

This medical products company believes single-use devices should be safe, clinically effective . . . and sustainable

By: Norbert Sparrow - June 26, 2018

We have expectations of efficacy and safety in medical products that are brought to market; should we also factor in sustainability? Absolutely, says Rob Chase, founder and President of NewGen Surgical, a medical products company based in San Rafael, CA.



NewGen Surgical's skin stapler is made with 69% plant-based material.

Single-use medical devices and surgical products have dramatically improved medical care by minimizing opportunities for hospital-acquired infections and cross contamination and, in many instances, have reduced cost. Polymers are used overwhelmingly in the fabrication of disposable devices and that has led to a proliferation of plastics in medical-care facilities. To some, that's a problem.

“The medical device industry needs to continue to innovate and create products that save lives and shorten recovery times with less pain, but it also needs to focus on embedding sustainability throughout the healthcare continuum,” says

Chase. “This includes focusing on plastic disposable products, which are used in the millions and are destined for landfill or incineration.”

Chase characterizes his approach as smart sustainable design—a “deep dive” into thinking about the resources we are using in healthcare and how the supply chain impacts the environment. “There is a growing need in the industry for products that offer performance, clinical efficacy and economic value, but with the added benefit of being environmentally more sustainable,” says Chase.

Thus far, his company has developed two medical product lines that meet those criteria. The NGS35W skin stapler is made with 69% plant-based material that results in a 67% reduction in energy used during the production process and eliminates more than 500 pounds of plastic waste for every 10,000 skin staplers used, according to the company. NewGen Surgical also has developed a sustainable needle counter box, eliminating 93% of the plastic waste associated with a product used in nearly every operating room procedure. Both products are Class I devices and are disposed of in the sharps bin, like

conventional plastic devices of this kind. “There is no change in work flow for the surgical staff in using a NewGen Surgical sustainably designed product,” notes Chase.

The company also has developed sustainable packaging for surgical kits that, like their other product lines, can withstand EtO sterilization and have durability and strength properties that are similar to currently available products.

Chase, it should be noted, is not a zero-tolerance guy when it comes to the use of plastics. The company incorporates ABS medical-grade plastic where needed for functionality and performance. He recognizes that plastic has “enabled the advancement, development and production of many breakthrough medical devices.” But he strongly supports the use of sustainable alternatives, when feasible, especially in product categories that encompass millions of single-use disposable products.

“There are many single-use products in hospitals that can be redesigned through the lens of sustainability,” says Chase. “Surgical products that are intricate in design with tight tolerances may be better candidates for traditional medical-grade plastics,” he notes . . . at least for now. The continued development of biopolymers and other environmentally preferable materials may change that equation. “Products designed for the operating room have multiple design criteria, must be of high clinical performance, and be sterilizable. However, if the design criteria can be met using sustainable materials, you offer a solution to hospitals that increasingly connect healthy communities with the environmental impact of the products they use,” says Chase.

GreenHealth Exchange, a group purchasing organization (GPO), agrees. NewGen Surgical recently signed its first GPO agreement with the group, which is dedicated to bringing sustainably designed products to hospitals. “Doctors and nurses are responding. They appreciate a product that is in line with their own values as well as the hospital’s mission to care for patients knowing that the foundation of all health is a healthy environment.”

And if you’re wondering if there is a trade-off in pricing, as is often the case with biobased alternatives to conventional plastic products, Chase is ready with a response. “Our goal is to be price competitive with conventional products. However, like all new innovation, prices come down as adoption and volumes increase. Right now we are pretty close in pricing and we’re well on our way in volume,” says Chase.



Rob Chase, founder and President of NewGen Surgical.