

How can a medical device improve efficiency and comfort?



SYVEK VASCULAR ACCESS HEMOSTASIS APPLICATOR Design Research and Industrial Design

Marine Polymer Technologies was in an enviable position. Their proprietary Syvek Patch controlled bleeding for patients undergoing vascular surgery, but the patch required manual compression techniques which took time, fatigued caregivers, and made patients uncomfortable.

They asked us to find an easier to use, more cost-effective system that would minimize procedure time, provide greater patient and provider comfort, and lower administrative costs. We analyzed the competitive landscape, relevant technologies, and the contextual needs of health care professionals to identify areas of opportunity. Through a process of iterative prototyping and testing with users, we arrived at a hybrid solution that achieved the client's business objectives.



The result was an intuitive, applicator device that required little training to use, enabled comfortable use, and is the only compression device that mimics the accuracy and sensitivity of the preferred "manual compression" method. The contoured shape of the device provides patient comfort by interfacing with the puncture site in a soft, humane manner, and its visual appearance reinforces its utility.



The Syvek Applicator maximizes the efficiency of vascular access recovery procedures by minimizing device set-up time, reducing patient recovery time, and lessening infection risk. These time savings allows hospitals to increase patient through-put, frees up nurses for other duties, and creates faster discharge rates.

Research & Design by THRIVE partner Trent Kahute & team, while at Radius Product Development, Inc.