug delivery requires patients to spend a big part of their day or all of their day going to a clinic and getting an infusion. I have a neighbor who goes every Saturday morning to the University of Cincinnati to get an infusion, which takes that day away from her.

We wanted to say, 'Hey, you don't have to have an IV needle in your arm and drip drugs from a bag for eight hours. You can use this.' It can be used in a clinic or a patient can be sent home and do it themselves. It's a massive benefit for the patient but also a differentiator for the pharma companies, and has huge savings potential from a healthcare perspective, because now you're not tying up nurses and doctors and clinics and with the overhead that is incredibly expensive.

What kind of health conditions are treated with drug infusions?

Hooven: There's a wide variety. There are immune deficiencies, where you need to infuse antibodies from plasma. There are going to be over \$400 billion worth of drugs to treat cancer. Once approved, enFuse will enable patients, for a wide range of conditions, to have more flexibility in receiving their care. These conditions could be cancer, auto-immune, neurological, hematological, and others.

How did you know the time was ripe for such tech?

Hooven: We knew there was going to be a tremendous market in biologic drugs [Biologics are drugs made from complex molecules manufactured using living microorganisms, plants, or animal cells. Many are produced using recombinant DNA technology.] Biologic drugs are primarily delivered intravenously. These are miracle drugs; they're treating cancer. And so we said okay, let's develop a technology that allows the patient to receive what was previously an intravenous drug but let them do it subcutaneously with this friendly enFuse little device here.

How does the device work?

Hooven: You remove the enFuse from the transfer base and place it on the skin. (An adhesive is automatically exposed when you do this.) You press a button and the needle is automatically inserted and the controlled drug flow begins. There's a gauge that lets the user know the progress of the delivery. When the dose is complete, you get a visible cue. The needle is automatically retracted and locks out. Both the enFuse and the transfer system are single use.

Who do you sell to?

Hooven: Our partners include pharmas and biotechnology companies. We count among our clients Sanofi, Apellis, Genentech, and CSL Behring.

What's coming up for the company?

Hooven: Over the last 10 years, our team has developed, built, and tested over 100,000 enFuse delivery systems. Most recently, we've implemented high-speed manufacturing lines to meet the needs of our pharma partners and help make the enFuse available for patients worldwide, a significant milestone as we move toward commercialization.

What are the advantages of being in Cincy?

Hooven: [CincyTech](#) and [Children's Hospital](#) have been great to us. We have benefited from working with [Ohio Third Frontier](#), [JobsOhio](#), and [Innovation Ohio](#). [Cleveland Clinic](#) has supported us as well. You get a big fish in a small pond situation where if we were out in Silicon Valley or Cambridge, we wouldn't get a lot of attention. But Ohio is so focused on creating new companies to benefit the economy here. We get a lot of support from these institutions and organizations.