The use of universal packaging has become more prevalent in the last five years, reports Mike Nielsen, national sales manager at Barger (www.bargerpackaging.com). “The goal is to get as many components as possible into one tray.”

The savings can be tremendous. “Savings can be seen in terms of capital investment, warehousing space, and internal resources,” Nielsen says. For instance, medical packaging engineers can limit the number of validations required for both designs and processes, he says. “Design validation can focus on the worst case,” he says. In addition, there will be “fewer sealing tools as well as fewer lid and carton dies.”

Given such potential savings, Barger has worked on a number of universal tray designs. Two recent projects involved designs that accommodate hundreds of different SKUs, and Barger plans to submit them to IoPP’s annual AmeriStar awards for consideration.

The first is a small PETG clamshell for holding small extremity related implants, allowing the manufacturer to package 300 different SKUs with one design. “Using moving parts in our mold, we created a hinge that can flex hundreds of times without breaking,” reports Nielsen. The clamshell features no sharp edges and is designed to be packaged in a pouch.

The second design consists of inner and outer PETG trays for a double sterile barrier. Developed for nonsterile medical devices now moving into a sterile format, the tray replaces an all-plastic pouch and can be used for packaging 683 different products, reports Nielsen. The tray is protected from the devices’ sharp edges by BargerGard polyurethane inserts.

BargerGard may actually help medical packaging engineers take advantage of universally designed trays, says Scott Duehmig, director of sales for Barger and Placon. “BargerGard helps take up space, acting as void fill and allowing engineers to utilize common tray footprints,” he says. “It has been a key part of our ability to innovate in order to support designs for 600-plus SKUs.”

Medical device packaging engineers are looking for ways to control costs today, reports Duehmig, but not in the expected ways. When asked whether there was any momentum in switching from rigid to flexible packaging, Nielsen says he
continues to see a “preference for rigid, as our customer base becomes more risk averse and likes robust rigid packaging.”

Nielsen does add, though, that flexible packaging does play a huge role in medical device packaging.

Smaller packaging isn’t necessarily preferred, either. As part of Barger’s recent “voice of the customer” work, Nielsen says that he has found that smaller designs aren’t always better for medical device companies. “Consistency is often better, we hear, for shelf space as well as continuity.” Universal designs appear to offer benefits in both cost savings and format consistency.

Medical device companies are also looking at “how packaging affects products’ carbon footprints,” says Duehmig. “It is a part of design criteria.”

To that end, Nielsen reports that medical device makers are already making use of Placon’s EcoStar line, which consists of recycled polyethylene terephthalate (RPET) obtained through the company’s postconsumer bottle washing and recycling facility. “Clamshells made from EcoStar RPET are being used as secondary packaging in double-barrier systems,” says Nielsen.

In 2011, Placon acquired Barger Packaging Inc., and in 2012 all medical-related thermoforming in both Elkhart, IN, and Madison, WI, was unified under the Barger brand. Barger’s Elkhart operations continue to support small to medium runs with ISO Class 8 cleanroom capacity, while Madison operations offer additional cleanroom capacity suited for higher volumes, explains Duehmig. “Thanks to the acquisition, Barger has more than tripled its design resources, giving us a unique perspective,” he says. “For instance, we can utilize matched metal cutting so that we can cut on vertical walls, opening up the design scope.”

Adds Nielsen: “Our imagination is our only limitation.”